A **JOHN CATT** PUBLICATION

MAKING CHANGE STICK

A PRACTICAL GUIDE TO IMPLEMENTING SCHOOL IMPROVEMENT

DR JAMES MANNION

'A fabulous and unique book. Every school leader should have a copy. I loved it.'

Steve Munby

hachette LEARNING

MAKING CHANGE STICK

A PRACTICAL GUIDE TO IMPLEMENTING SCHOOL IMPROVEMENT

DR JAMES MANNION

hachette LEARNING

Although every effort has been made to ensure that website addresses are correct at time of going to press, Hodder Education cannot be held responsible for the content of any website mentioned in this book. It is sometimes possible to find a relocated web page by typing in the address of the home page for a website in the URL window of your browser.

Hachette UK's policy is to use papers that are natural, renewable and recyclable products and made from wood grown in well-managed forests and other controlled sources. The logging and manufacturing processes are expected to conform to the environmental regulations of the country of origin.

To order, please visit www.HachetteLearning.com or contact Customer Service at education@hachette.co.uk / +44 (0)1235 827827.

ISBN: 978 1 3983 8748 5

First published in 2025 by
Hachette Learning,
An Hachette UK Company
Carmelite House
50 Victoria Embankment
London EC4Y 0DZ
www.HachetteLearning.com

The authorised representative in the EEA is Hachette Ireland, 8 Castlecourt Centre, Dublin 15, D15 XTP3, Ireland (email: info@hbgi.ie)

Cover photo © Eric Isselee/Shutterstock

Typeset in the UK.

Printed in the UK.

A catalogue record for this title is available from the British Library.

In memory of Sir Tim Brighouse

Thank you for setting the bar –
and for suggesting the title…

Praise for *Making Change Stick*

James Mannion combines deep insight and understanding of the complexity of change management in schools with practical, down-to-earth strategies and processes that school leaders can use. This is a fabulous and unique book. Every school leader should have a copy. I loved it.

Steve Munby
Visiting Professor at University College London Centre for Educational Leadership and former CEO of the National College for School Leadership

James Mannion's *Making Change Stick* is a fascinating and thought-provoking exploration of the science of implementation and improvement, applied to the world of education. Mannion examines the reasons why so much of the precious financial and human resource invested in change management in schools fails to have the desired impact. He provides a step-by-step approach to change implementation, designed to improve pupil outcomes, that is research-informed but simply explained. The book is packed full of sage advice, practical activities, helpful questions, grids and diagrams and clear and relevant worked examples. Each of the short chapters has a useful summary. Mannion's credibility comes from thorough research and years of working with leaders and practitioners on making change stick in a wide range of schools and settings.

Rachel Macfarlane
Lead adviser for underserved learners, Herts for Learning and author, The A-Z of Diversity & Inclusion

This book couldn't have come along at a better time for us in our school journey; it has really provided a clear and effective pathway for implementing change. It's full of useful tools and important challenges to help leaders and teachers avoid the pitfalls that often lead to initiatives not being sustained effectively in schools and other organisations. James balances the 'why' and the 'how' beautifully, and has drawn from a range of disciplines in order to work out what steps need to be taken

in order for change not only to stick, but to become deeply meaningful and purposeful. While it has helped us in an educational setting, the implications for these processes and tools reach far beyond education – they would be useful for any group wanting to tackle any problem within a complex organisation.

Dr Debra Kidd
Leader of learning and teaching, British School of Brussels

This is a book for every leader who is looking again at how to make change happen and stay happened... and then see it make an impact. *Making Change Stick* offers a 'what to do and what not to do' outlook and urges change makers to get the right group of people involved. It is a handbook with a readable research background, clear principles and step by step advice.

Mick Waters
Former Director of Curriculum for England and author, About our Schools

Your no-nonsense companion for securing school change - steeped in evidence and packed with practical insight.

Peps Mccrea
Director of Education, Steplab and author, Evidence Snacks

In this wonderful book, James helps school leaders answer that eternal question of how to effectively implement change in a meaningful, productive and lasting way. In an engaging manner, he takes you through the process and enables the reader to have a practical understanding of implementation science and change management. The schools I lead now have 'slice teams' working through every new project!

Dr Kulvarn Atwal
Principal Learning Leader, Highlands and Uphall Primary Schools and author, The Thinking Teacher and The Thinking School

It's easy to be overwhelmed by books offering advice. If you read one this year, read this. It exudes practical wisdom.

Sir Anthony Seldon
Former Vice-Chancellor, University of Buckingham and author, The Fourth Education Revolution

Feedback from school leaders on the *Making Change Stick* programme

The impact has been huge. When we looked back and did backward design, we found that lots of things we want to implement have been tried before and failed. But by using a slice team and getting the message out to everybody, everyone having a voice has made a huge difference to us as a school. Now we've got buy-in, we've got the relationships and we've also got a collaborative culture and consistency. I would definitely recommend *Making Change Stick* to other schools. It looks like it's this big thing when you first see it, but as you work your way through make sure you don't miss anything out and everything is done thoroughly and properly. As a school, moving forward, everything we try to implement will be done using this method because we've found it so successful. So go for it!

Sarah O'Kelly
Deputy head, Queen Elizabeth High School

Having done this training with my whole senior management team, they all felt very energised and confident. And in our discussions since – it's been two weeks now since we did the course – with three or four of my team, it's been, 'Well, I know how I want to tackle this now,' or we're looking back on something we did last year and thinking, 'Oh, the bit we missed was this.' The *Making Change Stick* programme has really highlighted to us what we have missed in the past, but it's also given us real confidence that we now have very practical tools we can use to make implementation better in our school. The main thing we got out of the programme was the motivation, the confidence and the energy to really want to tackle the next project, and a sense that we know how to address the fears and concerns people have before you implement something

new. People don't talk enough about the science of implementation, and equally the training is very scarce, and yet it's such a key area of understanding for a school or any institution if they are going to attempt change. That's why this programme is so valuable – because it's something we're doing all the time, but we've never really been trained in it.

Alasdair Kennedy
Headteacher, Trinity School

The *Making Change Stick* programme has really been the making of me as a leader. I had many thoughts about change management throughout my career, but rarely was I given the opportunity to actually be shown and guided through the process. It's something that I take with me now and apply to everything that I do. Not only have I managed to make that policy so much better, but I've also developed the skillset to lead other changes through. And the really nice thing is that I have been able to coach other people in implementation science, so it's having a wider impact on our school culture. I would recommend this training to any school that's thinking about implementing a serious change because it will certainly ensure that your change has real impact. But I would also recommend the programme for the positive impact it has on school culture and developing leadership capacity in your school, which we know is so important.

Elaine Long
Assistant principal, UCL Academy

I thought the *Making Change Stick* training was excellent. I really like that it was practical. I could really see how it would apply to a problem that I'm actually trying to solve at the moment. It felt comfortable, we had opportunities to discuss ideas and we could really apply it to our own setting. My key takeaway is that I really wish I had done this training before I embarked on my current project – I think I can still use some of it, but goodness me, I would be doing things differently if I had had this learning first!

Sara Ward
Pastoral deputy head, Trinity School

The slice team has been a transformative way for us of implementing change. Traditionally, an idea comes through a member of the senior leadership team (SLT) who's probably been on a training course, or they've seen something at another school, and they discuss it with the SLT and it then gets rolled out in the school. You don't have the same buy-in that you have from a slice team. Now, we've got members of staff from the SLT, middle leaders, experienced staff, Early Career Teachers, teaching assistants, governors, pupils – effectively, every stakeholder is covered, meaning everyone's got a voice in that change. This makes buy-in across the school far more powerful.

Sean Thomas
Raising standards leader, Milford Haven School

We were yet to choose our focus when we formed our slice, so people just came into it really open-minded and excited because it was something they were going to develop for the children in their classes. The impact really for me has been on the engagement of our staff.

Katie Crockford-Morris
Head of years 5 and 6, Pembroke Dock Community School

The way the programme is structured is really helpful. I would definitely recommend *Making Change Stick* to other schools. For me, the widest impact has been on involving the wider members of our school community, removing the idea of a top-down approach to change management and involving the whole community to ensure change is lasting.

Cat Place
Headteacher, Jubilee Park Primary School

It's always in my mind now. Everyone talks about the slice – that is the most powerful thing. But I think the [implementation] equation is also really something to look at, as well as backward design. Those three things for me – I think about them whatever I do now.

Julian Dessent
Curriculum and learning network manager, Carmarthenshire County Council

One of the most powerful parts of the programme for me was establishing a slice team and really relying on them to provide the data and

information on a policy before you implement it. As a senior leader, I think you have your assumptions about how staff are feeling or where people are at in terms of readiness for change, and it was so eye-opening to start off with that feedback from across the school community. I now can't see how you would implement change without using a slice team. I would definitely recommend the *Making Change Stick* programme for any middle or senior leader at any point in their career. The clarity of the framework is what really makes this programme stand out. It takes a complex process and breaks it down into a series of steps with some really usable models that help you plan for change.

Kate Barry
Assistant principal, UCL Academy

I am envious of those at the beginning of their career who have something like this. The *Making Change Stick* training was a game changer for me, and [the great thing is that] it's going to make a difference to my learners. You know, ultimately that's what you want. I hope this will be my legacy to this school. If I've done nothing else for them, I hope this is what they'll thank me for in 20 years' time!

Margot Thomas
Deputy head, Lamphey Primary School

Dear reader,

Thank you for choosing to read this book. I hope you find it a useful guide to improving educational and life outcomes for the children and young people in your setting.

These pages contain all the key ideas from the *Making Change Stick* programme, a framework for implementing school improvement that has been researched and developed in hundreds of schools, all over the world, over the last 10 years or so.

Alongside this book, the full *Making Change Stick* programme includes:

- A facilitator guide.
- A series of short videos (one for each chapter).
- A playbook with activities to help you apply these ideas to your context.
- Data collection tools.
- A project management system.
- Slides for use in professional learning sessions.
- Access to the *Making Change Stick* community.

This is available at makingchangestick.co, where you will also find a free taster course and a range of free resources.

Some of the text in chapters B and C has been adapted from my TEDx talk, 'How to change the world'. You may find it helpful to watch this before reading the book – you can find it at bit.ly/TEDxMannion.

If you find the ideas in this book helpful, or if you have any suggestions for how the *Making Change Stick* programme might be improved, I'd love to hear from you. Please share your thoughts at bit.ly/mcs-reader.

If you'd like to submit a short case study outlining the impact the *Making Change Stick* programme has had at your school, you can do so here: bit.ly/mcs-case.

Any such contributions will help shape the future of the programme – and may even appear in future editions of the book!

I hope you enjoy your journey into implementation and improvement science. If you find it half as fascinating as I do, you're in for a treat…

Dr James Mannion

james@rethinking-ed.org

About the author

Dr James Mannion is a speaker, teacher trainer, author and podcaster with a passion for educational and political reform. He is the co-founder and Director of Rethinking Education, a teacher training organisation specialising in implementation and improvement science, self-regulated learning and practitioner inquiry. A former teacher of 12 years, James has an MA in person-centred education from the University of Sussex and a PhD in self-regulated learning from the University of Cambridge. He is also the host of the popular Rethinking Education podcast, which has had over half a million downloads to date. James currently has four more books queueing up to get out of his head. However, he is also a master procrastinator; while completing his doctorate, he wrote and starred in two sci-fi rock operas, with a third on the way…

Contents

Phase II: Make a plan

Phase III: Make it happen

INTRODUCTION

'The practitioner *is* the intervention…'

One bright July morning in 2014, almost 10 years to the day before I submitted this manuscript to the good people at Hodder Education, I walked into a room that would change the course of my life – and, as it turned out, that of many others…

I was doing a PhD at the time, and I happened to be in university on the same day as a conference called 'Implementing Implementation Science: The science of making interventions effective in real-world contexts'.

I hadn't heard of implementation science before, but 'making interventions effective in real word contexts' was very much on my mind at the time, and I was intrigued by the possibility that there might be a 'science' to guide me in my quest. So, I decided to stick my head in the door. And *my goodness*, I'm glad that I did.

The keynote speaker that morning was Dr Barbara Kelly, an educational psychologist at the University of Strathclyde and co-editor of the snazzily titled *Handbook of Implementation Science for Psychology in Education*. Dr Kelly opened her presentation with a bold claim:

> Implementation science is remarkable for two reasons. Few scientists and fewer practitioners have heard of it […] and most scientists and practitioners require it immediately!

It's fair to say Dr Kelly had my attention from the outset. But then she said something that *really* made my ears prick up: 'The practitioner *is* the intervention.'

At the time, I was halfway through an eight-year study of a self-regulated learning initiative called the Learning Skills Curriculum (LSC). The LSC had started out life as a taught course for all pupils in Year 7 (age 11–12)

at the school where I worked, but the ideas and practices we'd developed through the LSC were by now scaling up across the whole school.

Until that day, the LSC team had approached whole-school implementation as a *conceptual* problem. We had assumed that if we just explained some key concepts to our colleagues and shared one or two examples of what self-regulated learning looks like in practice, all would be well.

What Dr Kelly helped me realise that day is that implementation is not really a conceptual problem – it's a *people* problem. As well as focusing on key concepts and classroom practices, we *also* needed to think about our colleagues:

- What's workload like among teachers, leaders and support staff currently?
- How ready for change are our colleagues generally?
- How ready for this particular change are they?
- Are any of our colleagues resistant to the self-regulated learning agenda? If so, why?
- How might we identify early adopters – those colleagues who are ready, willing and able to promote self-regulated learning through their practice?

And so on. There's a lot more to implementation science than the idea that 'the practitioner is the intervention.' But thinking about implementation as a people problem *is* a game-changing insight that has important implications for how we think about leading change in schools.

Note to self

Listening to Dr Kelly that day, I could immediately see how implementation science might increase the likelihood of a successful outcome for the LSC. But I could also see the potential of implementation science as framework for school improvement more generally. I wrote a 'note to self' in my pad, using capital letters and double underlining it to show that I meant business:

> After the PhD, GET INTO IMPLEMENTATION SCIENCE!!!

As it turned out, my doctoral study took eight years to complete because we followed four cohorts from Year 7 through to Year 11 – one 'control'

cohort and three LSC cohorts. (In case any international readers are unfamiliar, Year 7 is when pupils in England start secondary school and Year 11 is when they sit high-stakes GCSE exams.)

Thanks in part to my emerging interest in implementation science, the LSC had a significant impact on pupil learning outcomes. The first cohort, who took part in more than 400 LSC lessons over a three-year period, went on to achieve the best results the school had ever seen by a significant margin. Furthermore, the disadvantage gap closed from the bottom up, almost completely. By the end of Year 9, the disadvantage gap across all subjects was 25% in the control cohort. In LSC cohort 1, after three years of LSC lessons, the disadvantage gap was just 2% – a 92% reduction from one year group to the next.[1]

These results are all the more remarkable when you consider the fact that the control cohort took part in over 400 *more* lessons of subject learning, compared with the LSC cohorts. And yet the LSC cohorts significantly outperformed the control group in subsequent measures of subject learning. Because they had become more confident, effective, self-regulated learners, pupils in the LSC cohorts were able to learn more effectively in fewer lessons.[2]

The *Making Change Stick* programme

When I finished my PhD, I held true to my 'note to self'. I started reading everything I could lay my hands on to do with implementation science

1 See Mannion, J., Mercer, N. and McAllister, K. (2018). The Learning Skills curriculum: raising the bar, closing the gap at GCSE. *Impact, Journal of the Chartered College of Teaching, Issue 4: Designing Curriculum*. Retrieved from https://my.chartered.college/impact_article/the-learning-skills-curriculum-raising-the-bar-closing-the-gap-at-gcse.

2 We've since replicated these findings in a range of settings around the world. See https://rethinking-ed.org/lep for details of the impact at Knysna High School in South Africa. For the full-fat version of the LSC study, see Mannion, J. (2018). *Metacognition, self-regulation, oracy: A mixed methods case study of a complex, whole-school Learning to Learn intervention*. Doctoral thesis, Hughes Hall, University of Cambridge. Available at: bit.ly/MannionPhD. For a more accessible account, see Mannion, J. & McAllister, K. (2020). *Fear is the Mind Killer: Why Learning to Learn deserves lesson time – and how to make it work for your pupils*. Woodbridge: John Catt Educational. There is also now a professional learning resource based in part on my doctoral research. See Mannion, J., Stoll, L., Spence-Thomas, K. & Ross, G. (2023). *Activate: A professional learning resource to help teachers and leaders promote self-regulated learning*. Crown House. Available at https://www.crownhouse.co.uk/activate.

and change management. By this time, I was working as a bespoke programmes leader at the Centre for Educational Leadership at the UCL Institute of Education, where I was able to research and develop these ideas with schools.

One thing I learned was that implementation science does not provide a complete account of 'how to make interventions effective in real-world contexts'. There are several related fields of study – most notably, improvement science – that also provide important pieces of the puzzle.

To date, most of the work around implementation and improvement science has focused on healthcare. However, in writing this book I have trawled the change management literature from many other fields, including education, business and manufacturing, engineering, social psychology, sociology, cognitive science, political science and behavioural science. (We'll explore these ideas in more detail in *Chapter C: Implementation and improvement science – a new synthesis*.)

Over the last 10 years or so, I've worked with hundreds of teachers, leaders and support staff from schools all over the world, figuring out how to harness the power of implementation and improvement science to improve educational and life outcomes for children and young people. This effort has resulted in the *Making Change Stick* programme, the contents of which you now hold in your hands.

I've now shared these ideas with thousands of schools, and the feedback has been phenomenal – as you may have noticed in the testimonial quotes at the start of this book. To pull out three examples:

> The *Making Change Stick* programme has really been the making of me as a leader.
>
> I really wish I had done this training before I embarked on my current project … goodness me, I would be doing things differently if I had had this learning first!
>
> I hope this will be my legacy to this school. If I've done nothing else for them, I hope this is what they'll thank me for in 20 years' time.

I've been training teachers for many years now, and I've read many thousands of comments from teachers and school leaders in evaluation surveys, so I speak from experience when I say that the comments people

make upon completing the *Making Change Stick* programme are *next level*. Feedback like this is not normal, and it makes me feel incredibly hopeful that the ideas in this book will help improve outcomes for children and young people for many years to come.

The *Making Change Stick* programme can be completed by any individual with an interest in school improvement. However, it's really designed for a slice team to work through together, focusing on a real-world school improvement initiative. In this sense, the programme is rooted in a model of 'learning by doing'. (A slice team is a change team comprising representatives from a range of stakeholder groups. This is the big idea at the heart of the *Making Change Stick* programme. We'll explore this in more detail in *Chapter 1: Appoint a slice team*.)

Throughout the research and development period, I facilitated the programme, either in-person or remotely. However, it soon became apparent that if these ideas are going to be applied at a system level I needed to get out of the way! So now, alongside this book, schools can work their way through the *Making Change Stick* programme independently using an online training suite (available at makingchangestick.co). This includes the following elements:

- A facilitator guide – includes timings, activities and suggested discussion points so the programme can be facilitated in-school.
- A series of short videos – one for each chapter of the book.
- A playbook – includes a summary of the key ideas from each chapter, with activities designed to help you apply the ideas to your context.
- Data collection tools – practical guidance on how to capture your school improvement initiative in all its complexity.
- A project management system – a customisable tracking system to help you visualise what needs to be done, by whom, when, for how long and in what order.
- Slide presentations – for sharing key ideas in professional learning sessions.
- Access to the *Making Change Stick* community – connect and learn from educators all over the world, a rich source of real-world professional learning.

- Top-up support – additional implementation and improvement coaching can be arranged as required.

Working your way through the *Making Change Stick* programme usually takes around 24 hours (for example, 8x three-hour sessions, or 12x two-hour sessions). Typically, these sessions will be spread across two or three terms, although they can be done more intensively over a period of a few weeks. This is a substantial time commitment. It has to be. As we will soon cover, implementing school improvement is a significant challenge and you need to carefully consider the change process from every angle.

To underscore this point: the *Making Change Stick* programme is not a 'silver bullet' or a 'quick fix'. It's a systematic, collaborative, agile approach to implementing school improvement that is highly impactful, hugely rewarding and endlessly fascinating.

Books may be systematic, but they are neither collaborative nor agile. Rather, they are static and linear and therefore limited in their ability to bring about change. Consequently, although this book contains all the key ideas from the *Making Change Stick* programme, it's no substitute for the online training suite. If you really want to improve outcomes for the children and young people in your setting, you may wish to consider accessing the full programme.

How to use the book

The *Making Change Stick* programme is a largely sequential process that you work through from beginning to end, leaving no stone unturned as you plan and implement a school improvement initiative. It therefore makes sense to read the book from beginning to end, especially on first reading.

Part 2 of the book has the same structure as the full *Making Change Stick* programme. This is organised into three phases: **make a start**, **make a plan** and **make it happen**. This part of the book is full of practical tools and strategies that you can use to implement school improvement initiatives.

If you're already experienced at leading whole-school change, you may wish to use the checklist that appears throughout *Part 2* as a menu of ideas to supplement your existing practice. Once you've read it through,

I hope the book will become a reference text that you will dip in and out of for many years to come.

However, if you're new to leading whole-school change – or if you're new to implementation and improvement science – I recommend you begin with *Part 1: Rationale and overview*. The chapters in *Part 1* are lettered, rather than numbered, because the chapter numbers in *Part 2* align with the online training suite. *Chapter A* sets the scene by asking a question that never fails to blow my mind. In *Chapter B*, we'll consider why so few school improvement initiatives actually improve pupil outcomes. *Chapter C* provides a brief introduction to implementation and improvement science and explains how the *Making Change Stick* programme draws together tried-and-tested ideas from these two fields of study, alongside a range of other sources. And *Chapter D* outlines the important role of school leaders in making change stick.

The central argument

In his fascinating book *Influence: The Psychology of Persuasion*, Dr Robert Cialdini wrote, 'If social psychology was a business, you would say it has great [research and development] but no shipping department'.[3]

We might say the same of implementation and improvement science. With a handful of honourable exceptions, the change management literature is not what you might call a page-turner. But nestled within the screeds of jargon and endlessly bewildering diagrams, there are *loads* of really useful ideas for how to improve people's lives.

The central argument of this book is as follows:

- The knowledge of how to bring about lasting, positive change in real-world contexts is out there – it's just a bit all over the place. The *Making Change Stick* programme draws together tried-and-tested tools and strategies from a range of sources and assembles them into an easy-to-follow framework that can be applied to any improvement initiative or setting.
- It's really important that we get better at implementing school improvements as soon as possible. If we can bring about a step change in terms of increasing the effectiveness of school

3 Cialdini, R. B. (2007). *Influence: The Psychology of Persuasion*. Harper Business.

improvement initiatives, the potential benefits to the educational and life chances of children and young people are almost incalculable. It is my deeply held belief that getting to grips with the ideas in this book is the key to unlocking many of the problems we face – and not just in education.

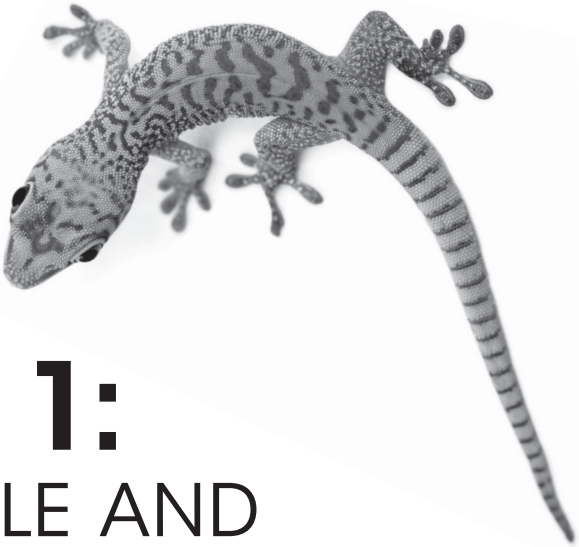
- If you follow the strategies and exercises set out in this book, you will significantly boost your ability to bring about lasting improvements to the educational and life outcomes of the children and young people in your setting. You may even learn a thing or two about self-improvement along the way.

So, let's get started! You may wish to grab a notepad – you're about to learn some game-changing information…

CHAPTER SUMMARY

- 'Implementation science is remarkable for two reasons. Few scientists and fewer practitioners have heard of it […] and most scientists and practitioners require it immediately!' Ten years on, this is still true. But hopefully, not for much longer…
- 'The practitioner *is* the intervention.' Thinking about implementation as a 'people problem' is a game-changing insight that has important consequences for how we think about leading change in schools.
- Implementation science does not provide a complete account of how to make interventions effective in real-world contexts. Several related fields of study – notably, improvement science – also provide important pieces of the puzzle.
- To date, much of the work around implementation and improvement science has focused on healthcare. The *Making Change Stick* programme applies these tried-and-tested ideas to the world of education.
- The *Making Change Stick* programme can be completed by any individual with an interest in school improvement. However, it's really designed for a slice team to work through together as you plan and implement a real-world school improvement initiative.

- This book contains all the ideas that appear in the full *Making Change Stick* programme. However, it's no substitute for the online training suite. If you really want to bring about lasting improvements to the lives of the children and young people in your setting, you may wish to consider accessing the full programme.
- The central argument of the book is as follows:
  - The *Making Change Stick* programme draws together tried-and-tested tools and strategies from a range of sources and assembles them into an easy-to-follow framework that can be applied to any improvement initiative or setting.
  - It's really important that we get better at implementing school improvement as soon as possible. The potential gains are huge.
  - If you follow the strategies and exercises set out in this book, you will significantly boost your ability to bring about lasting improvements to the educational and life outcomes of the children and young people in your setting.



PART 1:
RATIONALE AND OVERVIEW

CHAPTER A
THE MIND-BLOWING QUESTION

What proportion of school improvement initiatives improve pupil outcomes?

Over the last five years or so, I've posed this question to thousands of teachers, leaders and support staff all over the world. I never tire of doing so, because the responses never fail to blow my mind.

You may wish to pause for a moment while you consider this question. If you can, try to come up with a percentage figure.

When I ask this question, I often initially notice some interesting non-verbal responses. People laugh; they smile; they roll their eyes; they raise their eyebrows; they cast uncertain glances at one another; and they pull unusual facial expressions as they scroll through their memories and try to arrive at a ballpark figure.

Perhaps you're lucky enough to have worked in incredibly well-run schools, and your answer to this question is quite high. If so, congratulations – you won the lottery. Because in my experience, the vast majority of people respond to this question with a figure in the region of 10–20% – an estimate that is backed up by the available evidence, as we'll soon see.

Clearly, a failure rate of 80–90% is somewhat suboptimal. But the story does not end here.

Whatever figure you came up with, we're now going to tighten the criteria a little. As you look back over your career to date, what

proportion of school improvement initiatives would you say meet the following conditions:

- The initiative led to demonstrable gains in pupil outcomes.
- There is evidence of causation (i.e. you have data that connects the improvement initiative to the improved outcomes).
- The gains were sustained over several years, and are still happening now.

Again, you may wish to take a moment to reflect on whether you need to revise your figure in light of these criteria.

In my experience, at this point many people revise their figure down to somewhere around 0–5%. Or they may point to an initiative they believe to be impactful, but then say, 'We don't really have compelling *evidence*… we just *think* it's effective.' Or perhaps, 'There are definitely *pockets* of effective practice, but I wouldn't say it's working *everywhere* just yet.'

At this point you may be thinking, 'Hang on a minute. This all sounds a bit anecdotal. Where's the *evidence*?' If so, great! You're already thinking like an implementation scientist.

In truth, it's not possible to arrive at an accurate answer to the question. People tend not to publish detailed accounts of things that don't work. Also, it largely depends on how you define and measure 'improved pupil outcomes.'

But we *can* look for clues – and they all point in the same direction. Let's look at three: experts in change management, the available research evidence and teacher surveys.

Clue 1: Experts in change management

John Kotter is Emeritus professor of leadership at Harvard Business School and a world-renowned expert on organisational change. If you've ever done a school leadership course, you may be familiar with his eight-step framework for leading change. In his book, *A Sense of Urgency*, Kotter wrote:

> From years of study, I estimate today more than 70% of needed change either fails to be launched, even though some people

> clearly see the need; fails to be completed, even though some people exhaust themselves trying; or finishes over budget, late and with initial aspirations unmet.[4]

Kotter does make clear here that this is an estimate based on his experience working with many organisations over several decades, including, but not limited to, schools. But this figure of 70% comes up a lot. For example, in an influential paper published in the Harvard Business Review, Beer and Nohria wrote, 'The brutal fact is that about 70% of all change initiatives fail.'[5]

To be clear, some people have contested this figure of 70% and think the real figure is much lower, while others think it may even be higher.[6] And Kotter, Beer and Nohria were talking about change initiatives *generally* (i.e. in businesses and other large organisations) rather than in education *per se*. But the 70% figure provides us with a kind of background reading as to the estimated failure rate of change initiatives in any large organisation.

In education, the situation is no better. In their book *Learning to Improve: How America's Schools Can Get Better at Getting Better*, Professor Anthony Bryk and his colleagues at the Carnegie Foundation for the Advancement of Teaching – leading exponents of improvement science in education – powerfully summarise the research evidence:

> By definition, improvement requires change. Unfortunately, in education change too often fails to bring improvement – even when smart people are working on the right problems and drawing on cutting-edge ideas. Believing in the power of some new reform proposal and propelled by a sense of urgency, educational leaders often plunge headlong into large-scale implementation. Invariably, outcomes fall far short of expectations. Enthusiasm wanes, and the field moves on to the next idea without ever really

4 Kotter, J. (2008). *A Sense of Urgency*. Boston, MA: Harvard Business Press, p13.

5 Beer, M. & Nohria, N. (2000). Cracking the code of change. *Harvard Business Review,* 78(3), 133–41, p133.

6 For example, Hughes, M. (2011). Do 70 Per Cent of All Organisational Change Initiatives Really Fail?. *Journal of Change Management*, 11:4, 451–64. See also Zhexembayeva, N. (2020). 3 Things You're Getting Wrong About Organisational Change. *Harvard Business Review*, June 9.

> understanding why the last one failed. Such is the pattern of change in public education: *implement fast, learn slow, and burn goodwill as you go.*[7]

Perhaps one reason so many change initiatives fail to improve anything is that people tend to focus on the former – change – rather than the latter – improvement. As Viviane Robinson explains in her illuminating book, *Reduce Change to Increase Improvement*:

> To lead change is to exercise influence in ways that move a team, organisation or system from one state to another. The second state could be better, worse or the same as the first. To lead improvement is to exercise influence in ways that leave the team, organisation or system in a better state than before. […] Good ideas sometimes fail to generate reliable improvement because neither the advocates nor the implementing agents know how to execute them in ways that achieve the intended improvement.[8]

This phenomenon, whereby schools implement an endless stream of 'good ideas' that fail to achieve the 'intended improvement', leads to a condition that goes by many names, such as:

- Initiative-itis.[9]
- Innovation fatigue (or fad-igue).
- 'This too shall pass' syndrome (a phrase often muttered under teachers' breaths as the latest wheeze is announced).

Whenever I mention the phrase 'this too shall pass' before an audience, a ripple of laughter spreads through the room – the laughter of recognition. Initiative-itis is all too familiar to anyone who has spent more than a year or two working in schools.

7 Bryk, A. S., Gomez, L. M., Grunow, A. & LeMahieu, P. G. (2015). *Learning to Improve: How America's Schools Can Get Better at Getting Better.* Cambridge, MA: Harvard Education Press. Emphasis added.

8 Robinson, V. (2018). *Reduce Change to Increase Improvement*. Corwin: Thousand Oaks, CA, pp 2–5.

9 Hendry, C. (1996). Understanding and Creating Whole Organizational Change Through Learning Theory. *Human Relations*, 49(5), 621–41.

But while it may raise a wry smile, it's important to recognise that this condition is horribly corrosive. It makes people sceptical and increasingly cynical about the idea that lasting, positive change is even possible.

Clue 2: The available research evidence

As we've seen, it isn't really possible to quantify the extent to which school improvement initiatives are effective or ineffective. But we *can* catch glimpses here and there in the research literature – and it's not a pretty picture.

In 2010, the UK government established the Education Endowment Foundation (EEF), which describes its mission as 'breaking the link between family income and educational achievement […] by supporting schools to improve teaching and learning through better use of evidence.'[10]

Part of the EEF's remit is to carry out lots of medical-style randomised controlled trials, evaluating the impact of 'high-potential projects' to generate new evidence of 'what works.'[11] At the time of writing, the EEF has completed 211 projects, with a further 68 currently underway. Of the 211 completed projects, only 65 had a positive impact on pupil learning outcomes. This gives us a familiar failure rate of 69.2%, which seems particularly high when you consider that initiatives evaluated by the EEF are screened and selected on the basis that they demonstrate 'high potential'.

Elsewhere, the picture looks even less rosy. In one recent longitudinal study, researchers evaluated the impact of 411 leaders of UK schools and found that only 62 of them were able to bring about sustainable improvements at their school – a failure rate of around 85%.[12]

Turning to the international research literature, again a familiar picture emerges. To share just one eye-watering example, in recent years the Bill and Melinda Gates Foundation invested more than $2 billion in an attempt to improve educational outcomes by breaking up US schools

10 https://educationendowmentfoundation.org.uk.

11 https://educationendowmentfoundation.org.uk/projects-and-evaluation/projects.

12 Hill, A., Mellon, L., Laker, B. & Goddard, J. (2017). Research: How the Best School Leaders Create Enduring Change. *Harvard Business Review*, (5). This study has been criticised as the authors didn't clearly explain their methods, so we can perhaps take this finding with a pinch of salt. But it's worth being aware of.

into smaller 'schools within schools'. As Bill Gates later reflected, 'Simply breaking up existing schools into smaller units often did not generate the gains we were hoping for', a finding that he described, with admirable understatement, as 'disappointing'.[13]

Clue 3: Teacher surveys

In January 2024, the teacher polling organisation Teacher Tapp kindly agreed to run my 'mind-blowing question' past the 10,000 or so teachers on their database. Figure 1 shows the breakdown of the responses.

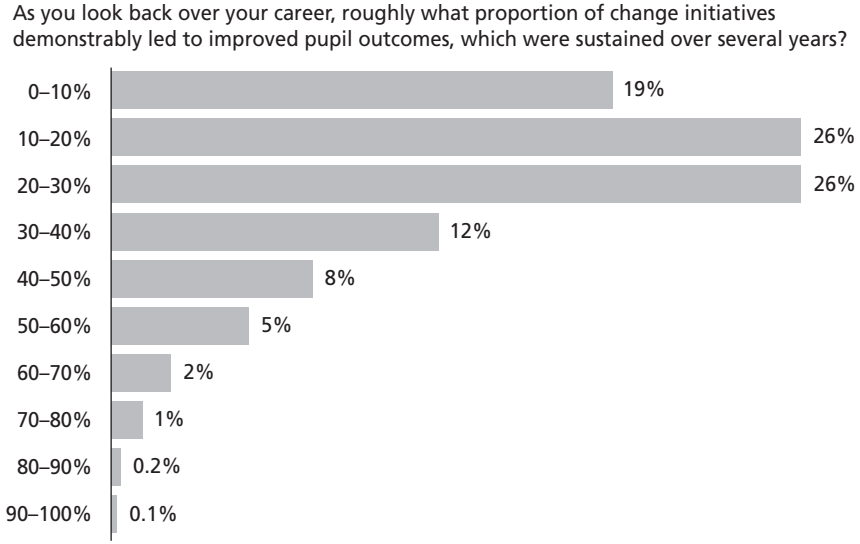


Figure 1 – Teacher responses to the 'mind-blowing question'

To summarise the findings of this survey:

- 19% estimated the success rate to be lower than 10%.
- 45% estimated the success rate to be lower than 20%.
- 71% estimated the success rate to be lower than 30%.

13 Gates, B. (2018). *Forum on Education in America: Prepared remarks by Bill Gates, co-chair and trustee*. Bill and Melinda Gates Foundation, November 11. Retrieved from: https://www.gatesfoundation.org/ideas/speeches/2008/11/bill-gates-forum-on-education-in-america.

Implementing school improvement is no picnic

To recap the story so far: according to leading experts in change management, to the available research evidence and to teacher surveys, the proportion of school improvement initiatives that bring about lasting, positive change is consistently low – somewhere around the 20–30% mark at best, and probably a lot lower.

This is somewhat suboptimal to say the least. In schools, there are often at least two or three significant change initiatives happening in a school at any given point in time. It sometimes feels like the only constant is constant change. So, the fact that the vast majority of school improvement initiatives don't actually improve pupil outcomes is not an inconsequential problem. This. Is. Huge.

This is not to suggest that teachers, leaders and support staff don't make a difference. On the contrary, educators make a difference every single day just by turning up and doing what they do. We're talking here about *school improvement* – the art and science of improving educational outcomes at the level of schools (or groups of schools, or the system as a whole) so that current and future generations achieve better outcomes than those who came before.

Nor should we be too hard on ourselves. If you've ever made a new year's resolution you probably know that 'making change stick' is easier said than done. Whenever I've tried to improve an aspect of my own life – to read more novels, to exercise daily or to eat more healthily, say – I've often found it's fairly easy to keep it going for a week or two. But if you fast forward a few more weeks, it's likely that the good ship 'self-improvement' will have run aground.

I'm far from unique in this regard. A recent analysis of over 800 million activities by the exercise app Strava found that, on average, people give up on their new year's resolution on 19 January. They call it 'Quitters Day'.[14]

Of course, bringing about lasting, positive change in our lives *is* possible. I struggled *for years* to establish and maintain healthy habits around things like exercise, diet, sleep, reading, meditation and technology

14 Haq, S. N. (2020). This is the day you're most likely to let your New Year fitness goals slip. *Runner's World.* Retrieved from: https://www.runnersworld.com/uk/training/a776013/today-is-the-day-youre-most-likely-to-let-your-new-year-fitness-goals-slip/.

addiction. My wife used to complain that I was forever buying books with titles like '365 Ways to Be More Productive Without Actually Doing Anything'. I've now made huge progress on each of these fronts, thanks in part to many of the ideas in this book. But it has been no cakewalk. Literally!

If it's hard enough to pick up a novel, take yourself to the gym or resist the doughnuts in a staff meeting, then bringing about lasting, positive change in a large, complex organisation like a school starts to look fiendishly difficult.

So, I want to be really clear at the outset. Making change stick in schools – motivating and mobilising a large, diverse group of people to all start consistently pulling in the same new direction in such a way as to bring about sustained, improved outcomes for current and future cohorts – well, let's just say it's no picnic.

Bringing about lasting, positive change in schools *is* possible. There are many examples of schools that have improved almost beyond measure. It's just that there are many *more* examples of school improvement initiatives that fail to meet their stated aims.

The question is, why?

CHAPTER SUMMARY

- According to experts in change management, teacher surveys and the available research evidence, the proportion of school improvement initiatives that bring about lasting, positive change is consistently low.
- When schools implement an endless stream of 'good ideas' that fail to deliver improved outcomes, it leads to initiative-itis. People become sceptical and increasingly cynical about the idea that lasting, positive change is even possible.
- In schools, there are often several significant change initiatives happening at any one point in time. Therefore, the fact that the vast majority of school improvement initiatives don't actually improve pupil outcomes is not an inconsequential problem. It's huge.

- We shouldn't be too hard on ourselves. Implementing lasting improvements in our own individual lives is hard enough. Doing so in a large, complex organisation like a school is considerably more difficult.
- Bringing about lasting, positive change *is* possible. There are many examples of schools that have improved almost beyond measure. It's just that there are many more examples of school improvement initiatives that have failed to meet their intended goals.

CHAPTER B
WHY DO SO FEW CHANGE INITIATIVES ACHIEVE THEIR INTENDED GOALS?

Teachers and school leaders aren't taught how to implement change effectively, and there are many problems with top-down change.

There are many reasons why a school improvement initiative might fall short of achieving its intended goals. In this chapter, we'll examine what I believe to be the two main causes:

1. Teachers and school leaders aren't taught how to implement change effectively.
2. There are many problems associated with top-down change – and top-down change is our default model.

Let's look at each in turn.

Reason 1: School leaders aren't taught how to implement change effectively

This is self-evidently the case. As we've seen, most school improvement initiatives fail to achieve their stated goals – and most school improvement initiatives are driven and overseen by senior leaders. If school leaders were taught how to implement change effectively, we might expect to see a much higher success rate. But we can also see this is true by looking at the training teachers and school leaders receive.

To become a school leader in England and Wales, you must complete a National Professional Qualification (NPQ).[15] At the time of writing, there are five leadership NPQs (senior leadership, headship, executive headship, early years leadership and one for special educational needs and disabilities (SEND) coordinators) and five specialist NPQs (leading teacher development, leading teaching, leading behaviour and culture, leading literacy and leading primary mathematics). This suite of qualifications was introduced in 2021, replacing a pre-existing set of four NPQs (middle leadership, senior leadership, headship and executive leadership).

Under the old NPQ system – the training that the vast majority of current school leaders in England and Wales received – there wasn't much of a focus on change management. I know this because I used to work at the UCL (University College London) Institute of Education, and part of my job was to facilitate NPQ programmes for groups of aspiring middle and senior leaders. We would touch upon a few key theorists and frameworks, such as:

- Kotter's eight-step process of change.
- The Kübler-Ross change curve, based on the 'stages of grief' model.
- Fullan's 'three keys for maximising impact'.

All good stuff, by the way. And both the old and new NPQs require each participant to implement a school improvement initiative and evaluate its impact. But under the old NPQs, aspiring leaders weren't provided with explicit guidance on how to do this. They were just told about a few high-level models for understanding change and then expected to lead an implementation project – and hopefully to do it well.

There's also a structural reason why the NPQs don't teach school leaders how to implement change effectively. Both the old and new qualifications take around 12–18 months to complete. However, if the literature on change management is clear about one thing, it's this: *it takes a lot longer than 12–18 months to bring about lasting, positive change.*

15 Technically an NPQ is voluntary, but most job descriptions for leadership positions cite them as an essential requirement. NB the account of current and historical leadership training in this chapter relates mainly to England and Wales, although much of the content will also be relevant to other countries.

For example, in the longitudinal study of 411 UK school leaders mentioned in *Chapter A: The mind-blowing question*, the researchers noted that:

> In our study, it took *at least five years* to engage a school's community, change its culture and improve its teaching. The most successful leaders stayed for the whole of this journey, and often longer, with test scores increasing by an impressive 45–50 percentage points in the first *eight years* after they took over.[16]

In a similar vein, Kotter writes: 'Until changes sink deeply into a company's culture, a process that can take *five to ten years*, new approaches are fragile and subject to regression.'[17]

The short-term nature of school leadership training also undermines the very projects that participants undertake in order to gain the qualification. Over the years, I've heard many teachers dismiss a school improvement initiative led by an aspiring senior leader because 'they're just doing this so they can pass their course. I bet nobody will even mention this next year.' 'This too shall pass' syndrome strikes again!

The new suite of NPQs do have more of an explicit focus on implementation, which we'll examine shortly. To set the scene, we need to take a brief diversion.

The EEF implementation guidance

In 2018, the Education Endowment Foundation (EEF) published a guidance report titled *Putting Evidence to Work: A School's Guide to Implementation*. An updated version, titled *A School's Guide to Implementation: Guidance Report*, was published in 2024.[18]

16 Hill, A., Mellon, L., Laker, B. & Goddard, J. (2017). Research: How the Best School Leaders Create Enduring Change. *Harvard Business Review*, September 14. Retrieved from: https://hbr.org/2017/09/research-how-the-best-school-leaders-create-enduring-change. Emphases added.

17 Kotter, J. P. (1995). Leading Change: Why Transformation Efforts Fail. *Harvard Business Review*. Retrieved from: https://hbr.org/1995/05/leading-change-why-transformation-efforts-fail-2. Emphasis added.

18 EEF (2024). *A School's Guide to Implementation: Guidance Report*. London: Education Endowment Foundation. Retrieved from: https://educationendowmentfoundation.org.uk/education-evidence/guidance-reports/implementation.

The EEF implementation guidance has been widely embraced by the teaching profession – reportedly, the document has been downloaded 'more than 100,000 times a year' since its launch.[19] This is hugely encouraging since it reveals a hunger within the teaching profession for guidance on how to implement school improvement.

The updated guidance report centres around three recommendations:

1. Adopt the behaviours that drive effective implementation. This centres around three core behaviours: engage, unite and reflect.
2. Attend to the contextual factors that influence implementation. This focuses on three such factors: what's being implemented, systems and structures, and people who enable change.
3. Use a structured but flexible implementation process. Here, the implementation process is presented as a four-stage cycle: explore, prepare, deliver and sustain.

The EEF guidance report includes a number of useful insights about change implementation, such as:

> Implementation is fundamentally a collaborative and social process driven by how people think, behave and interact.
>
> Schools can use implementation teams that include a range of stakeholders to plan, manage and review implementation of an intervention.
>
> Where possible, aim to repurpose existing systems and structures rather than bolting on new ones.[20]

However, there are many practical ideas and strategies for implementing school improvement that the EEF guidance either overlooks or oversimplifies. There's no need to enter into a detailed critique here – anything that appears in the *Making Change Stick* programme that

19 Henshaw, P. (2024). Getting interventions right: Popular EEF implementation guidance is revamped and updated. *Headteacher Update*, April 24. Retrieved from: https://www.headteacher-update.com/content/resources/getting-interventions-right-popular-eef-implementation-guidance-is-revamped-and-updated/.

20 EEF (2024). *A School's Guide to Implementation: Guidance Report*. London: Education Endowment Foundation, p1–16.

does not appear in the EEF guidance should be viewed as an important omission. This includes things like:

- How to appoint an implementation team and how the team should operate.
- The importance of communications planning (often overlooked in schools).
- How to use backward design, i.e. starting with the end in mind and working towards it in a systematic way.
- How to write impact goals that specify the difference you would like to make, for whom and by when.
- How to understand the problems you currently face by conducting a root cause analysis.
- How to build and refine an improvement strategy over time.
- How to use a theory of action to understand the difference between the status quo and an alternative (desired) future.
- What 'tight but loose' implementation looks like in practice.
- How to build a shallow 'on-ramp', rather than viewing school improvement as a series of on–off switches.
- How to plan for diffusion (i.e. how to spread effective practice throughout the school over time).
- The crucial importance of planning for habit change.
- How to write a data collection plan that captures evidence at three levels: baseline, impact and side effects.
- How to create an implementation timeline to minimise workload and avoid 'pinch-points'.
- How to use a pre-mortem to anticipate problems and solve or mitigate them in advance.
- The importance of project management – and how to do it.
- The need to create individual as well as whole-school improvement plans.
- How to use PDSA cycles (plan, do, study, act) to iterate and improve practice – a cornerstone of improvement science.

- How to combine data and dialogue to inform decision-making in an ongoing way.
- How to embed and sustain improvements for the long term.

To summarise, in putting implementation on the map, the EEF guidance is a welcome step in the right direction. However, it misses out many important steps and does not adequately guide school leaders through the complex process of implementing a whole-school improvement initiative.

Meanwhile, back at the NPQs…

As we saw earlier in this chapter, the new NPQs do have more of a focus on implementation – each of the 10 frameworks has a section on implementation at the end.[21] However, the authors essentially just copy-and-pasted the four-stage EEF cycle and bolted it on to the end of each framework. The language used in these frameworks is almost identical to that used in the EEF guidance report.

To recap, the vast majority of current school leaders were trained under a system that did not provide them with explicit guidance on how to implement school improvement effectively. The training currently provided to aspiring school leaders does provide *some* guidance on how to implement school improvement. However, this guidance overlooks or oversimplifies many important ideas and strategies from implementation and improvement science.

This point was made forcefully by Alasdair Kennedy, the headteacher at Trinity School in Croydon, upon completing the *Making Change Stick* programme:

> People don't talk enough about the science of implementation, and equally the training is very scarce. And yet it's such a key area of understanding for a school, or any institution, if they are going to attempt change. That's why [the *Making Change Stick* programme] is so valuable – because it's something we're doing all the time, but we've never really been trained in it.

21 Available at https://www.gov.uk/government/publications/national-professional-qualifications-frameworks-from-september-2021.

So, teachers and school leaders aren't taught how to implement change effectively. This is rather an important oversight, since 'implementing school improvement' is essentially a school leader's job description.

We'll now turn to the second major reason why so few school improvement initiatives meet their stated goals.

Reason 2: Top-down change

Much of society is predicated on the idea that top-down change is the best way to organise human affairs. In politics, business and healthcare, for example, there's usually a small number of people at the 'top' of the organisation – cabinet ministers, board members, NHS directors – who make decisions about what needs to happen and then just kind of 'announce' those decisions to people further down the hierarchy.

Education is no different, with the Secretary of State at the top of the pyramid – down through myriad layers of junior ministers, civil servants, regional schools commissioners, trust CEOs, executive headteachers, headteachers, deputy heads, assistant principals, heads of faculty, heads of department, lead practitioners, seconds in department, classroom teachers, teaching assistants and learning support assistants – and with children and young people at the bottom. Throughout this hierarchy, decision-making is largely one-directional, and it flows from top to bottom.

When top-down works

To be clear, top-down change *can* be useful – usually when a situation calls for swift action or lends itself to a straightforward solution.

For example, I used to work at a school where we had a significant problem with litter. There have been some fascinating studies looking at how the presence of litter can affect people's behaviour, even increasing the incidence of criminal and antisocial behaviour.[22] There was not an epidemic of criminal or antisocial activity at my litter-strewn school. However, it's likely that having so much rubbish lying around may

22 Keep Britain Tidy (2014). *How Clean is England? Local Environmental Quality Survey of England 2013/2014.* November, London: Keep Britain Tidy. See also Keizer, K. E. (2010). *The spreading of disorder.* [Thesis fully internal (DIV), University of Groningen]. [s.n.].

have adversely affected the pupils' sense of respect for the school, their behaviour and perhaps even their learning in lessons.

One day, the senior team took decisive action. From that day forth, pupils would only be allowed to eat and drink in the canteen. Despite some initial grumbles, everyone soon adapted to the new rule, the litter problem went away overnight, and the school was a much more pleasant place to be.

Beyond education, the introduction of seat belts and the indoor smoking ban are two commonly cited examples where top-down change led to improved public health outcomes.[23] Generally, top-down change is effective when there's a simple cause-and-effect relationship between two factors (seat belts save lives, cigarettes shorten them) and where a single policy decision gets to the heart of the matter.

When top-down is less effective

When we're dealing with more complex, multi-dimensional issues, top-down change tends to be less effective. The areas of school life that often feature in school improvement plans, such as improving reading, reforming the curriculum or improving behaviour, tend to fall into this category. At the level of national education policy, this includes things like fixing the attendance crisis, closing the disadvantage gap or improving mental health and wellbeing. Wider societal examples include things like averting climate catastrophe, fixing the social care crisis or addressing the fact that life expectancy has started going down for the first time in decades.

Top-down change is not only *ineffective* at solving complex problems such as these, it's often *counterproductive*. Here are six ways in which top-down change can inhibit school improvement.

1. Black box leadership

When the 'people at the top' make all the big decisions, they often keep things to themselves. Senior leadership teams tend not to publish the minutes of their meetings, nor do they open their meetings to a 'viewing

23 Høye, A. (2016). How would increasing seat belt use affect the number of killed or seriously injured light vehicle occupants? *Accident Analysis & Prevention*, 88, 175–86. Strassmann, A., Çolak, Y., Serra-Burriel, M. et al. (2023). Nationwide indoor smoking ban and impact on smoking behaviour and lung function: a two-population natural experiment. *BMJ Thorax*, 78, 144–150.

gallery' as happens in local council meetings, courts of law and the House of Commons. Instead, senior teams usually hold meetings behind closed doors. All the key decisions are made inside a 'black box' that the wider school community cannot see into.

As a consequence, the wider school community does not get to play a meaningful role in shaping the decisions that affect their daily lives, or even to see how these decisions are made. Instead, people further down the hierarchy often feel that change is 'done to them'. This brings us to the second way in which top-down change can be counterproductive.

2. Human nature

Put simply, people don't like having change 'done to them' – even when it's a really good idea. This is a well-documented aspect of human nature – as a general rule, *people don't like being told what to do*. Conversely, people *really do* like to have at least a small amount of say over what they do, how and when.

This hard-wired need for autonomy becomes apparent at a very young age, when a parent tries to put their child's shoes on, for example, and the child says, 'No! Me do it!' This pattern persists long into adulthood. Indeed, several studies have found that autonomy is more important to employees than how much they get paid.[24]

Research has found that giving people autonomy in the workplace can improve staff retention, increase wellbeing and enhance productivity. It's what you might call a win-win-win. But these benefits remain unrealised in a top-down culture where the autonomy of the wider workforce is constrained or suppressed. As Michael Fullan memorably puts it: 'If you want to kill a good idea, mandate it.'[25]

24 Reisinger, H. & Fetterer, D. (2021). Forget Flexibility. Your employees want autonomy. *Harvard Business Review*, October 20. Retrieved from: https://hbr.org/2021/10/forget-flexibility-your-employees-want-autonomy. See also Maestas, N., Mullen, K. J., Powell, D., von Wachter, T. & Wenger, J. B. (2018). *The Value of Working Conditions in the United States and Implications for the Structure of Wages.* National Bureau of Economic Research, Working Paper No. 25204: 22.

25 Fullan, M. (2024). *It is about being specific about the change but not mandating it. (If you want to kill a good idea, mandate it). If it's good AND specific most people will adopt it.* Retrieved from: https://x.com/MichaelFullan1/status/1770542102855713227.

3. Consultation exercises

In a top-down culture, leaders often undertake a consultation exercise at the outset of a change initiative. Broadly speaking, this is to be encouraged – when they're done well, consultation exercises draw on a wide pool of experience to help inform decision-making. They can also help make the wider school community feel included in the change process.

However, there are several ways in which consultation exercises can be counterproductive. The worst case is when consultation exercises are conducted to create the *appearance* of having listened to people, when in fact most of the key decisions have already been made.

Even when consultations are conducted in a spirit of genuine curiosity and collaboration, if people *feel* their suggestions have been ignored, they may *perceive* the process to have been a hollow 'listening exercise'. Rather than making people feel included, this can lead to a sense of resentment or ill-feeling towards the change initiative.

Another issue is consultations tend to take place at a particular point in time, for example within a 30-day window. Consequently, the information collected is limited to what is known at that point in time. If important information comes to light once the consultation window has closed, there may be no obvious mechanism through which the wider school community can contribute to the decision-making process.

4. An 'us and them' culture

Within any population, some people are more ready for change than others. Typically, there will be a spectrum with 'keen beans' at one end and 'resistors' at the other, with everyone else somewhere in between. This is a foundational concept in implementation science that we'll explore in *Chapter 13: Plan for diffusion*.

When change is implemented in a top-down way, there's often an expectation that everyone will implement the change in lockstep – 'keen beans' and 'resistors' alike. Where resistance is encountered, leaders may respond in one or more of the following ways:

- Have a quiet word to clarify expectations.
- Provide support to help the person adapt to the new norm.

- Notify the person's line manager, asking them to make clear this is a whole-school expectation and they need to get 'on the bus'.
- Arrange a meeting to discuss the issue formally.
- Put something in writing, such as a warning letter, contract or agreement that the person signs up to.

Where resistance becomes entrenched, more serious actions may be considered – the dreaded 'support packages' and 'capability measures'. Another approach is simply to adopt a heavy-handed tone. People sometimes refer to this approach as strong-arm leadership, or my way or the highway, where a leader essentially says, 'I'm the boss, this is my decision – and if you don't like it, you know where the door is.'

This approach may be effective at suppressing dissenting voices in the short term. But it can also create a culture of fear, rather than an open-door ethos of trust and mutual support where people feel they can take risks and request support around issues they're struggling with without fear of repercussion.

Whichever of these options are used – from the quiet word to the heavy-handed ultimatum – it's important to recognise these are all top-down moves, with one person using their authority to encourage, persuade or coerce a colleague into changing their ways. Because they rely on a power differential, all such top-down moves can create an 'us and them' culture, with school leaders doing the doing and their colleagues being done to. In some cases, this 'us and them' culture can become toxic, with the senior team and the wider staff body viewing one another as adversaries rather than as colleagues working to achieve the same goals.

5. A compliance mindset

When you're implementing a school improvement initiative, what you really want is for everyone to get on board with a change initiative to help drive it through. In the best-case scenario, everyone in the organisation will be involved in trying out new ideas and strategies, evaluating the impact on pupil learning and sharing best practice.

However, when change is implemented in a top-down way, people often aim simply for compliance. They don't really buy in to the change initiative, but equally they don't want to be seen as being awkward. They

simply want to be *seen* to be doing the right thing when somebody walks past with a clipboard, without fundamentally changing their practice. In this way, a top-down approach to change management can create a tick-box mentality, rather than harnessing the collective will of the staff body to drive the process of school improvement.

6. Groupthink

In 1971, the psychologist Irving Janis published a seminal article in which he set out to explain how 'one of the greatest arrays of intellectual talent in the history of the American government' could have presided over some of the worst foreign policy disasters in modern history, including the Vietnam War and the Bay of Pigs invasion of Cuba.[26]

Janis concluded that in groups of like-minded people – even when those people are highly capable, intelligent and well qualified – decision-making often goes awry because of unhealthy in-group dynamics. According to Janis, members of 'prestige' decision-making teams often come to value the group, and their role within it, higher than anything else. They become susceptible to 'group norms that bolster morale at the expense of critical thinking.'[27] This leads them to strive for conformity and unanimity on issues that the group faces and to not think carefully enough about the implications of the decisions they make together.[28]

Such unhelpful group dynamics can also extend beyond leadership teams. Imagine a headteacher announces a new school improvement initiative to the whole staff. A teacher or member of the support staff may think, 'Hmmm. We tried this at my last school and it really didn't work very well. Perhaps I ought to say something…' However, that person probably won't want to raise their hand in a whole-school meeting and contradict their boss, partly because it would be awkward to do so and partly because contradicting your boss in a public forum may not be the best way to advance your career. So, they bite their tongue. This is perfectly understandable. However, we can see how this tendency for people to avoid conflict in the interest of group harmony or self-

26 Janis, I. (1971). Groupthink. *Psychology Today*, 5(6), 43–6.

27 Ibid, p43.

28 Janis, I. (1972). *Groupthink: Psychological Studies of Policy Decisions and Fiascos.* Boston, MA: Houghton Mifflin.

preservation leads to bad decision-making. The headteacher is not made aware of all the relevant information held in the room.

When making decisions that affect many people's lives, it's a good idea to have highly capable, intelligent and well-qualified people in the room. What you don't want is to have *only* highly capably, intelligent and well-qualified people in the room. You also need people who are looking at the problem through fresh eyes. And you especially need people who aren't afraid to ask so-called 'stupid questions'. Because when someone says, 'Can I ask a stupid question?', what they often really mean is, 'Am I missing something, or is this a terrible idea?'

Groupthink has been responsible for many terrible incidents over the years, including aeroplane crashes, space shuttle disasters and financial meltdowns. It's the most serious problem associated with top-down change. And it's far more common than you may think.[29]

Some organisations have developed practices that minimise the extent to which groupthink happens. For example, Toyota have developed an approach to lean manufacturing known as 'The Toyota Way'[30], which includes a number of key ideas such as:

- Nemawashi – making decisions slowly by consensus.
- Hansei – self-reflection.
- Kaizen – continuous improvement.

These ideas, which are woven throughout the *Making Change Stick* programme, have also been put to good use in the public sector.

29 NeuroLeadership Institute (2020). *The Worst Aviation Accident in History is a Case Study for Giving Employees a Voice.* August 6. Retrieved from: https://neuroleadership.com/your-brain-at-work/speaking-up-can-prevent-aviation-accident; Janis, I. (1991). 'Groupthink' in E. Griffin (ed.) *A First Look at Communication Theory* (pp 235–46). New York: McGraw Hill; Esser, J. K. & Lindoerfer, J. S. (1989). Groupthink and the space shuttle challenger accident: Toward a quantitative case analysis. *Journal of Behavioral Decision Making*. 2(3), 167–77; Nichols, P. E. (2010). Groupthink Theory and the Great Crash of 1929. Honors Theses. 1112. Retrieved from: https://repository.lsu.edu/honors_etd/1112.

30 If you want to learn more about The Toyota Way, you can visit the Wikipedia article at: https://en.wikipedia.org/wiki/The_Toyota_Way.

However, such approaches are the exception to the rule. In education – as in business, healthcare and politics – top-down rules the roost, and there remains an urgent need to learn how to systematically avoid groupthink in schools – and in the wider society.

It doesn't have to be this way

To recap, there are two main reasons why so many school improvement initiatives fail to achieve their intended goals:

1. To date, school leaders haven't been taught how to implement change effectively – and this is a significant part of their role.
2. There are many problems with top-down change – and this in itself is a problem, because top-down change is our default model.

The good news is that neither of these problems are insurmountable, and the *Making Change Stick* programme tackles each of them head on.

Through applying powerful insights from implementation and improvement science (and elsewhere) to real-world school improvement initiatives, the *Making Change Stick* programme provides educators with a practical apprenticeship in how to bring about lasting, positive change in real-world contexts. And through using representative slice teams to plan and implement school improvement initiatives, the *Making Change Stick* programme overcomes each and every one of the problems with top-down change outlined in this chapter.

There are three main advantages to implementing change using a slice team. First, you create much better **policy**, because you approach the change process from multiple perspectives, thus anticipating problems and solving them in advance.

Second, people throughout the organisation know they're represented in the slice team – that there's someone like them who will represent their views and interests and with whom they can interact throughout the implementation period. And so, you get **buy-in** like never before.

And third, slice teams work with the grain of **human nature**, rather than against it. They recognise the importance of giving people a voice and a choice over what they do, when and how. And that's the best antidote to groupthink that there is.

CHAPTER SUMMARY

- There are two main reasons why so few school improvement initiatives short of achieving its intended goals:
  - School leaders aren't taught how to implement change effectively.
  - There are many problems associated with top-down change – and top-down change is our default model.
- In England and Wales, the training that the vast majority of current school leaders received didn't provide them with explicit training on how to implement change effectively.
- The new suite of NPQs has more of an emphasis on implementation, based on the EEF's guidance. This is a step in the right direction. However, many important aspects of change implementation are either overlooked or oversimplified in the EEF guidance, and it does not adequately guide school leaders through the complex process of implementing a whole-school improvement initiative.
- Top-down change can be useful when a situation calls for swift, decisive action or lends itself to a straightforward solution. However, there are many problems associated with top-down change. These include:
  1. Black box leadership.
  2. Human nature.
  3. Consultation exercises.
  4. An 'us and them' culture.
  5. A compliance mindset.
  6. Groupthink.
- It doesn't have to be this way. None of these problems are insurmountable, and the *Making Change Stick* programme helps us overcome each and every one of them.

CHAPTER C
IMPLEMENTATION AND IMPROVEMENT SCIENCE – A NEW SYNTHESIS

The *Making Change Stick* programme draws together tried-and-tested ideas from a range of sources – especially implementation science and improvement science.

The jungle of jargon

As I mentioned in the *Introduction*, the seed that led to the *Making Change Stick* programme was planted in 2014 when I attended a conference called 'Implementing Implementation Science'. I was intrigued by the prospect of immersing myself in this 'science of change', and I started to read everything I could lay my hands on.

As I did so, it often felt as though I was hacking my way through a jungle of jargon. The literature on change management is riddled with the stuff. To begin with, there's a surprising lack of agreement on what to even call the study of how to make good things happen. As we can see in Figure 2, such things go by many names.

Figure 2 – Houston, we have a problem

Language is not the only issue. The change management literature is home to a bewildering array of diagrams featuring various combinations of cycles, spirals, staircases, ladders, funnels, light bulbs, magnifying glasses, cogs, hexagons, pyramids, mountains, valleys, 'change curves' – and lots (and lots) of boxes and arrows. And that's before we get to the acronyms…

In short, with a handful of honourable exceptions, the change management literature can be a bit of a slog to wade through, and I often found myself with more questions than answers. But – as they used to say in California – 'there's gold in them thar hills.' Every so often, I would find myself stunned by the elegance or explanatory power of an insight or strategy, and I would feel compelled to try it out in practice.

By the time I finished my PhD in 2018, I was working as a bespoke programmes leader in the Centre for Educational Leadership at the UCL Institute of Education. My job was to design and facilitate professional development programmes for teachers and school leaders, usually rooted in some form of practitioner inquiry. Happily, in this role I was able to create an implementation science programme and pilot it with a small number of primary and secondary schools. The initial version of the programme took the form of two half-day workshops centred around just 10 ideas; the programme is now around three times the size. Nevertheless, the feedback from these early outings was extremely encouraging, and I've continued to trial and develop new ideas with teachers and leaders in hundreds of schools around the world.

The *Making Change Stick* programme draws together ideas and strategies from a wide range of sources, including education, healthcare, business and manufacturing, engineering, social psychology, sociology, cognitive science, political science and behavioural science. There are two fields of study that I've found to be particularly helpful: **implementation science** and **improvement science**. To date, much of the work around implementation and improvement science has focused on healthcare, although ideas from both fields have also been applied in educational settings.

In this chapter, I'll introduce these fields in turn, looking at evidence of impact in healthcare and education. I'll then explain how the *Making Change Stick* programme is a much needed (and often called for) synthesis of ideas from these two fields of study, alongside powerful ideas from those additional areas of scholarship listed above.

Implementation science: What is it, and why should I care?

This heading is borrowed from the title of a fascinating paper by Bauer and Kirchner, which features a case study from psychiatry that powerfully illustrates why people should care about implementation science.[31]

A few years ago, two studies investigated a new approach to treating bipolar disorder called the collaborative care model (CCM). The first

31 Bauer, M. S., Kirchner, J. (2020). Implementation science: What is it and why should I care? *Psychiatry Research*, Volume 283, 112376.

study found that, over three years, the CCM had a significant positive impact across a range of outcomes, including mood, quality of life and satisfaction with care – all at no increased cost. The second study found that compared with 'treatment as usual' the CCM significantly reduced the frequency and severity of symptoms of bipolar disorder, again at 'minimal cost'.[32]

Both studies were randomised controlled trials – widely regarded as the gold standard in experimental design – and were published in respected journals. The CCM was endorsed in national clinical practice guidelines in the US and Canada and listed on the prestigious National Registry of Evidence-Based Programs and Practices.

All of this was about as much as the researchers could have wished for. But there was trouble in paradise:

> It was a no-brainer: improved outcome at little to no cost. […] And yet, within a year of the end of the studies, none of the 15 sites had incorporated the CCM into their usual workflow. The clinicians who had participated in the CCM went back to their usual duties, and the individuals with bipolar disorder went back to receiving their usual form of care. […] For all practical purposes, bipolar CCMs ceased to exist at these sites. The experience in the story is not unique. […] Succinctly put, establishing the effectiveness of an innovation does not guarantee its uptake into routine usage.[33]

To reiterate, not only had use of the CCM not spread beyond the sites where it was trialled and found to be effective – it didn't even take root in those settings!

As Bauer and Kirchner point out, this problem is far from unique. Indeed, it is very much the norm. Alarmingly, research suggests that on

32 Simon, G. E., Ludman, E. J., Bauer, M. S., Unützer, J. & Operskalski, B. Long-term Effectiveness and Cost of a Systematic Care Program for Bipolar Disorder. *Arch Gen Psychiatry.* 2006;63(5):500–08.

33 Bauer, M. S., Kirchner, J. (2020). Implementation science: What is it and why should I care?, *Psychiatry Research*, Volume 283, 112376.

average, it takes 17 years for a clinical innovation with proven efficacy to achieve 14% uptake across the healthcare system as a whole.[34]

Whenever I share these research findings with people, jaws tend to hit the floor. Seventeen years, 14% – these are both bad numbers. What this means is that, should you find yourself in a hospital, there's a surprisingly high chance that you'll receive a suboptimal treatment – despite the evidence being available that other approaches are more effective.

This is a serious, stubborn and somewhat bewildering problem. Every year, human beings spend billions of dollars worldwide on medical and educational research (as in many other fields) and discover all kinds of ingenious, cost-effective ways to improve people's lives. Then we leave the vast majority of that powerful knowledge on the table and return to the substandard status quo.

This is where implementation science comes in. Implementation science is defined as 'the scientific study of methods and strategies that facilitate the uptake of evidence-based practice and research into regular use by practitioners and policymakers.'[35]

There are three important points to make about this definition.

First, implementation science is centrally concerned with closing the gap between what we know and what we do, often referred to as the **know–do gap** or the **research–practice gap**. Essentially, this involves identifying barriers that slow or halt the uptake of evidence-based practices and then figuring out how to reduce or mitigate those problems in a systematic way.

34 Fixsen, D., Blase, K. & Van Dyke, M. (2019). *Implementation Practice and Science*. Active Implementation Research Network. Chapel Hill, NC, p62; Mosteller, F. (1981). Innovation and evaluation. *Science* 211, 881–86. Balas, E.A. & Boren, S. A. (2000). Managing clinical knowledge for health care improvement. *Yearbook of Medical Informatics*. Schattauer, Stuttgart, 65–70; Grant, J., Green, L. & Mason, B., 2003. Basic research and health: a reassessment of the scientific basis for the support of biomedical science. *Res. Eval*. 12, 217–24; Morris, Z. S., Wooding, S. & Grant, J. (2011). The answer is 17 years. what is the question: understanding time lags in translational research. *J. Roy. Soc. Med*. 104, 510–20.

35 University of Washington Implementation Science Resource Hub (n.d.). *What is implementation science?* Retrieved from: https://impsciuw.org/implementation-science/learn/implementation-science-overview.

Second, the word 'regular' is important in the definition we have used. Implementation science starts with an intervention or strategy you have strong evidence for. Then you figure out how to scale up the use of that intervention or strategy in such a way that its use becomes regular, or routine – part of 'the way we do things around here'. So the goal of implementation science is not to establish the impact of an innovation but rather to identify and optimise the factors that influence its uptake into **routine use**.

Third, by focusing on routine use, implementation science is concerned with what happens in **real-world contexts**. In real-world contexts, there are always bumps in the road and things rarely go according to plan. Agendas shift, crises unfold, funding streams run dry. Staff turnover in particular is a perpetual barrier to effective implementation.

To be clear, implementation science isn't about creating conceptual frameworks and flow charts that work only in theory. It's about tackling the problems that inevitably arise when you try to bring about lasting, positive change in real-world contexts – in all their messy, ever-changing complexity.

The importance of slice teams

Implementation scientists have found that one of the most powerful ways to bring about lasting, positive change in real-world contexts is to use a **slice team**. There are many ideas in the *Making Change Stick* programme, but this is the big idea that drives the whole approach.

In a slice team, you take a cross-section through the organisation so that you get different types of people – representatives of different stakeholder groups, if you like – sitting around the decision-making table together.

In a healthcare context, instead of having all the big decisions made by hospital managers and senior clinicians (which is what usually happens), you assemble a slice team that includes some of those senior people but also includes junior doctors and nurses, hospital administrators, patients and so on – all the people with a valuable perspective on the problem you're trying to solve.

So, you look at the problem through multiple lenses and then write – and execute – a detailed implementation plan, often over a period of several years. It's important to note this is not just a consultation exercise – the slice team essentially becomes the executive, tasked with overseeing a particular policy.

It's not top-down change, but it's not bottom up either. It's people at all levels of the organisation working in harmony towards a common goal. This is what Michael Fullan describes as 'joint determination', whereby 'those with the problem must have a hand in shaping the action, assessing how it is going and what corrections to make.'[36] This is how you overcome many of the problems with top-down change that we explored in *Chapter B: Why do so few change initiatives achieve their intended goals?*

Earlier in this chapter we encountered the alarming fact that, on average, it takes 17 years for evidence-informed 'best practice' to achieve 14% uptake across the healthcare system as a whole. When you implement change using a slice team, you can achieve 80% uptake within three years,[37] which is a bit – a lot – more like it!

Let's look at an example of what this looks like in practice.

Implementation science case study: Cincinnati Children's Hospital

A few years ago, medics at the Cincinnati Children's Hospital became concerned by the very high level of hospital admissions due to asthma. To address this issue, they assembled a slice team – the 'Asthma Improvement Collaborative' – that included people like school nurses, pharmacists and asthma patients working alongside medical professionals.

The school nurses noticed that 'some children have difficulty consistently using their asthma inhalers because they spend part of their week with one relative and the remainder with another.'[38] So the team provided those children with two inhalers – one for each home – as well as ensuring asthma medication was available during the school day for anyone who left their inhaler at home.

36 Fullan, M. (2023). Why We Can't Escape the Status Quo in Education: 200 years of doing the same thing just won't cut it. *Education Week*, January 9. Retrieved from: https://www.edweek.org/leadership/opinion-why-we-cant-escape-the-status-quo-in-education/2023/01.

37 Fixsen, D., Blase, K. & Van Dyke, M. (2019). *Implementation Practice and Science*. Active Implementation Research Network. Chapel Hill, NC, p62.

38 Center for the Study of Social Policy (2016). *Asthma Improvement Collaborative: Friends of evidence case study,* DC, p3.

The pharmacists noted that 'some families […] have difficulty visiting pharmacies, such as parents who work long hours or who do not have a car'.[39] So they started delivering asthma medication to people's homes.

And the families of asthma patients often reported damp and mould in their homes, so they took steps to 'connect families with programs that help them decrease dust, mould and other hazards in their homes that trigger asthma.'[40] They also provided legal aid to help families stand up to negligent landlords.

This improvement initiative started with a proven strategy – the consistent use of asthma medication, combined with removing dust, damp and mould from people's homes. The problem was these things were not being done consistently. The slice team looked at the problem from multiple perspectives, identifying root causes and thinking creatively about how to overcome the problems they encountered.

Within three years of adopting this approach, hospital admissions due to asthma had fallen by 50%. In the following three years, the readmission rate reduced by a further 50%. This led to a 24% reduction in school days missed, a 30% reduction in workplace absenteeism and huge financial savings for the hospital.[41]

That's what you might call a win-win-win-win-win!

This is just one of many examples of how implementation science – and the use of slice teams in particular – can bring about lasting, positive change in real-world contexts. However, implementation science is not the only game in town. The related field of improvement science has also proven incredibly useful at improving patient outcomes in the world of healthcare, and it holds great potential for improving educational outcomes for children and young people.

39 Ibid, p3.

40 Ibid, p3.

41 McCarthy, D. & Cohen, A. (2013). *The Cincinnati Children's Hospital Medical Center's Asthma Improvement Collaborative: Enhancing Quality and Coordination of Care*. The Commonwealth Fund; Kercsmar, C. M., Beck, A. F., Sauers-Ford, H. et al. (2017). Association of an Asthma Improvement Collaborative With Health Care Utilization in Medicaid-Insured Pediatric Patients in an Urban Community. *JAMA Pediatrics*. 171(11), 1072–80; Parikh, K., Hall, M., Mittal, V. et al. (2015). Comparative Effectiveness of Dexamethasone versus Prednisone in Children Hospitalized with Asthma. *J Pediatr*. 167(3), 639–44.

Let's take a closer look at improvement science, before exploring some similarities and differences between implementation science and improvement science and the way in which the *Making Change Stick* programme weaves together powerful ideas from these and other fields.

Improvement science: What is it, and why should I care?

As we've seen, implementation science starts with a proven innovation or strategy and then sets out to scale up its use to improve outcomes in real-world settings. So, while implementation science is concerned with improving outcomes, it's not concerned with establishing the efficacy of the strategy itself – this comes earlier in the process.

Improvement science begins before we have confidence in an intervention. It involves trialling, evaluating and developing new ideas and strategies before a decision is made whether to scale up their use more widely. According to the Carnegie Foundation for the Advancement of Teaching, a leading centre promoting the use of improvement science in education:

> Improvement science deploys rapid tests of change to guide the development, revision and continued fine-tuning of new tools, processes, work roles and relationships. Improvement science is explicitly designed to accelerate learning by doing. It's a more user-centred and problem-centred approach to improving teaching and learning. As the improvement process advances, previously invisible problems often emerge and improvement activities may need to tack in new directions. The objective here is quite different from the traditional pilot program that seeks to offer a proof of concept. Improvement research, in contrast, is a focused learning journey. The overall goal is to develop the necessary know-how for a reform idea ultimately to spread faster and more effectively. Since improvement research is an iterative process often extending over considerable periods of time, it is also referred to as continuous improvement.[42]

42 Carnegie Foundation (2023). *Using Improvement Science to Accelerate Learning and Address Problems of Practice*. Retrieved from: https://www.carnegiefoundation.org/our-ideas.

In other words, improvement science is partly about trialling new ideas to establish proof of concept, and it's partly concerned with the question of how to constantly, gradually and progressively get *even better* at what you do.

The Carnegie Foundation identifies six core principles of improvement science.

1. Make the work problem-specific and user-centred

The improvement cycle starts with the question, 'What problem are we trying to solve, and for whom?' Answering this question may involve surveying and interviewing teachers, leaders, pupils and support staff to understand how the problem plays out among different stakeholder groups.

2. Focus on variation in performance

There are often pockets of excellent practice in any school, trust or district. The trick is to achieve this consistently. Instead of asking, 'What works?', we need to ask questions such as:

- 'What works for whom, where, when and under what conditions?'
- 'To what extent do outcomes vary in different contexts?'
- 'What factors cause or influence this variation?'

Answering these questions may involve looking at a range of data sources, looking at trends and variability across contexts and surveying or interviewing representatives of key stakeholder groups.

3. See the system that produces the current outcomes

You cannot improve what you do not fully understand. To understand the system that produces current outcomes, it's helpful to write a theory of action. We'll explore this in detail in *Chapter 10: Build your improvement strategy*, but briefly, a theory of action comprises three levels: beliefs and values, actions and consequences. Once you understand the contextual factors that create current outcomes, it is possible to create an alternative theory of action that will lead to different (hopefully improved) outcomes.[43]

43 Robinson, V. (2018). *Reduce Change to Increase Improvement*. Corwin: Thousand Oaks, CA.

4. We cannot improve at scale what we cannot measure

Data collection and analysis is the beating heart of quality improvement. First, it's important to collect **baseline** data, so you understand the problem clearly and have a standard to compare future performance against. Second, when we intervene in a complex system such as a school we need to understand that our actions can have both desirable and undesirable consequences. It's therefore important to collect data on **side-effects** as well as **desired effects** – we'll explore this in *Chapter 16: Prepare data collection*.

5. Use disciplined inquiry to drive improvement

Quality improvement is an agile process. It requires you to try things out in a systematic way, collect and analyse data in real time and use the information you gather to inform decision-making in an ongoing way. To do this, improvement scientists use rapid **PDSA cycles** (plan, do, study, act). This involves:

- Identifying what you want to change, which outcomes you want to improve and how you will evaluate the impact of your actions (plan).
- Implementing the change and evaluating what happened (do).
- Comparing your findings with your prediction (study).
- Deciding what to do next (act).

Often, implementing a change initiative does not generate the desired results straight away. PDSA cycles allow you to 'learn fast, fail fast, and improve quickly'.[44] We'll explore how to do this in *Chapter 22: Run PDSA cycles*.

6. Accelerate learning through networked communities

Much of the Carnegie Foundation's work focuses on the use of networked improvement communities (NICs). An NIC has four essential characteristics:

- It focuses on a well-specified common aim.
- It is guided by a deep understanding of the problem, the system that produces it and a shared working theory to improve it.

44 Carnegie Foundation (2023). *The six core principles of improvement*. Retrieved from: https://www.carnegiefoundation.org/our-work/improvement-in-education/six-core-principles-improvement.

- It is disciplined by the methods of improvement science to develop, test and refine interventions.
- It coordinates the development, testing and refinement of interventions across varied educational contexts.

NICs are similar to the slice teams used in the *Making Change Stick* programme. However, while slice teams are usually located within a single organisation, NICs often include researchers and practitioners from a range of settings.

Improvement science is an emerging field, and there has been limited research into the efficacy of some of these ideas. A systematic review of 190 healthcare studies that used PDSA cycles as an approach to quality improvement found that 98% of the studies reported improved outcomes. However, only 27% of the projects defined a specific quantitative aim in advance and then reached it, leading the authors to conclude that 'the claim that PDSA leads to improvement should be interpreted with caution.'[45]

As always, the devil is in the detail. However, there are many compelling case studies that show how PDSA cycles and NICs can be used to improve outcomes, both in healthcare and in education. Let's look at an example from the world of education.

Improvement science case study: Community College Pathways

In 2010, researchers in the US reported that each year around half a million college students 'fail to complete their developmental mathematics coursework, jeopardising their ability to earn an associate degree or technical certification, and/or transfer to […] further education'.[46]

In response to this 'national crisis', the Carnegie Foundation assembled an NIC comprising faculty administrators, researchers and program

45 Knudsen, S. V., Laursen, H. V. B., Johnsen, S.P ., Bartels, P. B., Ehlers, L. H & Mainz, J. (2019). Can quality improvement improve the quality of care? A systematic review of reported effects and methodological rigor in plan-do-study-act projects. *BMC Health Services Research* 19, 683.

46 Huang, M. (2018). *2016–17 Impact Report: Six Years of Results from the Carnegie Maths Pathways*. Stanford, CA: Carnegie Foundation for the Advancement of Teaching.

designers from several community colleges with the aim of improving mathematics outcomes among struggling college students.[47]

The Community College Pathways NIC collected data 'to "see" the organisation and system in which they operate, for example, to notice how many students drop out after the first class or the first semester at their institution, compared to other institutions, and to notice strategies used by more successful instructors and colleges'.[48]

Informed by the data they collected, the team created a multi-tiered solution to the problem. They developed two programmes named Statway and Quantway, which were designed to help students earn a college-level credit in a single year instead of the traditional two or more years. They identified a number of 'drivers' to help them achieve their aim, which was to 'change developmental mathematics from a gatekeeper to a gateway.'[49] And they used PDSA cycles to test additional minor improvements to help students build belonging, develop a mutual sense of responsibility and improve attendance.[50]

The outcomes of the Community College Pathways project were astonishing. Traditionally, students study college maths for two years with a 15% pass rate. The pass rate among students who took the Statway course was 54% – more than tripling the pass rate in half the time.[51] Similarly, only 29% of students traditionally completed developmental mathematics over two terms; on the Quantway course, 63% of students completed the course in just one term. These results are illustrated in Figure 3.

47 Ibid, p3.

48 Lewis, C. (2015). What Is Improvement Science? Do We Need It in Education? *Educational Researcher*, 44(1), 54–61; p55–6.

49 Huang, M. (2018). *2016–17 Impact Report: Six Years of Results from the Carnegie Maths Pathways*. Stanford, CA: Carnegie Foundation for the Advancement of Teaching, p3.

50 Silva, E. & White, T. (2013). *Pathways to improvement: Using psychological strategies to help college students master developmental math*. Carnegie Foundation. Stanford, CA: Carnegie Foundation for the Advancement of Teaching; Bryk, A., Yeager, D., Hausman, H., Muhich, J., Dolle, J. R. et al. (2013). *Improvement research carried out through networked communities: Accelerating learning about practices that support more productive student mindsets*. A White Paper presented at the White House Meeting on Excellence in Education: The Importance of Academic Mindsets, Washington, DC, June 10.

51 Huang, M. (2018). *2016–17 Impact Report: Six Years of Results from the Carnegie Maths Pathways*. Stanford, CA: Carnegie Foundation for the Advancement of Teaching.

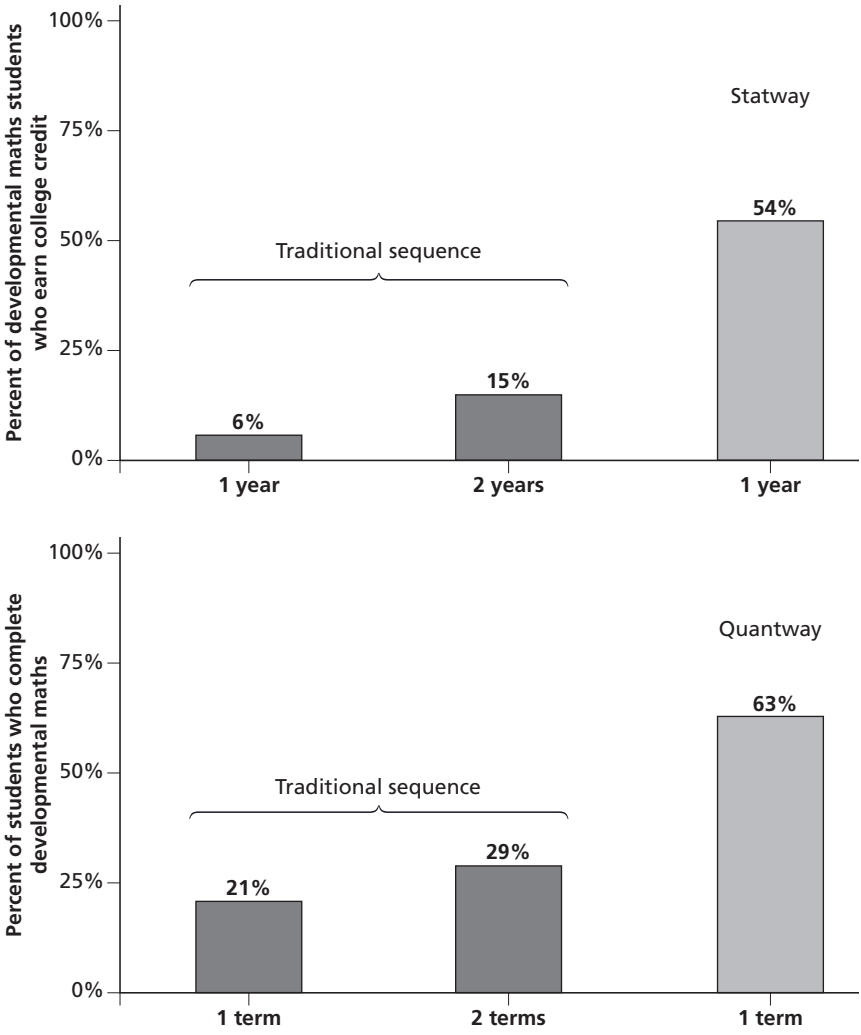


Figure 3 – Student success in traditional maths programmes vs Statway and Quantway

Perhaps the most impressive outcome from the Community College Pathways initiative is the way in which the pass rate steadily improved as the programme expanded to include more colleges over a period of six years (see Table 1). Throughout this period, the initiative consistently delivered three to four times the success rate of the traditional model, in half the time.

Year	Number of colleges	Number of students	Pass rate
2011–12	8	418	56%
2012–13	8	1402	52%
2013–14	11	1805	59%
2014–15	11	1936	57%
2015–16	16	2680	64%
2016–17	23	3227	72%

Table 1 – Students completing developmental mathematics with Quantway[52]

Cincinnati Children's Hospital and the Community College Pathways project are just two of many examples of how implementation and improvement science have been used to improve outcomes in healthcare and educational settings. To date, however, these approaches remain the exceptions to the rule. Ineffective implementation and suboptimal outcomes are the norm. To co-opt the title of the conference I attended all those years ago, there remains a pressing need to 'implement implementation and improvement science'.

But we need to go further. In recent years, many scholars have argued that we need to integrate and synthesise ideas from improvement science and implementation science – alongside tried-and-tested ideas and strategies from many other fields – to create a more coherent approach to quality improvement.[53]

This is precisely what the *Making Change Stick* programme sets out to do.

Making change stick: A new synthesis

Implementation and improvement science share a number of key features. They are each concerned with understanding processes and systems.

52 Ibid, p7.

53 For example, see Check, D. K., Zullig, L. L., Davis, M. M. et al. (2021). Improvement Science and Implementation Science in Cancer Care: Identifying Areas of Synergy and Opportunities for Further Integration. *Journal of General Internal Medicine* 36(1), 186–95; Nilsen, P., Thor, J., Bender, M. et al. (2022). Bridging the Silos: A Comparative Analysis of Implementation Science and Improvement Science. *Frontiers in Health Services* 1: 817750; Ovretveit, J., Mittman, B. S., Rubenstein, L. V. & Ganz, D. A. (2021). Combining Improvement and Implementation Sciences and Practices for the Post COVID-19 Era. *Journal of General Internal Medicine* 36(11), 3503–10.

They each recognise the importance of involving people with a range of perspectives in the decision-making process. And they each recognise the importance of ongoing data collection and analysis to inform practice and improve outcomes. However, there are also a number of key differences between these two fields, which are summarised in Table 2.

	Improvement science	Implementation science
Origins	• Industry. • Healthcare.	• Sociology. • Behavioural science.
Definition	The application of small, measurable, individualised changes to improve outcomes and help uncover the root cause of problems.[54]	The scientific study of methods and strategies that facilitate the uptake of evidence-based practice into routine use.[55]
Focus	A specific problem or area for improvement that adversely affects pupils/patients or the wider system.	An evidence-based approach has not been adopted into routine practice, or its uptake is uneven across settings.
Principles	• Accelerating 'learning-by-doing'. • Improving reliability. • Managing demand, capacity and flow. • Location specific.	• Driving behavioural change through focusing on factors that influence uptake into routine use. • Generalising mechanisms of change across locations.
Goals	To improve outcomes relating to a specific problem.	To create generalisable knowledge about how to implement evidence-based practices to improve outcomes in a range of contexts.

Table 2 – Comparing improvement and implementation science[56]

54 University of Pittsburgh (n.d.). Retrieved from: bit.ly/mcs-pitt.

55 University of Washington Implementation Science Resource Hub (n.d.). What is implementation science? Retrieved from: https://impsciuw.org/implementation-science/learn/implementation-science-overview/.

56 Adapted from Koczwara, B., Stover, A. M., Davies, L. et al. (2018). Harnessing the Synergy Between Improvement Science and Implementation Science in Cancer: A Call to Action. *Journal of Oncology Practice* 14(6), 335–40.

The *Making Change Stick* programme integrates ideas from these two fields by recognising the reciprocal ways in which implementation and improvement interact:

- School improvement is a process that needs to be implemented.
- Implementation is a process that lends itself to continuous improvement.

In other words, the relationship between implementation and improvement cuts both ways. The *Making Change Stick* programme draws together key ideas from both fields of study, engaging *with* research – building on what we know about 'what works' and translating that knowledge into policies and routine practice (implementation) – and engaging *in* research, using systematic cycles of 'learning by doing' to improve pupil outcomes (improvement).

The *Making Change Stick* programme includes a range of ideas and strategies from other fields of research and practice. Some of these are summarised in Table 3.

Key idea	In a nutshell...
Team flow/ interthinking	Create the conditions to ensure that your slice team is optimally effective.
Priority matrix	Identify priorities for school improvement by plotting a range of options in terms of effort and impact.
Backward design	Establish measurable 'impact goals', identify how you will know when you have achieved them and plan how to achieve them.
Root cause analysis	Adopt a systematic approach to understanding the root causes of the problems you need to solve.
Values mapping	Make sure your chosen school improvement focus is aligned with your espoused values.
Mapping the journey	Chart the journey to your goal state by creating a clear understanding of where you are and where you want to be.
Lean methodology	Focus on continuous improvement and the elimination of ineffective practice.
Theories of action	Understand the beliefs, values, actions and consequences that underpin the status quo and the goal state.

Key idea	In a nutshell…
Tight but loose	Walk the line between being too stringent and being too flexible.
Steps to success	Create a smooth, shallow 'on-ramp' that sets out in detail how you will proceed from where you are to where you want to be.
Diffusion of innovations	Plan how to spread the use of effective practice through your school community.
Habit change	In change management, the 'raw material' is often people's habitual behaviours, so plan for habit change accordingly.
Professional learning and development	Plan professional learning and development with a range of mechanisms, including onboarding new colleagues.
Communications planning	Conduct a 'chorus of voices' to deliver a range of messages to a range of audiences through a range of channels.
Pre-mortem	Anticipate problems in advance and create contingency plans for if and when they arise.
Agile project management	Use a responsive visual tracking system to make clear who needs to do what, when, how and in what order.

Table 3 – Additional key ideas in the *Making Change Stick* programme

To recap, the *Making Change Stick* programme draws together tried-and-tested ideas from a range of sources, drawing primarily – but not exclusively – on ideas from implementation and improvement science. The aim has been to create an accessible, easy-to-follow process to help time-pressed educators improve educational and life outcomes for children and young people.

So far, we've touched upon the importance of slice teams as a way to overcome the limitations of a top-down approach to change management. However, the *Making Change Stick* programme is not anti-leadership – far from it. In the next chapter, we'll look at a number of important roles school leaders play in making change stick.

Then we'll dive into the programme itself!

CHAPTER SUMMARY

- The implementation gap is a serious problem. On average, it takes 17 years for a clinical innovation with proven efficacy to achieve 14% uptake across the healthcare system as a whole.
- To address the implementation gap, and to embed quality improvement at a system level, several fields of study have arisen – most notably, implementation science and improvement science.
- Implementation science is:
  - 'The scientific study of methods and strategies that facilitate the uptake of evidence-based practice into regular use.'
  - Concerned with closing the gap between what we know and what we do.
  - Designed to tackle the problems that arise when you try to bring about lasting, positive change in real-world contexts.
- Improvement science is:
  - A user-centred and problem-centred approach to improving outcomes.
  - Concerned with using rapid improvement cycles to guide the development, revision and continued fine-tuning of new tools, processes and strategies.
  - Designed to accelerate 'learning by doing'.
- Many case studies demonstrate how implementation and improvement science can improve outcomes in healthcare and education. However, there remains a need to 'implement implementation and improvement science'. We also need to integrate and synthesise ideas from a range of fields to create a coherent approach to quality improvement.
- The *Making Change Stick* programme draws together ideas from improvement science and implementation science, alongside many other fields of study, to create an accessible, easy-to-follow process to help time-pressed educators improve outcomes for children and young people.

CHAPTER D
THE ROLE OF SCHOOL LEADERS IN MAKING CHANGE STICK

School leaders play a number of important roles in making change stick. Here are 10.

The *Making Change Stick* programme is designed to overcome the problems associated with top-down change that we examined in *Chapter B: Why do so few change initiatives achieve their intended goals?* However, school leaders play several important roles in the *Making Change Stick* programme. In this chapter, we'll explore 10 ways in which school leaders can support the process of school improvement:

1. Familiarise yourself with the programme.
2. Be aware of time and timing.
3. Be minimally invasive.
4. Understand the implementation equation.
5. Set the course and sell the vision.
6. Devolve decision-making to the slice team.
7. Manage the project.
8. Provide organisational support for change.
9. Recognise failure for what it is.
10. Create a climate of continuous improvement.

1. Familiarise yourself with the programme

The *Making Change Stick* programme can be used in three main ways:

- To learn about change management generally.
- To plan and implement a new school improvement initiative from scratch.
- To improve an existing initiative that isn't working as well as it might.

The full version of the *Making Change Stick* programme follows a 'plug and play' design. In theory, the facilitator does not need to be familiar with the materials before diving in because the slice team works through the programme together.

That said, it's a good idea for at least one member of the school leadership team and one member of the slice team to be aware of what's coming down the track (this could be the same person or two different people). One of the main reasons for writing this book is so that school leaders can familiarise themselves with the programme before deciding whether to run it at their school (or deciding which ideas to draw on – see 'Be minimally invasive' on page 79).

If you really want to go the extra mile, you may wish to familiarise yourself with all the materials beforehand. It's not really possible to be overprepared.

2. Be aware of time and timing

Time

As we've seen, bringing about lasting, positive change in schools is no mean feat. As a consequence, the *Making Change Stick* programme is quite substantial. In total, it usually takes around 24 hours (for example, 8x three-hour sessions or 12x two-hour sessions) for a slice team to work their way through all the exercises and get everything in place. Whether you intend to proceed as an individual or as a team, calendar some dates and times at the outset. You may not need all these sessions, but it's best to err on the side of caution by ring-fencing the time in advance.

Beyond this, the slice team will need further time to implement and evaluate the changes – communicating with colleagues, collecting data,

attending 'pivot or persevere' meetings and so on. How long this takes will depend on the size of your school, the number of people in your slice team and the nature of your change initiative. But the programme is designed to minimally impact workload; the aim of this programme is to help people work smarter, not harder. In *Chapter 10: Build your improvement strategy*, we'll consider what you may need to *stop* doing in order to create the time and space for new practices to be trialled and evaluated.

Depending on your improvement focus, it's generally a good idea to think in terms of a three-year implementation period. This is not to say you won't see positive results early on – you almost certainly will. But if you want the improvements to become 'part of the way we do things around here', think in terms of years rather than weeks or months.

Timing

Think about when in the school year will be the best time to start the process. There's no right answer to this question – you can run the programme at any time in the school year and find it useful. However, as a rule of thumb it's a good idea to get the ball rolling two full terms before the end of the academic year.[57] This will give you plenty of time to complete the programme and make the necessary preparations for the coming school year.

3. Be minimally invasive

A common mistake in change management is that people try to change too much. For example, if a school's mathematics results show room for improvement it may be tempting to buy in a new mathematics scheme. However, implementing a new mathematics scheme requires a significant investment of time and effort for teachers to familiarise themselves with the new materials and adapt them to meet the needs of their learners. And if the existing scheme is not the root of the problem, changing the scheme is unlikely to improve outcomes. Instead, it may be better to explore ways to improve the teaching of maths using the existing scheme.

57 NB in the UK, there are three terms per year – autumn, spring and summer – or six half terms (autumn 1, autumn 2, spring 1 etc).

When considering potential school improvement initiatives, be minimally invasive. Only change what you need to. There are two aspects to this:

- Don't undertake too many change initiatives at the same time. Try instead to do fewer things, better.
- Where possible, adapt existing systems and structures rather than creating new ones.

To be clear, you don't need to implement the full *Making Change Stick* programme for every change initiative that comes along. This programme is designed for the big stuff – whole-school improvement initiatives that are likely to take several years to really bed in. We'll look at how to choose your focus and some examples of the kinds of change initiatives that lend themselves to the full *Making Change Stick* programme in *Chapter 3: Choose your focus*.

As an alternative to running the full programme, in many cases you may find it more helpful to treat the contents pages of this book as a menu from which you can 'pick and mix' strategies to suit your needs. For example, if a problem you face is rooted in people's existing behaviours, you may find it helpful to look at **communications planning**, **habit change** and **steps to success**. If a problem relates to a lack of expertise within the teaching staff, you may find it helpful to use **Guskey's pyramid** to plan a **professional learning** programme and then use **individual improvement plans** and **PDSA cycles** (plan, do, study, act) to help people develop their practice over time.

If you're unsure how wide ranging an improvement initiative needs to be, you may find it helpful to conduct a **root cause analysis** at the outset. This will help you develop a more accurate understanding of the problems you face and what it will take to address them. You may also need to **de-implement** or **scale back** some existing systems and structures to create the time and space for new ideas and strategies to take root. We'll look at how to do this in *Chapter 10: Build your improvement strategy.*

4. Understand the implementation equation

When you're planning a change initiative, there are essentially two components: **what you're doing** (your improvement strategy) and **how you're doing it** (your implementation strategy). We can express this as an equation:

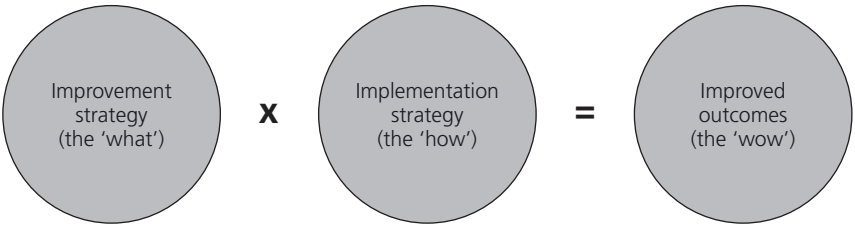


Figure 4 – The implementation equation

Here, we can see that 'what x how = improved outcomes'. Or, if you prefer, 'what x how = wow' – as in, 'Wow, it actually worked!'

The most important element in the implementation equation is the multiplication sign, because if either the 'what' or the 'how' amounts to zero, then the outcome will also be zero.

We can think of the contents pages of this book as a more complicated version of the implementation equation. Imagine a little multiplication sign between each of the chapter headings. You could do a really good job of implementing a school improvement initiative, but if any of these elements amount to zero – if you overlook the importance of habit change, for example, or communications planning, or if you're collecting data on the wrong things – then the outcome may also be zero, and all your efforts will have been in vain.

In short, whenever you're planning a change initiative, you should give serious consideration to all the ideas in the *Making Change Stick* programme. Being minimally invasive is an important principle, but this should be balanced with the fact that when you cut corners you decrease the likelihood that your change initiative will improve pupil outcomes in a meaningful or lasting way.

Conversely, if you work your way through the *Making Change Stick* programme in a systematic way, you'll significantly increase the likelihood that your change initiative *will* improve outcomes.

And if we all take this journey together – if, as a profession, we can learn how to implement school improvement effectively *at a system level* – then we can bring about a step change in improving the educational and life

outcomes of current and future generations. We'll return to this enticing prospect in the *Afterword: The future of school improvement…*

5. Set the course and sell the vision

Whether you implement the full *Making Change Stick* programme or simply select strategies from it, perhaps the most important role of school leaders is to regularly demonstrate their continued support for both the 'what' (the improvement strategy) and the 'how' (the implementation strategy).

Some schools appoint a slice team before deciding what they want to focus on. They commit to the approach before they commit to a particular course of action. But more often, the senior team will decide which area of school improvement they'd like to focus on before appointing a slice team, or perhaps they'll create a shortlist of options. The next step is for the leadership team to tell the wider staff body what's happening and invite people to apply to join the slice team. This is likely to involve some kind of 'pitch' in which senior leaders sell the vision to their colleagues.

There are two aspects to this pitch. First, the improvement strategy – the 'what'. If you've already chosen your area of focus, you may need to sell this idea to convince people to get involved. If you haven't identified an improvement strategy yet, this too can be a selling point ('If you apply to join the slice team, you can have a say in deciding which aspect of school life you'd like to improve.'). As we saw in *Chapter B: Why do so few change initiatives achieve their intended goals?*, people really value autonomy in the workplace and the opportunity to shape the process of school improvement is likely to be highly motivating for at least some of your colleagues.

The second aspect of the pitch relates to the implementation strategy – the 'how'. Regardless of whether they apply to join the slice team, people throughout the school community need to know that they will be represented, regularly and meaningfully consulted, and that their input will be invaluable in shaping the improvement strategy as the implementation period unfolds.

There's no simple formula for creating the perfect pitch – it depends on your school, your colleagues, your area of focus and so on. But it's important to be aware that different people respond to different kinds of

information, and so it's a good idea to include some or all of the following features in your pitch.

- Start with the end in mind – a bold vision of the near future that people can feel excited about.
- Connect your vision of the future to the problems of the present.
- Create an emotional hook by sharing a case study of a particular pupil who is (or may be) affected by the problems of the present.
- Chart a clear path that will take you from where you are to where you want to be.
- Share external research evidence to demonstrate that it is possible to improve outcomes in this area.
- Share case studies of other schools that have been on a similar journey and are now enjoying improved outcomes in a particular area.
- Recognise the importance of identity – talk about 'who we are' or 'what we stand for', rather than focusing on 'what we need to do'.
- Use the word 'we' to make everyone feel included in the change effort.

This pitch is an important first step in creating a culture of trust – trust that the area of focus is the right one at this point in time, trust in the *Making Change Stick* approach to implementing school improvement and trust that this improvement initiative has the full support of the senior leadership team, trust or governing body (and therefore that the agenda is not going to shift for the foreseeable future).

6. Devolve decision-making to the slice team

As an individual, you can work your way through the *Making Change Stick* programme and learn a great deal about how to implement change effectively. However, the programme is really designed for a slice team to work through together as they implement a real-world school improvement initiative. It's far more impactful to complete the programme in this way, because the best way to learn how to implement change effectively is to get stuck in and then refine your thinking along the way.

As we've seen, a slice team is a change team comprising representatives of different kinds of people from throughout the organisation. We'll look at

how to appoint a slice team and how to make them work really effectively in the next two chapters.

For the purposes of this chapter, the key word is 'devolve'. The main way in which the *Making Change Stick* approach differs from 'business as usual' is that the slice team essentially becomes the executive, tasked with overseeing a particular area of school improvement.

There can be no half-measures here. The slice team should not be a talking shop in which the senior member of the team has a veto. If this happens, you need to identify the problem and correct course immediately, because otherwise it will undermine the process and reduce the likelihood that you will achieve lasting, positive change.

The *Making Change Stick* programme involves people at all levels of the organisation – leaders included – working in harmony towards a common goal. This is an example of what John Hattie refers to as **collective teacher efficacy**, a phenomenon he describes as 'the number one influence related to student achievement'.[58]

7. Manage the project

Although senior members of the slice team should not have a veto when it comes to decision-making, as time goes on they do often take on additional responsibilities in the team due to their role in the school and their lighter teaching load.

Typically, senior members take more of a lead in *Phase III: Make it happen* with responsibilities like:

- Managing the project – checking people have done what they're supposed to have done, following up and issuing reminders where necessary.
- Overseeing data collection and analysis.
- Coordinating communications.

However, the slice team should still meet regularly throughout the *Make it happen* phase, and the team should continue to take any strategic decisions jointly.

58 Visible Learning (n.d.). *Collective Teacher Efficacy according to John Hattie.* Retrieved from: https://visible-learning.org/2018/03/collective-teacher-efficacy-hattie/.

8. Provide organisational support for change

As you monitor and evaluate your improvement initiative over time, there will be various points at which you will need to make decisions with resourcing implications. For example, there may be financial or time costs associated with onboarding new colleagues, collecting and analysing data, covering lessons and so on. Looking ahead and anticipating such resourcing issues is critically important to the success of the change initiative. Many school improvement initiatives run aground due to an absence of what Thomas Guskey calls 'organisational support for change'. (We'll look at Guskey's work in more detail in *Chapter 15: Plan professional learning*.)

For example, let's say a year from now, there's an unusually high turnover of staff in one department or year group. The following year, only a minority of the people in that department or year group will have been at the school when the improvement initiative was launched.

If you don't want this to become a 'blind spot', you need to plan for how to get new colleagues up to speed. These onboarding sessions should be planned and resourced in advance so they are ready to go as and when required. Likewise, when the colleagues who deliver this training (or perform other important roles) part company with the school, you need an offboarding protocol so they can transfer this responsibility to other members of the team.

You may also find that some colleagues require more support than others to change their practice, and they may benefit from additional coaching or mentoring. As far as possible, the slice team should anticipate these issues in advance and the school leadership team should allocate resources appropriately. We'll look at this in more detail in *Chapter 19: Conduct a pre-mortem*, and *Chapter 24: Embed and sustain improvements.*

9. Recognise failure for what it is

When you implement an improvement strategy, it can take a while to hit your stride. Sometimes, things get worse before they get better – the so-called **implementation dip**. The process of school improvement often involves trying things that don't quite work as well as you hoped and then taking corrective action. This is not something to be concerned about – indeed, it's an integral part of the process.

If a change initiative makes things worse and they remain worse, there will come a point when you need to either revise or stop it altogether and try something else. Any such 'pivots' should be informed by a combination of data and dialogue. We'll look at how to do this in *Chapter 23: Schedule regular 'pivot or persevere' meetings*.

But in the short term, an important role of school leaders is to hold your nerve – to create an environment in which people are willing to take risks and give your improvement strategy the time and space it needs to find its groove before you can reap the dividends.

In short, school leaders need to recognise failure for what it is: feedback in wolf's clothing. We often tell children and young people they need to learn from their mistakes. As educators, we need to afford ourselves the same luxury.

10. Create a climate of continuous improvement

> If the teacher makes the weather, the school creates the climate. School improvement is how schools create an ever-better climate for individuals and groups of teachers to do their job in the most favourable circumstances.[59]

This quote by Sir Tim Brighouse provides a powerful metaphor that ties this chapter – and indeed the whole *Making Change Stick* programme – together. Fundamentally, the role of school leaders is to create a climate in which all teachers, leaders and support staff are enabled, encouraged and empowered to achieve the best possible outcomes for the children and young people in their care.

Sometimes people talk about creating a **climate of trust**, and trust is certainly an essential prerequisite for a healthy school environment. But because the work of school improvement is never finished – because no school will ever achieve 'perfection' – it's more helpful to throw the net wider and to think in terms of creating a **climate of continuous improvement**. No single strategy can achieve this. Rather, a climate of

59 Cited in NAHT (2020). Improving Schools: A Report of the School Improvement. Commission. Haywards Heath: NAHT, p2. Retrieved from: https://www.naht.org.uk/Portals/0/PDF's/NAHT%20Improving%20schools%20final.pdf?ver=2021-05-31-090628-853/.

continuous improvement is something that emerges over time through the cumulative effect of many small moves.

Taken together, implementing the ideas outlined in this chapter – and the rest of the book – will create a climate of continuous improvement. The following are a few additional ideas that school leaders may wish to consider in achieving this goal.

Be transparent

Build a glass box, rather than a black box. Publish your meeting minutes. Keep people updated with key decisions. Narrate the journey of change, sharing setbacks as well as successes. We'll explore how to do this in *Chapter 6: Build a glass box*.

Celebrate progress

Use a range of variable rewards to recognise people for their contributions to the cause. Combine the use of private gestures, such as thank you cards and emails, with more public gestures such as flowers, chocolates and verbal praise in staff briefings.

Communicate clearly

Strive for brevity and clarity in all written and verbal communication. Ask a trusted colleague to sense-check emails before you send them. If you find yourself writing a long email, ask an AI engine to suggest ways to express what you want to say more succinctly. Make sure information flows smoothly and frequently through all available communication channels. We'll look at how to do this in *Chapter 5: Draft a comms plan*.

Create a shared vision

Beyond the vision for your change initiative set out in 'Set the course and sell the vision', establish and narrate a clear direction of travel for the school as a whole. Does everyone know what you're trying to achieve, over what timeframe, and where the school is currently in terms of achieving its goals?

Demonstrate humility and vulnerability

This is not an easy one to plan for, but everyone runs into difficulty from time to time and school leaders are no exception. When this happens,

should you find yourself in a situation where you can authentically share your experiences with your colleagues to demonstrate what learning from your mistakes looks like in practice, it's probably a good idea to do so – even if it makes you feel uncomfortable. You may find it helpful to talk it through with a trusted colleague first.

Encourage people to take risks

In order for schools to get even better at what they do – and that's a high bar, because schools are already kind of amazing – we need to create a climate in which people feel emboldened to try out new ideas and strategies in the full knowledge they might not work. While we should minimise the potential for harm, it's important that school leaders create the conditions in which people feel free to take risks in developing their practice. There are a few ways to achieve this, such as by explicitly encouraging risk taking, modelling and celebrating it where appropriate and offering suggestions for the kinds of things people might like to try.

Empower a range of voices

A powerful way to create a culture of continuous improvement is to expand the range of voices people hear talking about a particular school improvement initiative. When a senior leader with a particular area of responsibility stands up to speak in a staff briefing, many of their colleagues can probably guess what they're going to talk about before they've even drawn breath.

But when 'unusual suspects' start talking about how they've been improving an aspect of their practice – in staff briefings, in professional learning sessions, in meetings and so on – people are often intrigued. When surprising people get on board with a change initiative, others tend to follow suit. We'll look at how to achieve this in a systematic way in *Chapter 5: Draft a comms plan* and *Chapter 13: Plan for diffusion*.

Establish an open-door culture

In some schools, there is a defensive culture where teachers are unwilling to be observed while teaching lessons. This is partly a hangover from when teachers were graded following lesson observations – an era that has now thankfully passed, for the most part.

Some of the best-performing schools in the world have a culture of almost-daily lesson observations, where colleagues routinely drop in to one another's lessons for five or 10 minutes as they're passing in a free period and share brief feedback using the trusty 'what went well, even better if' format on a shared spreadsheet. Alternatively, you could implement a system where you share positive feedback using a spreadsheet, and suggestions for improvement are shared privately with the teacher in question.

As well as providing helpful feedback to individual practitioners, this practice creates an invaluable resource where people can 'magpie' (steal) ideas for effective classroom practice in a low-stakes way. It's an incredibly powerful way of sharing effective practice and achieving a culture of continuous, day-by-day improvement.

Maintain visible support

A potential pitfall of devolving decision-making to a slice team is that members of the senior team may appear (or feel) detached from the change initiative. It's really important that you don't allow this to happen. The senior team can easily keep up to date with developments through senior team meetings. But the optics are arguably even more important. Throughout the implementation period, the senior team should regularly and visibly demonstrate their support for the change effort.

One of the most important roles a leader can fulfil is to narrate the journey of change towards the school's short-, medium- and long-term goals. Creating a narrative that spans weeks and months makes people feel like they're on a journey of improvement together, rather than simply 'turning up to do the day job'. We'll explore how to achieve this in *Chapter 5: Draft a comms plan* and *Chapter 24: Embed and sustain improvements*.

Promote wellbeing (and be tough on any threats to wellbeing)

To some people, 'creating a culture of continuous improvement' might sound a bit demanding, and there is a danger that if people are expected to 'continuously improve' they will burn out because they will never feel that they're good enough. This is not an insurmountable problem, but it needs to be carefully managed.

There are four aspects to this:

- Celebrate progress to make clear that people feel valued and they are absolutely already good enough.
- Be respectful of people's time and workload (see below).
- Take staff wellbeing seriously. If you don't already have a wellbeing committee, you may wish to create one using the slice team approach. This team's role is to do everything in their power to optimise staff wellbeing, providing support for colleagues who are struggling and giving people a range of ways to wind down and connect with one another in low-stakes, enjoyable ways. It's good practice to give people a menu of optional, regular wellbeing activities that they can access if they wish, rather than having 'enforced fun'.
- As far as possible, root out or minimise any factors that undermine wellbeing. You may find it helpful to conduct an annual root cause analysis to identify threats to people's wellbeing and to tackle them at their roots. We'll look at how to do this in *Chapter 9: Conduct a root cause analysis*.

Respect people's time and workload

It's super important that school leaders are always seen to be respectful of people's time. For example, around meetings, it's important to signpost – and model – the importance of:

- Arriving on time.
- Sticking to agreed timings.
- Organising meetings so that some colleagues can leave early if some agenda items do not concern them.
- Not allowing meetings to overrun.

Equally, it's important to be mindful of people's workload. The *Making Change Stick* programme is designed to help people work smarter, not harder. But workload is a perennial issue in education. School leaders should check in with people regularly to make sure they don't feel overwhelmed and offer practical support when they do.

Seek continuous feedback

To create a climate of continuous improvement, you need to provide people throughout the school community with a range of ways to share their thoughts on how the school is doing without fear of repercussion. Surveys, suggestion boxes, letting people know that your door is always open – the more ways you can find to do this, the better.

Go for launch!

To recap, so far we have:

- Considered the 'mind-blowing' fact that the vast majority of school improvement initiatives fail to meet their intended goals – and that most people know this to be true.
- Investigated the two main reasons why this is the case:
  - School leaders aren't taught how to implement change effectively.
  - There are many problems with top-down change – and top-down change is our default model.
- Explored two important fields of study – implementation science and improvement science – which form the backbone of the *Making Change Stick* programme, alongside tried-and-tested ideas from a range of other fields.
- Identified a number of important roles school leaders play in making change stick.

All that remains is to acquaint ourselves with the *Making Change Stick* programme itself.

Let's dive in!

CHAPTER SUMMARY

School leaders play several important roles in the *Making Change Stick* programme.

1. Familiarise yourself with the programme

Be aware of what's coming down the track. It's not really possible to be overprepared.

2. Be aware of time and timing

Schedule the required time into your calendar at the outset. Think about the implementation period in terms of years rather than weeks or months. And think about when in the school year will be the best time to start the process.

3. Be minimally invasive

Don't undertake too many change initiatives at the same time. Try instead to do fewer things, better. And, where possible, adapt existing systems and structures rather than creating new ones.

4. Understand the implementation equation

'What x How = Wow!' Remember the multiplication sign. Balance the need to be minimally invasive with the knowledge that if you cut corners you will decrease the likelihood that your school improvement initiative will improve pupil outcomes.

5. Set the course and sell the vision

A key role of school leaders is to regularly demonstrate their continued support for both the 'what' (the improvement strategy) and the 'how' (the implementation strategy) of a school improvement initiative.

6. Devolve decision-making to the slice team

There can be no half-measures here. The slice team should not be a talking shop in which the senior member of the team has a veto.

7. Manage the project

Typically, senior colleagues take more of a lead in *Phase III: Make it happen* with roles such as managing the project, overseeing data collection and analysis and coordinating communications.

8. Provide organisational support for change

Anticipate financial and time costs in advance and allocate resources appropriately. Create onboarding and offboarding protocols to minimise disruption due to staff turnover.

9. Recognise failure for what it is

Failure is feedback in wolf's clothing. Anticipate the implementation dip and hold your nerve (while keeping open the possibility that a strategy may need to be revised or abandoned).

10. Create a climate of continuous improvement

Taken together, implementing the ideas outlined in this chapter – and the rest of the book – will create a climate of continuous improvement.

PART 2:
THE *MAKING CHANGE STICK* PROGRAMME

Making Change Stick

Phase I: Make a start

- ☐ Appoint a slice team
- ☐ Optimise the team
- ☐ Choose your focus
- ☐ Write a one-page research summary
- ☐ Draft a comms plan
- ☐ Build a glass box

Phase II: Make a plan

- ☐ Map the journey
- ☐ Plan backwards
- ☐ Conduct a root cause analysis
- ☐ Build your improvement strategy
- ☐ Plan tight but loose
- ☐ Build steps to success
- ☐ Plan for diffusion
- ☐ Optimise for habit change
- ☐ Plan professional learning
- ☐ Prepare data collection
- ☐ Timeline and streamline
- ☐ Write a logic model
- ☐ Conduct a pre-mortem

Phase III: Make it happen

- ☐ Manage your project
- ☐ Create individual improvement plans
- ☐ Run PDSA cycles
- ☐ Schedule regular 'pivot or persevere' meetings
- ☐ Embed and sustain improvements
- ☐ Review, reflect – and plan your next project!

PHASE I:
MAKE A START

CHAPTER 1
APPOINT A SLICE TEAM

Use a representative team to drive the change process, improve decision-making and boost buy-in.

As we covered in *Chapter B: Why do so few change initiatives achieve their intended goals?*, there are some circumstances in which top-down change works well – usually, when a problem can be solved with swift, decisive action. However, as we've seen, when it comes to more complex, multi-layered problems such as implementing whole-school improvement initiatives, top-down change often fails to meet its stated aims.

Fortunately, there's a tried-and-tested alternative to top-down change that *is* effective at improving outcomes in complex arenas: the **slice team**. I first came across the idea of slice teams in the implementation science literature, where they go by several names (implementation teams, facilitation teams, community development teams… the list goes on!) Sometimes these teams exist within a single organisation; other teams include people from a number of different organisations, as a 'slice' through the wider system.

As the name suggests, in a slice team you take a cross-section of the school community so you have different types of people – representatives of different stakeholder groups, if you like – sitting around the decision-making table together.

A slice team may include a combination of some or most (but probably not all) of the following people:

- Senior leaders.
- Middle leaders.

- Early career teachers.
- More experienced teachers.
- The special educational needs and disabilities coordinator (SENDco) or additional learning needs coordinator (ALNco).
- Teaching assistants.
- Learning support assistants.
- Lunchtime supervisors.
- Admin support staff.
- Site staff.
- Parents or carers.
- Pupils.
- Governors.

In a primary school, it's a good idea to make sure you have representation from different age groups, for example early years (age 3–5), key stage 1 (age 5–7) and key stage 2 (age 7–11). In a secondary school, try to ensure as far as possible that a range of different subjects or faculties are represented.

The size of the slice team depends on the size of your school and the improvement initiative you're working on. I've worked with teams of three in nurseries and infant schools and up to around 12 in large secondary schools and sixth form colleges. It's really a matter of finding the right size and make-up for your context. On average, slice teams usually comprise around 5–7 people in a primary school and 8–10 people in a secondary school.

Appointing the team

I strongly recommend you appoint the slice team through a selection process. Invite applications from the whole staff and interview them to assess their suitability. I've worked with many schools where the leadership team has been pleasantly surprised by who applied to join the team. Colleagues you may expect to be 'resistors' are often keen to contribute to the process of school improvement. You may also wish to tap certain colleagues on the shoulder and encourage them to apply if you feel they would be particularly suited to the role.

To be clear, 'suited to the role' does not mean 'thinks the same as me'. Ideally, you want the team to include a range of different views and experiences. But equally, you don't want it to be a bunfight. If you have a colleague who likes to disagree with people a little *too* readily, it may be best to find other ways for them to contribute to the process, such as by inviting them to take part in focus groups.

As we've seen, working your way through the *Making Change Stick* programme is a fairly significant time commitment, but it's also a rich opportunity for professional learning and development. The main aim of the selection process is simply to ensure all team members are ready, willing and able to take on this additional level of responsibility.

You know your colleagues better than anyone. Just don't 'pack' the team with people you think will be biddable, or who are too like-minded. When you're making decisions that affect many people's lives, it's important to have robust and frank exchanges of views, and this requires there to be a range of voices and perspectives at the table.

Here are a few questions you may find it helpful to ask when interviewing people to join the slice team:

- Why did you apply to join the slice team?
- Why do you want to take on this additional commitment at this point in your career?
- Are you confident you have the capacity to take on this additional responsibility?
- If you could choose any aspect of school life you would like to improve, what would it be and why?

If the senior team has already chosen an area of focus, you could ask:

- How do you feel about the area of focus?
- Do you agree this is a priority for the school at this point in time? If so, why? If not, why not?
- Thinking about the area of focus:
    - What do you think we should do more of, or less of, to improve this aspect of school life?
    - What questions do you have?

- What concerns do you have?
- What ideas do you have?

What does the slice team do?

There are three phases in the *Making Change Stick* programme: *Make a start*, *Make a plan* and *Make it happen*. Usually, slice teams work their way through the *Make a start* and *Make a plan* phases together, with everyone contributing to key decisions. Sometimes, larger teams split up into smaller groups so they can work on different parts of the process in parallel. This can help speed up the process a little, with the trade-off being that fewer people have oversight of each part of the process. However, this can be managed by revisiting key decisions once the whole team has reassembled.

When you reach the *Make it happen* phase, different team members tend to take on different responsibilities such as collecting and analysing data, managing communications or delivering training. Often, these tasks are coordinated and overseen by the senior members of the team. The time commitment generally drops off at this point, and any activities should be spread throughout the implementation period to avoid pinch points and minimise workload. We'll look at how to do this in *Chapter 10: Build your improvement strategy* and *Chapter 17: Timeline and streamline*.

Once you've appointed your slice team, you need to create the conditions in which the team can work together in the best way possible.

CHAPTER SUMMARY

- In a slice team, representatives of different stakeholder groups from throughout the school community sit around the decision-making table together.
- Depending on the size of your school and the change initiative you're working on, a slice team may include:
  - Senior leaders.
  - Middle leaders.
  - Early career teachers.
  - More experienced teachers.

  - The special educational needs and disabilities coordinator (SENDco) or additional learning needs coordinator (ALNco).
  - Teaching assistants.
  - Learning support assistants.
  - Lunchtime supervisors.
  - Admin support staff.
  - Site staff.
  - Parents or carers.
  - Pupils.
  - Governors.
- In a primary school, it's a good idea to make sure you have representation from a range of different year groups. In a secondary school, try to ensure a range of different subjects or faculties are represented.
- The size of the slice team depends on the size of your school and the improvement initiative you're working on.
- Appoint the slice team through a selection process by inviting applications from the whole staff and holding interviews. The main aim is to ensure that a) team members are ready, willing and able to take on this additional level of responsibility, and b) there is a balance of different views and experiences.

Making Change Stick

Phase I: Make a start

- ☑ Appoint a slice team
- ☐ Optimise the team
- ☐ Choose your focus
- ☐ Write a one-page research summary
- ☐ Draft a comms plan
- ☐ Build a glass box

Phase II: Make a plan

- ☐ Map the journey
- ☐ Plan backwards
- ☐ Conduct a root cause analysis
- ☐ Build your improvement strategy
- ☐ Plan tight but loose
- ☐ Build steps to success
- ☐ Plan for diffusion
- ☐ Optimise for habit change
- ☐ Plan professional learning
- ☐ Prepare data collection
- ☐ Timeline and streamline
- ☐ Write a logic model
- ☐ Conduct a pre-mortem

Phase III: Make it happen

- ☐ Manage your project
- ☐ Create individual improvement plans
- ☐ Run PDSA cycles
- ☐ Schedule regular 'pivot or persevere' meetings
- ☐ Embed and sustain improvements
- ☐ Review, reflect – and plan your next project!

CHAPTER 2
OPTIMISE THE TEAM

Create the conditions for achieving team flow: jell the team, agree ground rules and set group goals.

In recent years, there has been some fascinating research into what makes teams work well together, as well as what can get in the way. In this chapter, we'll consider three key ideas: **cohesiveness**, **team flow** and **interthinking**. We'll then look at three activities designed to achieve these things: **jell the team**, **agree ground rules** and **set group goals**.

Cohesiveness

A few years ago, Google undertook at two-year research project to investigate a deceptively simple question: 'What makes teams successful?' Working with over 180 teams, the Project Aristotle researchers uncovered some fascinating, counter-intuitive findings.[60]

At the outset, the researchers assumed that a successful team requires three key ingredients: high-performing individuals, an experienced manager and access to all the resources they need. This turned out not to be the case. In particular, they found that **group norms and dynamics** are far more important than the make-up of the team, the management of the team or the performance of individual team members.

Group norms are the informal, often unspoken ways in which groups interact. These norms can be helpful or unhelpful. For example, in the meetings of Team A, the following things tend to happen:

60 Duhigg, D. (2016). What Google Learned from Its Quest to Build the Perfect Team. *New York Times*, February 25. Retrieved from: https://www.nytimes.com/2016/02/28/magazine/what-google-learned-from-its-quest-to-build-the-perfect-team.html.

- The room isn't set up when people arrive, so they have to drag tables and chairs around before they begin.
- While they're waiting for the meeting to begin, some team members are in the habit of 'blowing off steam' about a challenging pupil, class or parent they've had to deal with.
- Some people open up their laptops to check their emails. These remain open throughout the meeting, and people occasionally tap away at their keyboards.
- Other people check messages on their phones or scroll social media while they're waiting. Phones remain on the table throughout the meeting.
- If somebody's phone rings or pings during the meeting, they tend to respond to it immediately.
- One person does most of the talking.

In Team B, the following group norms are in place:

- Tables and chairs are arranged in a circle or horseshoe before people arrive.
- There is calm or uplifting music playing.
- There are refreshments available.
- As people sit down, they subtly switch their phones to 'do not disturb' mode and place them out of sight.
- Laptops are only used when they're instrumental to the running of the meeting, such as to take minutes or to review resources.
- At the start of the meeting, there's a round of 'bright spots' whereby each person shares a positive moment from their day, week or term.
- Each person is given a printed agenda with clear timings and space for making notes.
- There are regular opportunities for people to discuss agenda items in pairs and small groups before feeding their thoughts back to the wider group.

Which meeting would you rather be in?

The Project Aristotle researchers found that the key to creating an effective team is to establish healthy group norms such as those seen in

Team B, and that the overarching goal of such group norms should be to achieve a state of team cohesiveness.

In a cohesive team, the group achieves more together than the individuals within it could achieve working alone. It is often said that 'the whole is greater than the sum of its parts', a bit like an analogue watch. (If you take a watch apart, you'll just have a small pile of cogs and springs. But if you assemble them in a certain way, they'll keep time with split-second accuracy.)

In dysfunctional teams – like those beset with the 'groupthink' we encountered in *Chapter B: Why do so few change initiatives achieve their intended goals?* – the whole is very much *less* than the sum of its parts. Brilliant minds can come together and make terrible things happen. The difference between a cohesive team and a dysfunctional team is vast.

The Google researchers identified five features of cohesive teams that serve as a handy checklist for optimising your slice team.

1. Psychological safety

The workplace expert Amy Gallo defines psychological safety as the 'shared belief held by members of a team that it's OK to take risks, to express their ideas and concerns, to speak up with questions and to admit mistakes — all without fear of negative consequences.'[61]

The organisational anthropologist Timothy Clark suggests there are four aspects of psychological safety:

- Inclusion safety – All team members feel included and valued within the team.
- Learner safety – All team members are encouraged to seek out new information and ask questions without fear of judgement.
- Contributor safety – All team members are empowered to make valuable contributions and their efforts are recognised and appreciated.

61 Gallo, A. (2023). What is Psychological Safety? *Harvard Business Review*, February 15. Retrieved from: https://hbr.org/2023/02/what-is-psychological-safety.

- Challenger safety – Healthy conflict is embraced, with all team members encouraged to share their honest opinions and challenge one another's assumptions.[62]

2. Dependability

In dependable teams, team members know they can rely on one another. They turn up to meetings on time. They do what they say they're going to do, by the deadline, to a high standard. And they understand each other's strengths and weaknesses and provide support accordingly.

3. Structure and clarity

A strong team has clear plans, processes and goals, and all team members understand how they can contribute to achieving those goals. The political strategist Alastair Campbell suggests that an effective team needs clarity at three levels (the OST model):

- Objective – What is the team trying to achieve?
- Strategy – How is the team going to achieve its objective?
- Tactics – What do team members need to do to execute the strategy?[63]

We'll return to the OST model in *Chapter 10: Build your improvement strategy*.

4. Meaning

A sense of purpose is crucial to team effectiveness. There should be a strong collective feeling that the team is doing meaningful work that's valued by each team member.

The underlying reasons may vary. Some team members may be motivated by the pupils whose educational and life chances you're trying to improve. Others may be driven by a sense of collegiality – a desire to help their colleagues develop professionally, reduce their workload or improve staff retention. Whatever the reasons, they should all point in the same direction, which is helping the team achieve its goals.

62 Clark, T. R. (2020). *The Four Stages of Psychological Safety*. Oakland, CA: Berrett-Koehler.

63 Campbell, A. (2023). *But What Can I Do? Why politics has gone so wrong, and how you can help fix it.* London: Penguin.

5. Impact

All team members should believe that the work of the team – and that of all the members within the team – will help bring about lasting, positive change. They have to feel that the team will make a difference for themselves, their colleagues and their pupils.

To recap, in order to ensure cohesion, the team needs to be a source of safety, dependability, clarity, meaning and impact. But if you really want to set the bar high, ultimately you want to achieve a state of team flow.

Team flow

Flow is sometimes described as 'effortless effort'. It's a mysterious, almost magical state in which people become completely absorbed in whatever they're doing. When you're in a flow state, nothing else seems to exist. Time seems to stand still while the hours fly by and you 'become one' with the task at hand.

The flow state is commonly associated with sport and the arts – it is a condition of peak performance to which many actors, musicians and athletes aspire. But a state of flow is available to everyone, including educators, children and young people.

Historically, flow research has mainly focused on optimising the performance of individuals. However, a growing body of evidence suggests that the flow state can also be achieved in teams.

Steven Kotler, the executive director of the Flow Research Collective, has identified 22 triggers that can stimulate a flow state.[64] Among these, there are nine **group flow triggers**:

1. **Shared goals –** Sharing a common objective or mission with a group.
2. **Close listening –** Being fully present and attentive to what others are saying.
3. **Yes, and… –** Responding to contributions from others with acceptance and building upon their ideas.

64 Kotler, S. (2023). *What are flow triggers? 22 examples to unlock flow state*. Retrieved from: https://www.flowresearchcollective.com/blog/flow-triggers.

4. **Sense of control –** Having a significant influence over your contributions to the group's goals.
5. **Blending egos –** Setting aside individual success in favour of a collective focus on the group's goals.
6. **Equal participation –** Actively engaging in ongoing conversation where ideas flow freely.
7. **Familiarity –** Knowing and understanding each team member's tics and tendencies.
8. **Constant communication –** Engaging in ongoing conversation where ideas flow freely.
9. **Shared risk –** Collectively taking on challenges and uncertainties.

Every one of these group flow triggers – and, in fact, all 22 of the flow triggers identified by Kotler – feature in the *Making Change Stick* programme. This thing is literally a flow-fest!

Later in this chapter, we'll look at some activities designed to help your slice team harness the power of some of these flow triggers. But first, we need to introduce our third key feature of high-performing teams.

Interthinking

The story of human history is often told through the achievements and deeds of exceptional individuals – monarchs and conquerors, inventors and explorers, artists and activists. However, recent research into creativity and innovation suggests that, more often than not, individual achievement is accomplished as a result of collective endeavour. Creative pioneers often owe much of their brilliance to a surrounding network of intellectual relationships through which their ideas are constantly challenged, critiqued and stress tested. Written communication plays an important role here – many influential figures from history have been prolific letter-writers – but to a significant degree, brilliant ideas are forged through conversation.[65]

In their fascinating book, *Interthinking*, Karen Littleton and Neil Mercer set out 'to explain how, mainly through the use of spoken language, people are able to think creatively and productively together. We call

65 For example, see Sawyer, K. (2006). *Explaining Creativity: The science of human innovation*. Oxford: Oxford University Press.

this process "interthinking" to emphasise that people do not use talk only to interact, they interthink.' They argue that the human ability to use spoken language to think and solve problems together is 'one of the defining characteristics of our species [and] an important product of our evolutionary history that is at least as important today as it ever was.'[66]

However, as we've already seen – and as Littleton and Mercer note – two heads are not always better than one. So how can we avoid the dangers of groupthink and increase the likelihood that teams are able to work productively and successfully together?

According to Littleton and Mercer – and I have personally experienced this many times – we can achieve this quite easily through the use of ground rules – an agreed set of principles or guidelines that a team agrees to abide by when speaking and working together. We'll return to this idea later in this chapter.

So far, we've looked at the features of cohesive teams, the triggers that can stimulate team flow and the crucial role of spoken language in helping teams work together to become greater than the sum of their parts.

Let's now look at three activities to translate these insights into tangible outcomes: jell the team, agree ground rules and set group goals.

Exercise 2.1: Jell the team

As the Google researchers discovered, effective teams create a sense of dependability by understanding each other's strengths and weaknesses and acting accordingly. A similar idea can be seen in the group flow trigger of familiarity – 'knowing and understanding each team member's tics and tendencies.'

In practice, this means getting to know and checking in regularly with one another. This can be achieved both formally and informally – it's a good idea to do both if you can.

66 Littleton, K. & Mercer, N. (2013) *Interthinking: Putting talk to work*. London: Routledge, p1–2.

Formal

To get the ball rolling, working your way around the room, introduce yourselves and each share something about yourselves. This may include the following:

- I applied to join the team because…
- Something I'm looking forward to this year is…
- A TV show/film/podcast/book I enjoyed recently is…
- In my spare time, I like to…

You may wish to add some options of your own. What you choose to share is not important, but it is important for each of you shares *something*. The aim is for the team to see each other as human beings and not just 'the Year 3 teacher', 'the teaching assistant' or 'the literacy lead'.

Informal

If time and budget allow, you may wish to organise a social event. A meal, an escape room, a bowling alley – whatever takes your fancy. The only caveat is that everyone on the team should be up for it. Majority rule should not be applied here; if one team member feels pressured into doing something they aren't comfortable with, it will undermine the aim of the exercise – to make everyone feel included and build team spirit. For some people, going to the pub after school is squarely in their comfort zone; for others, it may not be.

Social events are great, but they carry a cost in terms of money and time. A cheaper and easier alternative is to set aside half an hour or so at the start or end of your first meeting for team members to chat informally with one another. Put some music on, provide some refreshments and just let people mingle and chat.

Regular check-ins

Beyond the initial 'getting to know each other' phase, think about how you might check in with one another regularly to discuss things beyond the work of the team, even if it's only for a few minutes.

- Encourage people to turn up to meetings a few minutes early or stay for a few minutes at the end, using the time to speak together informally.

- Have music playing as people enter and leave each meeting. Music is a great social lubricant.
- At the start each meeting, ask each person to share something positive that happened in the last day, week or term, or perhaps something they're looking forward to.

Exercise 2.2: Agree ground rules

Once the team has jelled, to achieve a state of cohesiveness and facilitate interthinking, agree a set of ground rules to guide how the team will work together. Here are some ground rules that work well – it's a good idea to start with a list like this, and then ask people whether there are any rules they would like to add, remove or change.

1. Everyone is an equal member of the team

Schools are usually organised in a hierarchical way, and ideally a slice team would include a representative from each 'tier' of the staffing structure. However, that hierarchy should not apply within the slice team. Instead, in a slice team everyone is equally responsible for writing the plan and for implementing that plan. (Later in this chapter, and in *Chapter 23: Schedule regular 'pivot or persevere' meetings*, we'll look at what to do when agreement cannot be reached.)

2. All relevant information should be shared

As we saw in *Chapter B: Why do so few change initiatives achieve their intended goals?*, one of the biggest problems with top-down change is groupthink, the phenomenon where groups of like-minded individuals make bad decisions because of unhelpful in-group dynamics.

To avoid falling into groupthink, we need to create the conditions where all relevant information is shared – especially if that information is inconvenient, for example if it's likely to lead to disagreement, lengthy discussion or debate. When you're making decisions that affect many people's lives, it's really important to have robust discussions in which you leave no stone unturned.

3. Tech should be put away

Several studies have found that the mere presence of a mobile phone on a table – even if it isn't pinging or being used – impairs cognitive

performance and task completion.[67] Even if your phone is only visible in your peripheral vision, part of your dopamine-hungry brain is aware of its presence. The engineers of Silicon Valley are clever, but they can be outsmarted with a simple move: switch off your phone and keep it out of sight. The same goes for any laptops that aren't essential to the running of the meeting.

4. Everyone should be free to air their honest views

Linked to 'All relevant information should be shared', you need to make it clear that within the slice team people can say what they really think without worrying about any potential repercussions. As we'll see in the 'five-minute interview' exercise in *Chapter 6: Build a glass box*, there are safe and easy ways in which we can achieve this.

5. Everyone should be prepared to have their views challenged

The flip side of airing honest views is that team members should be prepared to have their own views challenged where appropriate. When you're making decisions that affect many people's lives, you need to be anti-fragile and check your ego at the door. Aim to create a climate in which it's not just OK to change your mind, but doing so is recognised and embraced as a sign that you're approaching the work in an agile, open-minded way.

6. Everyone should work towards agreement where possible

Having said all this, the team is trying to get things done. With this in mind, it's important to adopt a solution-focused approach where conflicts are resolved and decisions are reached through consensus. If there is disagreement within the team about a particular decision or course of action, it may be necessary to vote and go with the majority. Alternatively, you may agree as a team to adopt 'strategy X' for now and then review it again in a few weeks once you've reviewed the data. We'll look at how to do this in *Chapter 23: Schedule regular 'pivot or persevere' meetings*.

67 Ward, A. F., Duke, K., Gneezy, A., Bos & M. W. (2017). Brain Drain: The Mere Presence of One's Own Smartphone Reduces Available Cognitive Capacity. *Journal of the Association for Consumer Research* 2(2), 137–54. See also Tanil, C. T. & Yong, M. H. (2020). Mobile phones: The effect of its presence on learning and memory. *PLoS One*, 15(8):e0219233.

7. Confidentiality should be maintained

When you're having robust conversations about school improvement – especially conversations in which colleagues, pupils or families may be mentioned by name – the usual confidentiality clause applies: what's said in the slice team should stay in the slice team. Likewise, take care not to include sensitive information in meeting minutes if they're going to be shared with the wider school community.

As always in schools, there's an important caveat here. Should any information come to light about illegality or a situation where someone may come to harm, it will be necessary to inform the safeguarding lead. Confidentiality can never be completely guaranteed, and people should be aware of this.

8. The ground rules should be reviewed regularly

To make sure the slice team is functioning effectively, and to guard against falling into groupthink, revisit the ground rules at the start of each meeting. Ask people to comment on how they feel things are going within the team and check that the ground rules are still serving their purpose. You may find the following discussion prompts helpful:

- Is everyone still happy with the ground rules?
- Are there any we would like to add, remove or amend?
- How well do we feel the slice team is working together?
- Is anyone unhappy with the way the team is working?
- Is there a danger we may be falling into groupthink?
- How can we guard against this?

To recap the suggested ground rules:

1. Everyone is an equal member of the team.
2. All relevant information should be shared.
3. Tech should be put away.
4. Everyone should be free to air their honest views.
5. Everyone should be prepared to have their views challenged.
6. Everyone should work towards agreement where possible.

7. Confidentiality should be maintained.
8. The ground rules should be reviewed regularly.

Exercise 2.3: Set group goals

We're going to spend the next few chapters setting increasingly clear goals for your school improvement project. In this exercise, you just need to think in terms of 'broad strokes' to agree group goals at two levels: the slice team, and pupil outcomes.

Here are a few examples. You may wish to select a goal from the following lists; alternatively, you may wish to write your own.

Slice team:

- Work our way through the *Making Change Stick* programme from beginning to end.
- Create a schedule for when we will meet throughout the year – and stick to it.
- Write and implement a communications plan, with each team member playing an active role.

Pupil outcomes:

- Close the attainment gap.
- Encourage reading for pleasure.
- Develop confidence in speaking and listening.

The aim of this short exercise is for your team to achieve clarity about what you're hoping to achieve together. However, I would urge at this stage that you hold your group goals lightly. In the next few chapters, we're going to put them under the microscope – and your thinking is likely to change along the way…

CHAPTER SUMMARY

- Once you've appointed a slice team, create the conditions in which the team can work together in the best way possible. This chapter looks at three key features of an effective team: cohesiveness, team flow and interthinking.

- Cohesive teams are characterised by psychological safety, dependability, clarity, meaning and impact.
- Flow is often described as 'effortless effort'. Historically, most research on flow has focused on the optimal performance of individuals. However, a growing body of evidence suggests the flow state can also be achieved in teams. Researchers have identified 22 flow triggers, including nine group flow triggers; the *Making Change Stick* programme features each and every one of them.
- Effective teams don't just interact; they interthink. Interthinking is the phenomenon where teams use spoken language to think together in such a way that the whole is greater than the sum of its parts. To enhance a team's ability to work effectively, it's helpful to use ground rules – an agreed set of principles or guidelines that everyone agrees to abide by.
- To create a team characterised by cohesiveness, interthinking and team flow, undertake three activities: jell the team, agree ground rules and set group goals.

Making Change Stick

Phase I: Make a start

- ☑ Appoint a slice team
- ☑ Optimise the team
- ☐ Choose your focus
- ☐ Write a one-page research summary
- ☐ Draft a comms plan
- ☐ Build a glass box

Phase II: Make a plan

- ☐ Map the journey
- ☐ Plan backwards
- ☐ Conduct a root cause analysis
- ☐ Build your improvement strategy
- ☐ Plan tight but loose
- ☐ Build steps to success
- ☐ Plan for diffusion
- ☐ Optimise for habit change
- ☐ Plan professional learning
- ☐ Prepare data collection
- ☐ Timeline and streamline
- ☐ Write a logic model
- ☐ Conduct a pre-mortem

Phase III: Make it happen

- ☐ Manage your project
- ☐ Create individual improvement plans
- ☐ Run PDSA cycles
- ☐ Schedule regular 'pivot or persevere' meetings
- ☐ Embed and sustain improvements
- ☐ Review, reflect – and plan your next project!

CHAPTER 3
CHOOSE YOUR FOCUS

Analyse gaps, compare alternative courses of action and arrive at a research-informed, values-aligned decision.

Most of the activities in the *Making Change Stick* programme are completed by the slice team. However, by the time a school has appointed a slice team, the decision about which area of school improvement they want to focus on has often already been made by the senior leadership team.

Even if you're completely sure you've already made the right decision, it's important to carefully consider whether this really is the best place to focus your efforts before going any further. Once you've completed the activities in this chapter, you may find that you change your mind. If you don't, you'll be extra confident you're on the right path – and you'll develop a more thorough understanding of your area of focus along the way. So, it's a win-win!

The reason that choosing your focus appears at this point in the programme (after the slice team has been appointed) is that even if the senior team has already chosen an area of focus, it's a good idea for the slice team to revisit the decision. There are two main reasons for this:

1. **Autonomy –** As we've seen, in the *Making Change Stick* programme decision-making is devolved to the slice team for your chosen area of focus. In order for this to work, the team needs to have some say over the area of focus itself, even if it's just to ask clarifying questions, understand the decision-making process or agree with what has already been decided.

2. **Expertise –** As 'experts by experience', each slice team member brings a perspective that doesn't exist within the senior team. It's therefore likely that the slice team will have a valuable role to play in contributing to or sense checking the decision-making process.

The activities in this chapter may be used twice; first by the senior team in choosing an area of focus at the start of the process (or perhaps coming up with a shortlist of options) and then again by the slice team once it's been appointed.

The 'what' and the 'how'

As we saw with the implementation equation in *Chapter D: The role of school leaders in making change stick*, we can think about a change initiative as having two dimensions – the 'what' and the 'how'. We can see this same idea expressed in a different way in Table 4. To achieve a positive outcome, we need both elements – the implementation strategy and the improvement strategy – to be effective.

		Implementation strategy (the 'how')	
		Effective	Ineffective
Improvement strategy (the 'what')	Effective	☺	☹
	Ineffective	☹	☹

Table 4 – The 'what' and the 'how'

Most of the *Making Change Stick* programme focuses on the 'how'. In this chapter and the next, we're going to look at the 'what'.

There are two aspects to choosing your focus:

1. How should you decide which area of school improvement to focus on?
2. What should you do to bring about improvement in this area?

In this chapter, we'll explore the first of these questions through five short exercises:

- Analyse gaps.
- Identify potential improvement strategies.
- Prioritise.

- Map your values.
- Review the evidence.

We'll turn to the second question in *Chapter 9: Conduct a root cause analysis* and *Chapter 10: Build your improvement strategy*.

Exercise 3.1: Analyse gaps

There are many ways to do a gap analysis, some more in-depth than others. To get the ball rolling, we're going to do a very quick version that involves throwing the net wide and looking at the difference between where you are and where you want to be in different areas of school life.

As a team, create a longlist of areas where you feel improvements could be made. Aim for around 5–7 at this stage. Here are some examples – feel free to add, change or delete items from this list as you see fit.

- Quality of teaching
- Consistency of teaching
- Progress
- Attainment
- Curriculum
- Learner effectiveness
- Behaviour and relationships
- The attainment gap
- Assessment
- Feedback
- Pupil wellbeing
- Staff wellbeing
- Use of data
- Professional learning
- Pastoral support
- Attendance
- Meetings and email culture
- Coaching
- Performance management
- Parental engagement

For each of the items in your longlist, ask three questions:

1. Where do we want to be? (Sum up in a phrase or sentence.)
2. Where are we now? (Sum up in a phrase or sentence.)
3. On a scale of 1–5, how important is it that we close this gap? (1 is 'not at all important' and 5 is 'this cannot wait'.)

If you're doing this as a team, you may wish to do this individually at first before creating a shared version. Don't overthink it – just jot down whatever comes to mind as you ask these questions. To keep your

responses succinct, you may find it helpful to refer to the worked example in Table 5 and use the template available at makingchangestick.co/gap.

Area of focus	Where do we want to be?	Where are we now?	How important is it that we close this gap? (Scale of 1–5)
Behaviour in Year 8	The same or better than other year groups.	Low-level disruption, calling out, high volume of detentions.	4
Quality of meetings	All staff view meetings as purposeful and collegial.	Some people think meetings are not a good use of time.	3
Staff wellbeing	All staff should feel happy, safe and well supported.	Many colleagues struggle with workload and stress.	5

Table 5 – Gap analysis (worked example)

Compare your list with your existing school improvement or development plan. Are your existing school improvement priorities included here? If so, great! If not, you may wish to add them to your list.

Exercise 3.2: Identify potential improvement strategies

For each gap you identified in Exercise 3.1, you now need to identify potential strategies that will take you from where you are to where you want to be. The aim of this exercise is to establish a sense of how easy or difficult it may be to close any gaps you've identified. Again, you only need 'broad strokes' at this stage – once you've chosen your area of focus, you'll design an improvement strategy in granular detail.

To continue with the worked examples used in Table 5, potential improvement strategies may include the following:

- To improve behaviour in Year 8, we could:
  - Conduct observations to understand current behaviour patterns and issues in Year 8.
  - Train teachers in how to be preventive rather than reactive.
  - Simplify the school rules.

- Establish a peer mentoring programme.
- Re-establish expectations with Year 8.
- Build relationships with key parents and carers.
- Change the lunchtime duty rota.
- Increase the visibility of senior colleagues in the corridors at lesson changeover.
- Establish a centralised detention system where teachers speak with pupils to resolve issues and repair damaged relations.

- To create more purposeful meetings, we could:
  - Convene a focus group with a random sample of teachers to explore perceptions of staff meetings.
  - Create a meetings task force.
  - Provide training for all middle and senior leaders in how to chair meetings effectively, rehearsing how to deal with common issues.
  - Set aside time for heads of department to plan meetings collaboratively, share best practice and receive feedback and support from each other.
  - Abolish prescheduled meetings, and establish a policy whereby meetings only happen when collective decisions need to be made that cannot be achieved through other means.
- To improve staff wellbeing, we could:
  - Administer a staff survey to capture people's feelings about wellbeing and workload.
  - Convene a wellbeing committee.
  - Implement a plan to reduce workload.
  - Create a weekly menu of wellbeing activities people can opt in to if they wish.

Having done this, give each area of focus two scores out of five: one for how effortful it would be to close that gap, and one for how impactful it would be. You may wish to create a table such as that illustrated in Table 6.

Area of focus	How effortful would it be to close this gap? (Score /5)	How impactful would it be to close this gap? (Score /5)
Behaviour in Year 8	4	5
Quality of meetings	2	3
Staff wellbeing	3	4

Table 6 – Effort and impact scores (worked example)

Once you've completed this exercise, write each area of focus on a separate sticky note. NB you just need to write the name of the gap ('behaviour in Year 8', 'quality of meetings', 'staff wellbeing'), not the strategies that will help you bridge those gaps.

You're now ready to populate a priority matrix!

Exercise 3.3: Prioritise

A priority matrix is a simple graph with **effort** on one axis and **impact** on the other.[68] As we can see in Figure 5, we can divide each axis in half to create four quadrants: quick wins, low priorities, significant projects and thankless tasks.

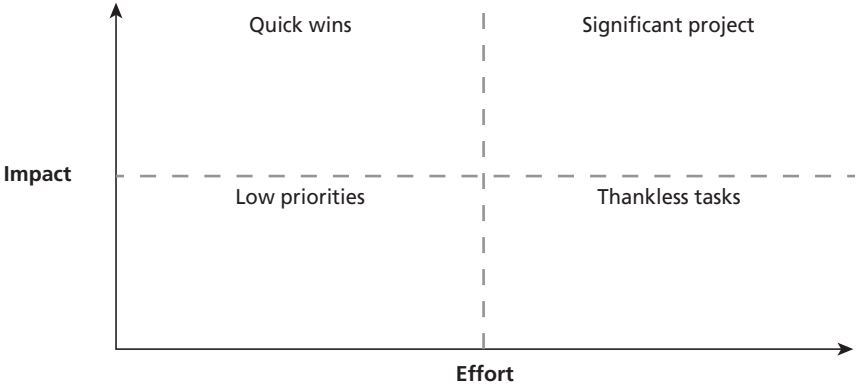


Figure 5 – The priority matrix

68 There are many variations on this activity, and they are all loosely based on the 'Eisenhower matrix', a time management tool inspired by a 1954 speech by the former US president and developed by Stephen Covey in Covey, S. (1989). *The 7 Habits of Highly Effective People*. London: Simon & Schuster.

Let's look at some examples of school improvement initiatives that might fall into each quadrant, starting in the top-left and working anticlockwise.

Quick wins

As I mentioned in *Chapter B: Why do so few change initiatives achieve their intended goals?*, I used to teach at a school where we had a significant problem with litter. One day, the senior team took decisive action – henceforth, pupils would only be allowed to eat in the school canteen. The litter problem went away overnight, and the school was a much more pleasant and ordered place to be.

Other examples of quick wins include:

- Teachers meeting and greeting pupils at the door at the start of lessons.
- Placing wall displays and clocks at the back of classrooms to reduce visual clutter and cognitive load.
- Hosting parents' evenings online rather than face-to-face.

Low priorities

Asking teachers to check pupils' uniforms at the start of every lesson might fall into the low priorities section. It's not a huge undertaking, but it's unlikely to have a significant impact on pupil learning outcomes and it takes up the teacher's time that might be spent on more productive things.

Other examples of low priorities include:

- Asking teachers to save lesson plans to a shared drive using a standard proforma.
- Pupils completing self-assessment reflection sheets.
- Carrying out 'book looks', which involves checking to see whether pupils' books have been marked according to the school policy.

There may be a case for doing these things from time to time, but they aren't usually seen as being urgent or impactful.

Thankless tasks

In the high-effort/low-impact quadrant, we might think of onerous marking policies that require teachers to spend many hours each week providing written feedback to each of their pupils.

Other examples of thankless tasks include:

- Regularly updating wall displays in classrooms and corridors.
- Lengthy report writing.
- Overly frequent data harvests.

Significant projects

When you identify a quick win, a top-down approach may be well suited to introducing and executing clear, decisive action. However, when we get into the upper-right quadrant – high-effort, high-impact change initiatives – top-down implementation is less effective. The *Making Change Stick* programme is designed for such significant projects.

Broadly speaking, high-effort, high-impact change initiatives meet the following two criteria:

1. It's a whole-school development that will affect many different people – teachers, leaders, support staff, pupils, parents and carers, form tutors…
2. It's a substantial undertaking, meaning it's likely to take more than a year or two before it becomes part of 'the way we do things around here'.

Table 7 features some examples of the kinds of significant projects a school might implement using the *Making Change Stick* programme.

Category	Example change initiatives
Behaviour	• New whole-school behaviour policy. • Improving the pastoral support system.
Curriculum	• Implementing a learner effectiveness programme. • Decolonising the history curriculum.
Pedagogy	• Improving the use of feedback. • Developing dialogic approaches to teaching and learning.

Category	Example change initiatives
Professional learning	• Developing the use of practitioner inquiry. • Implementing a coaching programme.
Outcomes	• Closing the attainment gap. • Improving reading.
Systems	• Improving how to collect, analyse and respond to data. • Organising the shared drives and moving to cloud storage.

Table 7 – Examples of high-effort, high-impact significant projects

To run the exercise, draw a large version of the priority matrix on a whiteboard. Taking the pile of sticky notes you made in Exercise 3.2, decide together as a team where on the matrix each should be placed. This may involve people saying things like, 'I think it should be a bit lower or further to the left, because…' With some items, you may find there is disagreement as to which quadrant it falls in. People may say, 'I think that's more of a low priority than a thankless task, because…'

You may find that each of the potential areas of focus on your shortlist fall into the upper-right significant-projects quadrant. But within that quadrant, you should be able to differentiate between how effortful and impactful each of your options will be.

If one of your options falls into the upper-left quick-wins quadrant, that's probably something you should action at the first opportunity. However, this would not be a suitable choice of project for you to focus on throughout the *Making Change Stick* programme.

Once you've plotted your potential gaps on the priority matrix, take a step back and see whether any of them stand out as a leading candidate. You may find it helpful to rank the different options. If you had to make this decision today, what would be your first, second and third choice, and why? Is there consensus within the team as to which significant project you should embark upon?

Don't worry if you haven't reached consensus yet. The next two activities should help bring things into sharper focus.

Exercise 3.4: Map your values

Many schools have a set of core values that they list on their school website and talk about in assemblies and at open evenings. If your school has a set of core values, you can use them in this exercise. If not, pick a few from the list below that align with your school's ethos – or you may wish to create a list of your own.

Here are some examples of the kinds of values that schools often espouse:

- Altruism
- Collaboration
- Compassion
- Doing your best
- Empathy
- Friendship
- Generosity
- Honesty
- Integrity
- Kindness
- Perseverance
- Resilience
- Respect
- Responsibility
- Service
- Wisdom

Values are all well and good. However, as Guy Claxton points out, when you look at what schools do on a day-to-day basis, it isn't always easy to see how such values play out in practice.[69]

Part of the problem is that values are a bit 'motherhood and apple pie' – few people would argue against any of the lovely-sounding things in the list above.

According to Higham and Booth, values are 'deep-seated beliefs and commitments that operate as motives for right action; as well as providing a sense of direction, they influence decisions in the moment.'[70] In other words, if you want to find out what someone's values are, you should really look at what they do rather than what they say.

69 Claxton, G. (2021). *The Future of Teaching and the Myths That Hold it Back*. London: Routledge.

70 Higham, R. & Booth, T. (2018). Reinterpreting the authority of heads: Making space for values-led school improvement with the Index for Inclusion. *Educational Management Administration & Leadership*, *46*(1), 140–57.

Booth and Ainscow suggest that one way to get a handle on this question is to consider what the opposites of your values may be.[71] There are no right answers here, but the opposites of the values we listed on page 134 could be something like the following:

- Altruism → Selfishness
- Collaboration → Wanting to win
- Compassion → Cynicism
- Doing your best → Disengagement
- Empathy → Indifference
- Friendship → Hostility
- Generosity → Hoarding
- Honesty → Manipulation
- Integrity → Hypocrisy
- Kindness → Bitterness
- Perseverance → Helplessness
- Resilience → Fragility
- Respect → Rudeness
- Responsibility → Recklessness
- Service → Hindrance
- Wisdom → Thoughtlessness

To run the values mapping exercise:

1. Write down a list of your core values and their opposites. If you're in a group, you may wish to do this exercise individually and then compare notes and create a shared version.
2. Return to your list of potential significant projects. For each, consider:
   a. How it helps promote your values.
   b. How it will help you move away from the opposites of your values.

71 Booth, T. & Ainscow, M. (2016). *Index for Inclusion: A guide to school development led by inclusive values*. Cambridge: Index for inclusion network, pp30–1.

For example, you may say:

1. Our new behaviour and relationships policy will:
    a. Promote the values of respect, responsibility and kindness.
    b. Reduce rudeness, selfishness and indifference.
2. Our new learner effectiveness programme will:
    a. Promote the values of collaboration, service and perseverance.
    b. Reduce helplessness, fragility and disengagement.
3. Our new peer mentoring system will:
    a. Promote the values of friendship, empathy and honesty.
    b. Reduce hostility, cynicism and manipulation.

The overarching question here is, which of our potential school improvement initiatives is best suited to helping us live out our values as a school? Discussing this question within your team should help clarify your thinking and help you identify the best option for you to focus on. Following this exercise, you may wish to alter the position of some of the sticky notes on your priority matrix.

By now, you may have a clear front-runner – a high-effort, high-impact project that is strongly aligned with your values – and you may be straining at the leash to get started. Before you make your final decision, however, there's one more exercise to complete – one that often makes people see things in an entirely new light.

Exercise 3.5: Review the evidence

Human beings are plagued with **cognitive biases**.[72] We like to think we're rational beings, but all too often we make decisions based on gut instinct and then rationalise those decisions after the event using our intellect. Perhaps the most common example is **confirmation bias**, whereby people readily accept ideas that confirm or support their existing beliefs and values, and question or dismiss ideas that challenge their existing worldview.

72 If this comes as news to you, visit the Wikipedia page listing the myriad ways in which we humans deceive ourselves – often without knowing it: https://en.wikipedia.org/wiki/List_of_cognitive_biases.

For example, if a new study confirms what you already believe, you might think, 'See! I was right all along! I knew it!' If, on the other hand, a new study goes against what you already believe, you might think, 'Hmmm… Does the evidence really support these conclusions? Could these findings be interpreted in another way? What was the sample size? Who funded this research? What's their agenda?'

The social psychologist Jonathan Haidt describes this dynamic as 'the elephant and the rider', the rider being your rational mind and the elephant being your emotional system.[73] The rider may feel they're in control, but if the elephant decides to cross the road to eat some tasty-looking leaves, the rider is largely powerless to do anything about it. They may even tell themselves they *wanted* to cross the road!

Sometimes, your gut instinct will turn out to be correct. However, guts are not renowned for being systematic when it comes to reading the available literature or weighing the evidence for and against a range of competing options. For this reason, the decisions we make using gut instinct are often based on incomplete information and they lean heavily towards our existing biases.

To make sure your choice of school improvement initiative is the right one, and to minimise the chance that it may be influenced by an unconscious cognitive bias, it's important to make sure that as far as possible your decision is informed by cold, hard evidence.

Broadly speaking, there are two kinds of evidence:

- Evidence that already exists (either in the literature or in your school).
- Evidence that you go out of your way to collect.

Whatever the options before you, it's likely you will need both.

Step 1: Review existing evidence

Schools are data collecting machines, and you're probably sitting on a wealth of evidence that can shine a light on various aspects of the significant projects on your shortlist. Depending on the school

73 Haidt, J. (2012). *The Righteous Mind: Why good people are divided by politics and religion.* Pantheon/Random House.

improvement initiatives you're considering, existing evidence may come from some of the following sources:

- Admissions data
- Attainment data
- Attendance data (pupils and staff)
- Behaviour data
- Complaints
- Exit interviews
- Inspection reports
- Lesson plans
- Observations/learning walks
- Progress data
- Published literature:
  - Academic research
  - Blogs
  - Books and book chapters
  - Government guidance
  - News articles
  - Research guidance reports
- Punctuality/lateness
- Pupil retention
- Pupil voice
- Pupil work
- Reports from school improvement partners
- Schemes of work
- School improvement planning
- Staff retention/turnover
- Surveys
- Teacher retention
- Teacher voice
- Test data

For each of the options on your shortlist, collate all the existing data that shines a light on some aspect of the problem you are trying to solve or the direction you would like to go in.

Summarise the evidence from each source into a single sentence or bullet point. You may find it helpful to collate these into a table, as exemplified in Table 8.

Data source	Summary of findings
Parent/carer survey	63% of parents are satisfied or highly satisfied with the communications they receive from the school.
Attendance data	38% of Year 11 pupils who receive free school meals (FSM) have attendance below 85%.
Behaviour data	On average, there are 41 detentions set each week for low-level disruption in Year 8 lessons.

Table 8 – Summary of existing evidence (worked example)

Step 2: Fill in any knowledge gaps

When reviewing the existing data relating to each of your options, you may notice some gaps in your knowledge. At this point, you may need to collect additional data to fill in the blanks. Examples can be seen in Table 9.

Knowledge gap identified	Actions to collect the data we need
We don't know enough about why so many parents are dissatisfied with the communications they receive from the school.	• Administer a survey to all parents. • Convene a focus group with a representative sample.
We don't know enough about the barriers to attendance for Year 11 pupils who receive FSM.	• Interview persistent absentees in Year 11 and their parents and carers.
We don't understand why low-level disruption is so prevalent in Year 8 compared with other year groups.	• Observe Year 8 lessons. • Convene a focus group with teachers of Year 8. • Interview Year 8 pupils who are frequently in detention.

Table 9 – Knowledge gap analysis (example)

To 'fill in the blanks', you may find it useful to use some of the data collection methods listed in Table 10 on page 140. As this table illustrates, there are advantages and disadvantages associated with any method of data collection. It is therefore good practice to collect multiple types of data as this helps overcome the limitations or disadvantages associated with any single data source.

Collecting and analysing data requires time and effort. However, with the judicious use of **sampling** – choosing a small, representative selection of teachers, pupils or books to look at – useful data can be collected while keeping workload to a minimum. We'll look again at the 'how' to balance data collection with workload in *Chapter 16: Prepare data collection*.

Data source	Advantages	Disadvantages
National test data	• Easy, quick, 'naturally occurring'. • Valid and reliable. • Allows comparisons across schools.	• Not designed for your issue. • Often more general than you need.
In-school test data	• Can be 'naturally occurring'. • Can be designed to suit your purposes.	• Low validity and reliability. • Can be influenced by many factors. • Cannot be compared with other schools.
Surveys	• Easy to collect large samples. • Can be anonymous. • There are many existing surveys you can use with established validity and reliability. • Can be tailored to meet your needs and interests.	• Surprisingly difficult to write high-quality questions. • Can have a low response rate, and who responds can bias your sample. • One-way communication – you can't sense check.
Pupil work	• Authentic, 'naturally occurring'. • Can be linked to your area of focus.	• Difficult to analyse in large numbers. • You can only work with what is there – you can't capture what is missing. • You can't sense check (unless you use it as a stimulus in an interview).

Data source	Advantages	Disadvantages
Interviews	• Flexible – individuals, pairs or focus groups. • Enables sense checking ('Do you mean…'). • High completion rate from a representative sample of participants.	• Can require interpretation – subject to bias. • Time consuming. • Not anonymous. • Responses may be affected by a desire to 'please the teacher'.
Observations	• You can see what's happening in real time. • You can use different types of observation to fit the purpose (e.g. in person or video).	• The presence of an observer can affect what is observed. • Low validity and reliability. • You can only capture what is observable.

Table 10 – Data sources: advantages and disadvantages

Once you've collected data to fill in any blind spots you may have, write a short summary of your findings (see Table 11 for an example).

Data source	Summary of findings
• Administer a survey to all parents. • Convene a focus group with a representative sample.	• 65% of parents would like more regular updates on progress, attainment and behaviour in lessons.
• Interview persistent absentees in Year 11 and their parents and carers.	• 54% of Year 11 persistent absentees cite mental health as the main reason for absence. • 37% cite exam stress.
• Observe Year 8 lessons. • Convene a focus group with teachers of Year 8. • Interview Year 8 pupils who are frequently in detention.	• The majority of incidents of low-level disruption are caused by a small number of pupils. • Instances of low-level disruption happen far more in some subjects than others.

Table 11 – Summary of findings (worked example)

Drawing it all together

In this chapter, we have:

- Conducted a gap analysis to look at the difference between where you are and where you want to be in several areas of school life.
- Created a shortlist of potential school improvement initiatives that may help you close the gap between where you are and where you want to be.
- Mapped these ideas on a priority matrix.
- Considered the extent to which each option aligns with your core values and helps move you away from the opposites of your values.
- Weighed the evidence relating to each of the options on your list.

There's no formula to tell you how to combine all of this information in making a decision. However, you should now have all the information you need to ensure that your decision is informed by your values and by all the available evidence. In my experience, once a senior team or slice team has undertaken these exercises there's usually one option that stands head and shoulders above the others and it's obvious what the improvement focus should be.

As you work your way through the next few chapters – especially chapters 7–10 – you may find that your area of focus changes. This is perfectly normal – in fact, it's a healthy sign that you're adopting an agile mindset in deciding how best to improve outcomes for the children and young people in your setting.

Now that you've chosen a project to focus on, you need to establish a clear understanding of the problem – and how you might fix it.

CHAPTER SUMMARY

- By the time you've appointed the slice team, the decision about which area of school improvement you want to focus on has often already been made by the senior leadership team.
- Even if you're completely sure you've made the right decision, carefully consider whether this really is the best place to focus your efforts.

- Revisit the decision with the slice team and sense check your thinking with the following five exercises:
  1. Analyse gaps – As a team, briefly discuss several areas of school life where you feel improvements could be made. For each, ask:
     a. Where do we want to be?
     b. Where are we now?
     c. On a scale of 1 to 5, how important is it that we close this gap?
  2. Identify potential improvement strategies – For each of the gaps you've chosen to focus on, identify possible improvement strategies that will take you from where you are to where you want to be.
  3. Prioritise – Plot the options you've identified on a priority matrix according to how effortful and how impactful you think closing each gap will be. Once you've done this, take a step back to see whether any of them stand out as a leading candidate.
  4. Map your values – Write down a list of your core values and their opposites. For each of your options, consider:
     - How it helps promote your values as an organisation.
     - How it will help you move away from the opposites of your values.
  5. Review the evidence – For each of your potential areas of focus:
     - Collate any existing evidence that shines a light on the problem you would like to solve.
     - Identify whether you have any knowledge gaps – any areas where you don't know enough to be able to make an informed decision.
     - Where necessary, take steps to fill in the blanks by collecting additional data. Use sampling to keep workload manageable.
- As you weigh all the information you've collected through these exercises, does one avenue of school improvement stand out more than the others?

- There's no formula to tell you how to combine all this information in making a decision. However, you now have all the information you need to ensure your decision is informed by your values and by the available evidence.

Making Change Stick

Phase I: Make a start

- ☑ Appoint a slice team
- ☑ Optimise the team
- ☑ Choose your focus
- ☐ Write a one-page research summary
- ☐ Draft a comms plan
- ☐ Build a glass box

Phase II: Make a plan

- ☐ Map the journey
- ☐ Plan backwards
- ☐ Conduct a root cause analysis
- ☐ Build your improvement strategy
- ☐ Plan tight but loose
- ☐ Build steps to success
- ☐ Plan for diffusion
- ☐ Optimise for habit change
- ☐ Plan professional learning
- ☐ Prepare data collection
- ☐ Timeline and streamline
- ☐ Write a logic model
- ☐ Conduct a pre-mortem

Phase III: Make it happen

- ☐ Manage your project
- ☐ Create individual improvement plans
- ☐ Run PDSA cycles
- ☐ Schedule regular ‘pivot or persevere’ meetings
- ☐ Embed and sustain improvements
- ☐ Review, reflect – and plan your next project!

CHAPTER 4
WRITE A ONE-PAGE RESEARCH SUMMARY

Don't reinvent the wheel. The truth is (probably) out there...

In the previous chapter, we identified which gap you would most like to close. We also started to identify potential strategies that will take you from where you are to where you want to be.

In *Chapter 8: Plan backwards*, we'll bring this vision into sharper focus by identifying precisely what you want to achieve, for whom and by when. This will be a convergent part of the process, as you hone in on a set of measurable **impact goal**s that you want to achieve. First, we need to undertake a more divergent exercise, as we throw the net wide and ask, 'What is known about this issue?'

Cognitive science has revealed a lot in recent years about the importance of domain knowledge. In short, if you want to think creatively or critically about something, it's important that you 'know your onions' because knowledge is the stuff we think with. This insight applies to both the 'what' and the 'how' elements of the implementation equation. This book is mainly about the 'how', but in this chapter – as in the last – we're going to focus on the 'what'.

The aim of this chapter is to write a one-page summary of what is known about your chosen area of focus, including any strategies that may be helpful in improving outcomes in this area.

There are two reasons for doing this. First, it will increase your chances of achieving a successful outcome because you'll be making decisions from a more informed position. There's no point in reinventing the wheel – the truth is (probably) out there…

Second, a one-page research summary is really helpful in getting your colleagues – both existing colleagues and new staff – up to speed. The importance of this cannot be overstated – staff turnover is one of the biggest barriers to lasting school improvement. At a school with 10% annual turnover, within five years up to 50% of staff may be new to the school. You need a plan for how to onboard new colleagues and help them 'hit the ground running' with regard to your school improvement initiative. Part of that onboarding process should be to provide new colleagues with a succinct research summary relating to your school improvement initiative, tailored to the needs of your school.

Three guiding principles will help you establish a robust, shared understanding of the problem you wish to address:

1. Park your hunches (for now).
2. Adopt a 'scout mindset'.
3. Spread the load.

Let's look at each in turn.

Guiding principle 1: Park your hunches (for now)

In education, there are many competing approaches and ideas, and naturally people want to know 'what works?'[74] But 'what works?' is a bad question. Nothing works everywhere, and everything works somewhere to some extent. Even if a teacher stands at the front of a classroom and reads in a monotone from a textbook held directly in front of their face, it's likely that at least *some* of their pupils will learn *something* from the experience.

It also depends on what you mean by 'works'. This point was illustrated powerfully Tom Sherrington, who writes:

74 For example, see Edovald, T. & Nevill, C. (2021). Working Out What Works: The Case of the Education Endowment Foundation in England. *ECNU Review of Education*, 4(1), 46–64.

> My best ever GCSE results […] came after a mad cramming dash to the finish in a reduced-time situation where every lesson featured past paper questions. Teaching to the test to the max. It worked. A*s galore. Physics take-up at A-level – not good. Did they enjoy it? No. Were they better at physics? No.[75]

Did this cramming approach 'work'? If you measure success in terms of exam results (as most education research does), then you would have to conclude it was a resounding success – 'A*s galore'! If, however, you define 'works' in terms of A-level take-up, or enjoyment, or getting better at physics – not so much.

Even if you take the view that 'what works' is synonymous with 'improving exam results', the idea that we can reliably determine the extent to which a given intervention or strategy 'works' is somewhat naïve because there are often several variables in play at any one time. As Kirschner and Surma put it:

> What works for one teacher may not work for another because teachers differ qualitatively; subtle and not so subtle differences between teachers mean that the way in which they carry out the same thing differs, both in how it is carried out and how it is perceived by their pupils. Also, what works in a lesson today won't necessarily work in the same lesson this afternoon, tomorrow or in three months.[76]

It's really important to bear this in mind as you start to build an understanding of the problem you want to solve and the strategies you might employ in doing so. Often, when people launch a change initiative, they start with a particular strategy or intervention in mind and then reverse-engineer it to their school context. To do this is to fall prey to a cognitive bias known as the **law of the instrument**, also known as being a 'hammer in search of a nail'.

75 Sherrington, T. (2013). Some Knowledge-Skills Interplay. *Teacherhead*. Retrieved from: https://teacherhead.com/2013/07/02/some-knowledge-skills-interplay.

76 Kirschner, P. & Surma, T. (2020). Editorial: Evidence-informed pedagogy. *Impact* (10): Autumn. Retrieved from: https://my.chartered.college/impact_article/evidence-informed-pedagogy.

It may be the case that you already have a particular intervention or strategy in mind. Perhaps you have a feeling in your gut – or a shared belief within your team – that the solution to your problem is instructional coaching, or peer tutoring, or a particular reading scheme, perhaps. This is probably because you have become persuaded, at some point along the way, that this strategy or approach 'works'. However, as we've established, nothing 'works' everywhere, and just because something has 'worked' in a particular research context, that's no guarantee it will work in your setting.

So, if you already have a strong hunch or belief about what will 'work' in your context, I urge you to park it – for now, at least. Keep an open mind and be prepared to go where the evidence leads you. This brings us to our second guiding principle.

Guiding principle 2: Adopt a 'scout mindset'

In her fascinating book, *The Scout Mindset: Why Some People See Things Clearly and Others Don't*, Julia Galef draws a distinction between motivated reasoning (the 'soldier mindset') and truth-seeking (the 'scout mindset').

The metaphor draws on two types of people you might find in an army. A soldier takes to the trenches and seeks to defend their territory or attack the enemy to gain new territory. Likewise, someone with a soldier mindset tends to spend their time defending what they already believe and challenging, attacking and seeking to persuade or 'defeat' those who take a different view.

A scout, in contrast, makes for the high ground. Their job is to establish an accurate understanding of the terrain. They want to know how far away the enemy troops are, how many there are, how well equipped they are, where the nearest water supply is and so on. Galef defines a scout mindset as 'the motivation to see things as they are, not as you wish they were.'[77]

People adopt a soldier mindset for all kinds of relatable reasons – the comfort of being right, the blow to your ego that comes with finding out you're wrong about something or the desire to belong to a social group

77 Galef, J. (2021) *The Scout Mindset: Why Some People See Things Clearly and Others Don't*. Piatkus.

or 'tribe'. There's nothing inherently wrong with any of this, and it can be useful to adopt a soldier mindset at times.

The problem is that all too often, people adopt a soldier mindset as their *default* mode of thinking, defending ideas they believe to be true and attacking those they believe to be wrong when they're not in possession of all the facts. If you've ever spent more than a few minutes on social media, you may recognise this pattern of behaviour.

Helpfully, Galef suggests some practical steps we can take to guard against falling into a soldier mindset, and instead to adopt a scout mindset.

The characteristics of a scout mindset are woven throughout the *Making Change Stick* programme, and there's no need to enter into an extended discussion of this here. However, for the purposes of building a knowledge base – the aim of this chapter – Table 12 lists a few scout mindset moves, with examples of what these might look like in practice.

Scout mindset move	For example…
Use balanced search terms	If you find yourself searching for 'evidence for intervention X', spend a similar amount of time searching for 'evidence against intervention X'.
Look beyond the headlines	Extraordinary claims require extraordinary evidence. If a headline or news article makes a bold claim about a particular study, ask: 'Is this really supported by the evidence?'
Consider the research context	Always consider the setting in which research was conducted. If it was done in a different school, country or time, ask: 'How generalisable are these findings to this school, in this country, at this point in time?'
'Steel man' opposing views	If you identify a position that differs from your own, try to consider the argument in good faith. (This contrasts with a 'straw man' argument, whereby someone attributes a weak argument to their opponent in an attempt to undermine their position.)
Seek out your blind spots	Ask yourselves: 'Do we have any blind spots here? What could we be missing?'

Scout mindset move	For example…
Identify the assumptions that underpin your beliefs and test them	Ask yourselves: 'What do we believe to be true that we don't have strong evidence for?'
If you don't know something, admit it – to yourself and to others	If somebody asks a pertinent question that you don't know the answer to, pay attention. Say: 'What a great question! I'm honestly not sure about this. How can we find out?'
Test your thinking for evidence of bias	As a team, discuss the following questions: • 'Are we judging strategy X by a different standard than we'd use for strategy Y?' (The double standard test.) • 'What would we think if we weren't centrally involved?' (The outsider test.) • 'If nobody agreed with us, would we still hold this position?' (The conformity test.) • 'If this study supported the opposite view, how credible would we find it?' (The selective sceptic test.) • 'If the current situation was not the status quo, would we choose it?' (The status quo bias test.)

Table 12 – Scout mindset moves

Guiding principle 3: Spread the load

Have you ever wondered how much education research is published each year? A few years ago, I asked this question on Quora; as it turns out, the answer is around 200,000 articles.[78] According to my back-of-the-envelope calculation, if you printed 200,000 articles out and stacked them up, you'd have a reading pile twice the height of the London Shard! Clearly, this makes for an unwieldy annual in-tray. Fortunately, there are many useful search tools and research summaries to help us cut through the noise and minimise workload.

Workload is the number one obstacle to building a knowledge base, because it requires both searching for and reading research, which takes

78 https://www.quora.com/How-many-education-research-articles-are-published-each-year.

time. For this reason, the best way to do this exercise is to spread the load. Everyone on the slice team should contribute to this task.

If you have a slice team with six or more people in it, ask each team member to commit one hour to reading and summarising research findings. If you're in a smaller team of three or four people, you have two options: spend twice as long on the task or rope in some colleagues to help you.

However you proceed, here are some top tips – firstly for finding research, and then for reading research.

Finding research

There are many sources of education research and many different types of publications; naturally, some are more reliable and reputable than others. However, you can find valuable information in many places, so it's a good idea to throw the net wide initially. I recommend using the following sources.

Peer-reviewed research

When studies have been peer reviewed, you can be more confident of the findings. Here are some useful sources of published education research:

- ERIC (Education Resources Information Center), available at eric.ed.gov. ERIC is free to access, although some of the sites it links to require subscriptions.[79]
- EBSCO Education Source, available at ebsco.com/products/research-databases/education-source. This is only available for people with an institutional login. (See page 154 for an example of how you can access this database through the UK Chartered College of Teaching.)
- Google Scholar, available at scholar.google.com.

Some academic research sits behind a paywall. There are a few approaches you can take here, the most obvious being to pay. However, it can be eye-wateringly expensive to access even a single paper, and so there are a couple of alternative routes you can try:

79 There's a helpful tutorial on how to use the ERIC database here: https://paperpile.com/g/eric-research-database/.

- Join a professional organisation that provides an institutional login to an education research database. For example, members of the Chartered College of Teaching receive free access to the EBSCO Education Source database. The Chartered College is UK-based but can be joined by teachers all over the world.[80]
- Join ResearchGate, available at researchgate.net. Many authors allow their work to be accessed for free through this site. You can also message the lead author of a paper you want to read. Authors are allowed to share the pre-print version of their paper (the version they submitted to the journal, which means it has not yet been peer reviewed). Researchers are often happy to oblige if you send them a short message explaining why you're interested in their work.

Within the research literature, two types of publication are especially useful and it's a good idea to add these terms to your search inquiry: 'meta-analysis' (studies of studies) and 'systematic review'. These are useful because it means the research has not only been peer reviewed and published, but also evaluated and to some extent refined by experts in the field.

Books and book chapters

There is no database of education books and book chapters, so you'll need to use a generic search engine to find these. However, many book chapters – and even entire books – are available online. Often these are PDFs, so if you add the phrase 'filetype:pdf' to the beginning of your search enquiry you may find that you strike lucky.

Evidence Snacks

Since January 2023, Peps Mccrea has been publishing a really helpful weekly newsletter with research digests and links to new studies. Mccrea spends hours each week reviewing and summarising education research so we don't have to. You can sign up and access the archive at snacks.pepsmccrea.com.

Grey literature

Alongside original research, there is so-called 'grey literature', defined as 'information produced on all levels of government, academia, business

80 See here for various ways of joining: https://chartered.college/join.

and industry in electronic and print formats […] where publishing is not the primary activity of the producing body.'[81]

Grey literature comes in many forms. Some of these are formal, such as government papers, research summaries and guidance reports. Others are less so – blogs, newsletters, social media posts and so on.

Grey literature can be an incredibly useful source of information. However, because it's not peer reviewed, the quality can vary enormously, so you need to read it with a critical eye. Here are some reliable sources of research summaries and guidance reports:

- Chartered College research summaries, available at bit.ly/mcs-cc-res.
- Education Endowment Foundation (EEF) guidance reports, available at bit.ly/mcs-eef.
- The Institute of Education Sciences' 'What Works Clearinghouse', available at bit.ly/mcs-wwch.

News media

It's worth checking the education news media, which often reports on important new studies. It can also be helpful at highlighting where controversy exists. Examples from the UK include:

- Times Education Supplement (TES), available at tes.com.
- Schools Week, available at schoolsweek.co.uk.
- Times Higher Education, available at timeshighereducation.com.
- UK Education News (a feed with the latest education news stories), available at ukeducationnews.co.uk.

Social media

Social media is often described as the 'wild west', and it's certainly true that it can generate as much heat as light. However, light there is – especially about topics that are in vogue – and it's worth using the search bars on social media sites to see what people are discussing and sharing about your chosen area of focus.

81 Third International Conference on Grey Literature (ICGL Luxembourg definition, 1997 – expanded in New York, 2004).

Reading research

Academic research has a reputation for being difficult to read and riddled with jargon. This is perhaps a bit unfair, but the criticism is not without merit. Also, research papers contain lots of information that school-based practitioners don't need to know. The key is to read strategically, rather than starting at the beginning and wading through to the end as you would a with a novel.

Reading strategically is really important because there's an almost limitless amount of literature out there and you want to keep things manageable. But equally, you should read enough to be confident that you have a sound understanding of your chosen area of focus.

To read research papers in a strategic way – i.e. to maximise value while minimising workload – you may find it helpful to follow some or all of the following steps:

1. Skim-read the abstract or executive summary. This will provide you with a short summary of the key features of the study:
    - What did the researchers want to find out?
    - Where was the research carried out?
    - How did they collect and analyse data?
    - What was the sample size?
    - What did they find?
    - What does it mean?
2. Jump to the end of the paper and read the final two or three paragraphs from the discussion section. Usually, researchers use the closing paragraphs to reiterate their findings and underscore the significance of the study. If the study has anything important to say, it will say it here. If there's nothing compelling in this section, it's probably a good idea to discard the paper and try another.
3. If the concluding paragraphs seem to say something important, go back and read the introduction. This will help you understand the context within which the research took place, including a summary of existing research and any gaps in the literature. You may also find it helpful to follow up on some of the references mentioned.

4. Skim-read the methods section for any numbers in the text, because this will likely tell you things like how many pupils, teachers or schools took part. Here are some questions you may find useful:
    - Where was the research carried out?
    - Was the research context similar or different to our own setting?
    - What kinds of data did the researchers collect?
    - Does the sample size seem reasonable?
    - Does the methodology seem sound?
5. If the methods make sense to you, check out any figures and tables in the results section. What's the significance of the findings? What story do they tell? Do the findings seem believable?
6. Revisit the discussion section. This should pick up the narrative started in the introduction, explaining the relevance of this study and how it advances the field. It should also make clear any limitations of the study – what it doesn't reveal, as well as what it does.
7. Write three bullet points to summarise the findings and any key points relevant to your project. You may also wish to make a note of any juicy quotes or statistics.

Exercise 4.1: The one-hour lit review

The aim of this exercise is for the slice team to work together efficiently to produce a one-page research summary that would take much longer for an individual to achieve. Each person should aim to spend an hour on this task, breaking up the time roughly as follows:

1. Search a range of databases (for example, ERIC, Google Scholar, EEF guidance reports, news media and social media), opening a tab for anything that seems relevant. (10 minutes.)
2. Go through each tab in turn. Skim-read each and close any tabs that don't seem relevant to your school improvement initiative. Aim to whittle your list down to around three articles. (20 minutes.)
3. Summarise each of your chosen articles in three bullet points. Include any juicy quotes or statistics. (3x 10 minutes.)

If everyone in a team of six does this exercise, you'll have summarised around 18 papers. Not bad for an hour's work!

The next time you meet as a team, go around the table with each team member sharing a summary of their findings. You may find it helpful to use some or all of the following questions to help guide this discussion:

- What is known about the problem we're trying to solve?
- What approaches may be helpful in addressing this problem?
- What approaches are likely to be less successful, and why?
- What have we learned from this exercise?
- Were our hunches confirmed, challenged – or both?
- What has surprised us?
- How strong is the evidence base?
- What controversies exist in this area?
- What is agreed upon?
- What is contested?
- What remains unknown?
- What approaches have other schools tried when addressing this problem?
- To what extent have these been successful?
- How easy is it likely to be to implement different approaches?

After each team member has shared their findings, condense them into a one-page research summary that captures the collective knowledge and understanding within the team.

Share the research summary with colleagues throughout the school and ask them to share their thoughts on it. And don't forget to include the scout mindset caveat: 'This is a summary of our current thinking, based on the available evidence. Should new evidence come to light, we'll update the summary accordingly.'

CHAPTER SUMMARY

- Write a one-page summary of what is known about your chosen area of school improvement. There are two main reasons for doing this:
  - It will increase your chances of a successful outcome, because you'll be making decisions from an informed position.
  - It will enable you to get new colleagues up to speed quickly and efficiently as part of the onboarding process.
- Three guiding principles will help you build a robust, shared understanding of the problem you wish to address and the methods you could use in doing so:
  1. Park your hunches (for now).
  2. Adopt a 'scout mindset'.
  3. Spread the load.
- In seeking to establish a knowledge base about your chosen area of focus, throw the net wide and search for a range of sources.
- Read strategically: abstract → concluding paragraphs → skim-read the introduction → methods → results → discussion.
- Every member of the slice team should commit to carrying out a one-hour literature review:
  1. Search a range of sources.
  2. Whittle the list down to around three articles.
  3. Summarise each of your chosen articles in three bullet points.
- Condense your findings into a one-page research summary.
- Share your research summary with colleagues throughout the school and ask them to share their thoughts on it.
- Share this with any new colleagues who join your school as part of the onboarding process, to get them up to speed with background knowledge relating to your school improvement initiative.

Making Change Stick

Phase I: Make a start

- ☑ Appoint a slice team
- ☑ Optimise the team
- ☑ Choose your focus
- ☑ Write a one-page research summary
- ☐ Draft a comms plan
- ☐ Build a glass box

Phase II: Make a plan

- ☐ Map the journey
- ☐ Plan backwards
- ☐ Conduct a root cause analysis
- ☐ Build your improvement strategy
- ☐ Plan tight but loose
- ☐ Build steps to success
- ☐ Plan for diffusion
- ☐ Optimise for habit change
- ☐ Plan professional learning
- ☐ Prepare data collection
- ☐ Timeline and streamline
- ☐ Write a logic model
- ☐ Conduct a pre-mortem

Phase III: Make it happen

- ☐ Manage your project
- ☐ Create individual improvement plans
- ☐ Run PDSA cycles
- ☐ Schedule regular 'pivot or persevere' meetings
- ☐ Embed and sustain improvements
- ☐ Review, reflect – and plan your next project!

CHAPTER 5
DRAFT A COMMS PLAN

Conduct a chorus of voices to direct and narrate the journey of change.

In this chapter, we'll address one of the main reasons so many school improvement initiatives fail to achieve their stated goals. It's also one of the easiest problems to fix.

Communications planning is widely used in fields such as business, politics and the charity sector. But for some reason, in schools the importance of writing and implementing a clear comms plan is often overlooked. This is a significant oversight.

When school improvement initiatives fail to meet their stated goals, people often talk about communication breakdown. It's true that poor communication can be a source of confusion, frustration and resentment. But the phrase 'communication breakdown' suggests that communications were good to begin with and then deteriorated. The truth is that in the absence of a clear plan, it's unlikely communications were particularly effective in the first place.

Drafting a comms plan

In this chapter, we'll take steps to ensure that from the outset and throughout the implementation period, people across the school community remain informed, engaged and invested in the process of bringing about lasting, positive change. We're using the word *drafting* here, rather than *writing*, because you'll need to regularly revise and update your comms plan as you work your way through the *Making Change Stick* programme.

The following six guiding questions will help shape your thinking when drafting a communications plan.

1. What's the 'big story'?

The content, delivery and purpose of your communications will vary throughout the implementation period. However, all messaging should fit within an overarching narrative. What story do you want to tell about your school improvement initiative? You should be able to capture this in a short phrase, for example:

- We're creating an amazing pastoral support system.
- We're eradicating the attainment gap.
- We're improving behaviour and relationships.
- We're prioritising mental health and wellbeing.
- We're growing great learners.
- We're making sure learning is secured in long-term memory.
- We're creating a culture where every child reads for pleasure.

Note the use of 'we' in each of these statements. Recognising that school improvement is a collective endeavour is important if you want people to feel like they're part of the process.

2. How will your messaging change as you progress through the implementation period?

Thinking about your 'big story', how should your messaging evolve over time to make sure people remain engaged? What do you need different audience groups to know or do at each step of the way? You may find it helpful to think about your communications in terms of the three phases of the *Making Change Stick* programme, for example:

- *Phase I: Make a start*
  - Raise awareness.
  - Appoint a slice team.
- *Phase II: Make a plan*
  - Write a comprehensive implementation and improvement plan.
  - Anticipate problems and solve them in advance.

- *Phase III: Make it happen*
  - Trial and refine.
  - Scale up and overcome barriers.
  - Embed and sustain improvements.

You probably won't have a clear idea yet of the exact form your messaging will take at each of these stages. Don't worry – this will become clearer as you make your way through the *Making Change Stick* programme. But it's important to be aware that your messaging will need to change as you progress through the implementation period.

3. What language should you use?

Think carefully about the images and metaphors you use in narrating the journey of change. A wide range of metaphors are used to describe aspects of school improvement – roadmaps, flight paths, golden threads and so on. Some are better than others!

When describing a change initiative, the metaphor of a journey is often helpful. After all, you're trying to get from where you are to where you want to be. Moreover, the metaphor of a journey allows you to adapt your narrative to reflect the complexity of the change process. You can speed up, slow down, avoid bumps in the road… you can reverse if you miss a turning… you can take a different route… and you can decide to head for a different destination entirely, should new information come to light.

It's a good idea to avoid the language of launches. Launches are one-off events which are soon forgotten. As the Education Endowment Foundation (EEF) point out:

> 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![82]

82 EEF (2019). *Putting Evidence to Work: A School's Guide to Implementation*. London: Education Endowment Foundation, p9.

Vehicles that get 'launched', such as space rockets and cruise ships, are not easy to steer. If you plan to use the metaphor of a vehicle to narrate your journey of change, make sure it has a steering wheel!

It's also important to be alert to the use of tentative language. Try to avoid saying things like:

- 'We aim to close the gap…'
- 'We hope to close the gap…'
- 'We plan to close the gap…'

Instead, use language that assumes success, such as:

- 'We will close the gap…'
- 'When we close the gap…'
- 'Once we've closed the gap…'

In this way, you frame your vision of the future as though it's a done deal – it's just a question of reality becoming aligned with your vision.

4. Who should deliver the messages?

Communications around a school improvement initiative are usually delivered by the senior leader with responsibility for that policy. When that senior leader stands up to speak in a staff briefing, their colleagues can often predict what they're going to talk about because 'they always talk about X.' In comms planning, consistency is important; predictability, however, is something to avoid.

Think about comms planning as a process of conducting a chorus of voices, with different people delivering different messages to different audiences through different channels at different times. The messaging and the language should be broadly consistent. But the more people you can get to deliver those messages in an authentic way, the more likely it is that those messages will land well.

5. Who are your target audiences?

It's likely that you'll need to communicate with many different types of people during the implementation period, both within school and externally. Internally, you may need to deliver messages to senior leaders,

middle leaders, teachers, teaching assistants, learning support assistants, admin support staff and pupils.

Externally, your primary audience group will probably be parents and carers. Depending on your setting and your area of focus, you may also need to communicate with local services, charities, improvement partners, inspectors, the local authority, the trust, neighbouring schools, regional schools commissioners, subject networks, trust leaders, researchers and so on. It's also an excellent idea to nurture positive relations with the local newspaper so you can collaborate with them about positive stories and photo opportunities.

6. Through which channels should you communicate?

The best form of communication is usually face-to-face. You just can't beat the human touch – it's more interactive and engaging and less prone to misinterpretation than written communication. However, there are many ways of communicating with people in schools, and you should think carefully about how to make the best use of all available channels.

Broadly speaking, there are four types of communication channel:

One-to-many (broadcast comms)

- Assemblies
- Briefings
- Display boards
- Emails
- Flyers
- Lessons
- Local news media
- Mail shots
- Newsletters
- Professional development (e.g. keynotes and courses)
- Social media
- Text message broadcasts
- Webinars
- Website

One-to-one

- Letters or text messages to individual parents and carers
- Meetings with individuals
- Phone calls
- Postcards
- Professional development (e.g. coaching)

Many-to-one

- An incoming slice team email account
- Data collection
- Question or suggestion boxes

Many-to-many

- Open evenings
- Parents' evenings
- Professional development (e.g. interactive workshops)
- School events (e.g. coffee mornings, fetes and shows)
- Staff meetings
- Talking assemblies
- Tutor time

Planning broadcast (one-to-many) communications

Ultimately, you want clear, succinct information to flow freely and regularly through whichever channels you choose to use. We'll look at non-broadcast forms of communication – one-to-one, many-to-one and many-to-many – in later chapters.

At the outset, you mainly need to focus on one-to-many, broadcast communications. In short, you need to tell people what you're up to and regularly update them while keeping the content and delivery of your messaging as fresh, varied and engaging as possible.

For each phase of your broadcast comms plan, complete the following steps (see Table 13 on pages 170–1 for a worked example):

1. List your communications objectives.
2. Identify the key messages you need to deliver to meet those objectives.
3. Identify your target audiences.
4. Select who should deliver the messages.
5. Identify the channels through which you will deliver the messages.
6. Plan when – and how often – to deliver the messages.
7. Finally – and most importantly – set alerts in your calendar to remind the person responsible when it's their turn to step up!

	Communications objective	Key messages	Target audience	Who will deliver?	Through which channels?	When/how often?
Phase I: Make a start	Make sure everyone knows we're prioritising mental health and wellbeing.	• 'We're starting an exciting project looking at how to improve mental health and wellbeing among teachers, support staff and pupils.' • Use the metaphor of a journey that we're going on together. • Establish a positive vision of the future.	• All teaching and support staff • Parents and carers	Headteacher	• Email and staff briefing • Website and newsletter	• September training day • Mid-September
	Encourage a wide range of people to apply to join the slice team.	'We want to appoint a slice team comprising representatives of many different types of people. This will involve a fairly significant time commitment over the next year, but it is a fantastic professional development opportunity for people looking for a new challenge or who may be interested in leadership and change management in the future.'	All teaching and support staff	Senior team	Staff briefing and follow-up email	• September training day • Send a weekly email reminder until the deadline

	Communications objective	Key messages	Target audience	Who will deliver?	Through which channels?	When/how often?
Phase II: Make a plan	We've appointed the slice team.	'We've appointed the slice team – here they are!' *[The team briefly stand to identify themselves]*	All teaching and support staff	Headteacher and slice team	Staff briefing and follow-up email	Monday briefing
	Here's your representative on the slice team.	'Here's an org chart showing who's your representative on the team. Drop them a line any time!'	All teaching and support staff	Headteacher	Briefing, email, poster in staff room	Monday briefing
	We're doing five-minute interviews soon.	'To capture people's thoughts, we're going to do a round of five-minute interviews soon. In the meantime, here's a one-page research summary.'	All teaching and support staff	Slice team	Staff briefing and follow-up email	Monday briefing

Table 13 – A broadcast comms plan (worked example)

One-to-many broadcast communications are an efficient way to convey simple messages and to narrate the journey of change and improvement. However, they aren't well suited to changing people's behaviours. To spread new ideas and practices through a population, the key is to get **people talking to people** about your change initiative (i.e. many-to-many, interpersonal communications). We'll explore this in more detail in *Chapter 13: Plan for diffusion*.

Now that you have a broadcast comms plan, it's time to build a glass box…

CHAPTER SUMMARY

- Communications planning is used in many other fields but is often overlooked in education. This is a significant oversight and a common reason why school improvement initiatives fizzle out. It's also one of the easiest problems to fix.
- A clear comms plan ensures that from the outset and throughout the implementation period, people across the school community remain informed, engaged and invested in the process of bringing about lasting, positive change.
- The following six guiding questions will help shape your thinking in writing a communications plan:
    1. What's the big story?
    2. How will your messaging change as you progress through the implementation period?
    3. What language should you use?
    4. Who should deliver the messages?
    5. Who are your target audiences?
    6. Through which channels should you communicate?
- Broadly speaking, there are four types of communications channel:
    - One-to-many
    - One-to-one
    - Many-to-one
    - Many-to-many

- To create a broadcast communications plan, complete the following steps:
  1. List your key communications objectives.
  2. Identify the key messages you need to deliver to meet those objectives.
  3. Identify your target audiences.
  4. Select who should deliver the messages.
  5. Identify the channels through which you will deliver the messages.
  6. Plan when – and how often – to deliver those messages.
  7. Set reminders!

Making Change Stick

Phase I: Make a start

- ☑ Appoint a slice team
- ☑ Optimise the team
- ☑ Choose your focus
- ☑ Write a one-page research summary
- ☑ Draft a comms plan
- ☐ Build a glass box

Phase II: Make a plan

- ☐ Map the journey
- ☐ Plan backwards
- ☐ Conduct a root cause analysis
- ☐ Build your improvement strategy
- ☐ Plan tight but loose
- ☐ Build steps to success
- ☐ Plan for diffusion
- ☐ Optimise for habit change
- ☐ Plan professional learning
- ☐ Prepare data collection
- ☐ Timeline and streamline
- ☐ Write a logic model
- ☐ Conduct a pre-mortem

Phase III: Make it happen

- ☐ Manage your project
- ☐ Create individual improvement plans
- ☐ Run PDSA cycles
- ☐ Schedule regular 'pivot or persevere' meetings
- ☐ Embed and sustain improvements
- ☐ Review, reflect – and plan your next project!

CHAPTER 6
BUILD A GLASS BOX

To secure buy-in, make sure the slice team is transparent and accountable to the wider school community.

Black box versus glass box leadership

The *Making Change Stick* programme was designed simply as a toolkit to help schools implement improvement initiatives in the most effective way possible. However, as I've shared these ideas with teachers and school leaders around the world, I've been fascinated to discover that people are starting to see this as a new way of thinking about leadership. We'll explore this in more detail in the *Afterword: The future of school improvement…*

One important way in which *Making Change Stick* is different to existing approaches to school leadership can be seen by comparing **black box** and **glass box** leadership.

As we saw in *Chapter B: Why do so few change initiatives achieve their stated goals?,* school leaders often default to a 'black box, top-down' approach to change management. They make decisions behind closed doors that are then announced to the rest of the school community.

We've seen that top-down change can be useful when a problem calls for swift, decisive action. However, when you're trying to implement a complex, high-effort, high-impact school improvement initiative – something that involves many different stakeholders and is likely to take several years to really bed in – the black box, top-down approach tends to be less effective.

In the *Making Change Stick* approach, the slice team operates as a glass box, rather than a black box. The glass box works in two ways.

First, through ongoing data collection and collation, the slice team can *see out* into the school community, building up a rich picture of how the change initiative is playing out across the school. A good example of this is the 'five-minute interview' exercise, which we'll look at later in this chapter.

Second – and perhaps most important – people throughout the school community can *see in*. Slice teams share the minutes of their meetings and invite people to come and observe if they wish to do so. People throughout the school community therefore know they're represented at the decision-making table – that there is someone *like them* who can represent their views and interests and with whom they can interact throughout the change period.

The black box, top-down approach to change management can create an unhelpful 'us and them' dynamic between the senior team and the rest of the staff body. Often, people just want to be *seen* to be doing what they've been told to do. At worst, an 'us and them' dynamic can foster deep-rooted hostility and resentment.

In contrast, because it's genuinely consultative, a 'slice team, glass box' approach tends to secure a huge amount of goodwill. You harness the energy, intelligence and problem-solving capacity of people throughout the organisation to become actively involved in driving the process of school improvement, making smart decisions at the point of use. In short, you get buy-in like never before, and that makes life a *lot* easier.

Put simply, if the whole school community feels included from the outset, they're more likely to come with you on the journey. And the glass box approach fosters a sense of inclusion like nothing else. Several school leaders have told me that once you implement change in this way, there's no going back. As Kate Barry (one of the senior leaders who took part in the initial pilot study of *Making Change Stick*) puts it:

> One of the most powerful parts of the programme for me was establishing a slice team and really relying on them to provide the data and information on the policy before you implement it. As a senior leader, you have your assumptions about how staff are

feeling or where people are at in terms of readiness for change, and it was so eye opening to start off with that feedback from across the school community. I now can't see how you would implement change without using a slice team.

Building a glass box

Here are five ways to build transparency and trust:

1. Publish an organisational (org) chart.
2. Share meeting minutes.
3. Invite people to observe slice team meetings.
4. Set up a suggestion box and an inbox.
5. Conduct a series of five-minute interviews.

Let's look at each in turn.

1. Publish an org chart

Through the slice team, every member of the school community should be represented, as far as possible, at the decision-making table. To make this explicit, publish a list of all members of the teaching and support staff, making clear who on the team is the point of contact for different groups of people. Update and re-share this list throughout the implementation period to reflect any changes in personnel.

Sometimes, the links will be obvious; for example, the teaching assistant would be the point of contact for all teaching assistants and learning support assistants. In smaller schools, it may be necessary to allocate more than one group of colleagues to a team member. For example, a classroom teacher may be the point of contact for other classroom teachers and teaching assistants, while a member of the senior team may be the point of contact for middle and senior leaders as well as members of the support staff.

2. Share meeting minutes

Whenever the slice team meets, ask for a volunteer to make a note of any discussion points, decisions taken and action items. Save these minutes to a shared drive and send a link to all staff after the meeting to let them know where they can find the minutes if they're interested.

Remind people that if they have any questions they can contact their representative on the slice team.

3. Invite people to observe slice team meetings

Once the slice team is up and running and you feel confident in the way you're working, you may wish to say to your colleagues, 'If anyone would like to come along to observe a meeting – or part of a meeting – please feel free to join us.' This is an effective way to deal with any critics or sceptics by inviting their feedback and including them in the process. It's unlikely that many people will take you up on your offer – schools are busy places and people don't have much time to spare. But the very fact that people have been *asked* can secure a huge amount of goodwill. And if anyone does take up your offer, be sure to make them feel welcome!

4. Set up a suggestion box and an inbox

In the interest of many-to-one communications, it's an excellent idea to make it easy for people throughout the school community to share their ideas, questions and concerns with the slice team. You may wish to create a dedicated email address where people can drop you a line. Alternatively – or in addition – place a suggestion box in the staff room where people can post a note anonymously. Remind people regularly that they can make suggestions or post comments in this way if they have any questions or suggestions relating to your school improvement initiative.

5. Conduct a series of five-minute interviews

This is a really powerful exercise. Early on in the process – usually between the first and second slice team meetings – it's important to undertake some form of data collection to capture the views of people throughout the school community. Rather than using a survey, I strongly recommend doing this through a series of face-to-face interviews. These should take no longer than five minutes – hence the name – but the personal touch goes a long way to building trust.

First, agree a list of questions you would like to ask your colleagues. Let's say you've decided to focus on feedback – your questions could be as follows:

1. What do you think about the fact that we've chosen feedback as the focus of a whole-school improvement initiative?

2. Do you agree that improving feedback is a priority for the school at this point in time? (If so, why? If not, why not?)
3. What questions do you have?
4. What concerns do you have?
5. What ideas do you have?

These are just suggestions – you may prefer to come up with some of your own.

Once you've agreed a list of questions, each person on the slice team should commit to carrying out between three and five interviews *with people like them* before the next slice team meeting. The teaching assistant interviews other TAs, the middle leader interviews other middle leaders, and so on.

Ensure the people you select for interviews represent a range of views. In a primary school, aim to speak with colleagues from a range of different phases (early years, key stage 1, key stage 2). In a secondary school, speak with colleagues from a range of different subject areas. You should also aim to interview people who are more likely to be sceptical as well as those you know will be supportive.

You don't need to speak with everyone in the organisation. But your sample should include enough people to give you confidence that you've captured the majority of views on the topic. The interviewer – the slice team member – should make brief written notes during these interviews to capture what people are saying.

The next time the slice team meets, share your findings with one another. And when you do this, *anonymise the feedback*. So, rather than saying, 'Bob thinks this is a rubbish idea', you could say, 'Some people questioned the decision to focus on feedback because they feel that behaviour is more of a pressing concern at the moment.'

Slice team members can also incorporate their own views with those of the people they have interviewed. This allows everyone on the slice team to share their views anonymously without fear of repercussion. It provides a safe mechanism for having the robust discussion that needs to take place when you're making decisions that affect many people's lives.

From opaque to transparent

This chapter contains five ideas for how to secure buy-in by adopting a 'slice team, glass box' approach as an alternative to the 'top-down, black box' approach. You may be able to think of other ideas. These things do not take long, and the return on investment is high. Through the activities we've covered in this chapter you can move away from an opaque approach, where decisions are made behind closed doors, towards a more transparent approach where the slice team is accountable to the wider school community.

This concludes *Phase I: Make a start*. In the next chapter, we'll dive into *Phase II: Make a plan*. We'll start by mapping the journey from where you are to where you want to be.

CHAPTER SUMMARY

- School leaders often default to a 'top-down, black box' approach to change management. They make decisions behind closed doors that are then announced to the rest of the school community.
- In the *Making Change Stick* approach, the slice team operates as a glass box rather than a black box. This works in two ways.
  - Through ongoing monitoring and evaluation, the slice team can *see out* into the community.
  - People throughout the school community can *see in*. People know that they are represented at the decision-making table and there is someone like them who will represent their views and interests.
- The 'slice team, glass box' approach harnesses the energy, intelligence and problem-solving capacity of people throughout the organisation to become actively involved in driving the process of school improvement.
- If the whole school community feels included from the outset, they're more likely to come with you on the journey. And the glass box approach generates buy-in and fosters a sense of inclusion very effectively.

- To build trust and transparency:
  1. Publish an org chart.
  2. Share meeting minutes.
  3. Invite people to observe slice team meetings.
  4. Set up a suggestion box and an inbox.
  5. Conduct a series of five-minute interviews.
- Through such high-return activities, you can move away from an opaque approach, where decisions are made behind closed doors, and create a culture where the decision-making process is transparent and the slice team is accountable to the wider school community.

Making Change Stick

Phase I: Make a start

- ☑ Appoint a slice team
- ☑ Optimise the team
- ☑ Choose your focus
- ☑ Write a one-page research summary
- ☑ Draft a comms plan
- ☑ Build a glass box

Phase II: Make a plan

- ☐ Map the journey
- ☐ Plan backwards
- ☐ Conduct a root cause analysis
- ☐ Build your improvement strategy
- ☐ Plan tight but loose
- ☐ Build steps to success
- ☐ Plan for diffusion
- ☐ Optimise for habit change
- ☐ Plan professional learning
- ☐ Prepare data collection
- ☐ Timeline and streamline
- ☐ Write a logic model
- ☐ Conduct a pre-mortem

Phase III: Make it happen

- ☐ Manage your project
- ☐ Create individual improvement plans
- ☐ Run PDSA cycles
- ☐ Schedule regular ‘pivot or persevere’ meetings
- ☐ Embed and sustain improvements
- ☐ Review, reflect – and plan your next project!

PHASE II:
MAKE A PLAN

CHAPTER 7
MAP THE JOURNEY

Connect to a vision of the near future in which your school has become a beacon of best practice.

Schools are busy places, and many educators walk around with a never-ending to-do list in their head, phone or planner. As a result, schools tend to be future-facing places – when they aren't in lessons or meetings, people tend to focus on what they need to do next.

Getting things done is all well and good. But it's also important to pause sometimes to examine the current moment in the context of a wider timeframe – to look back at where you've been and consider how things might be different in the future. When you're always focused on the here and now, it's easy to forget how far you've come.

This chapter contains three short exercises to help you map the journey from where you've been, through where you are now, to a time in the near future when you've achieved the lasting improvements you want to see.

Thinking about your area of focus, we'll firstly look to the past and ask, 'Where have we been?' Next, we'll turn our attention to the future and ask, 'Where do we want to be?' Finally, we'll return to the present moment and ask, 'Where are we now?'

These exercises can be completed either by individuals or slice teams. If you're in a team, I recommend you complete each activity individually first and then compare notes afterwards. You may wish to create a new shared document that all team members can contribute to.

Exercise 7.1: Where have we been?

Thinking about your chosen area of focus, sketch a timeline, on a blank piece of paper, of the key developments and moments that have led you to this point. In this exercise, most people draw a straight arrow running from left to right, with little labels coming off the main timeline, a bit like this:

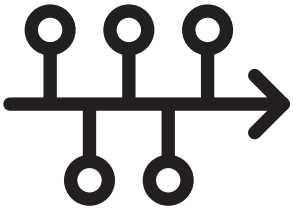


Figure 6 – An example timeline sketch

Some people visualise the journey more as a rollercoaster track with ups and downs and perhaps the occasional loop-the-loop. Others prefer to think in cycles or spirals. However you sketch your timeline, the aim is simply to chart the journey that has led you to the present moment. You may find the following prompt questions helpful:

1. When did you first become aware of this issue?
2. Who or what first brought it to your attention?
3. What's happened so far?
4. What hasn't happened so far – or hasn't happened enough?
5. What progress has been made so far?
6. What challenges have you faced along the way?
7. If you could go back in time, what might you do differently?

Exercise 7.2: Where do we want to be?

The next two exercises are based on the **impact framework**, an approach developed by some of my former colleagues at the UCL Centre for Educational Leadership.[83] To complete this activity, you can download

83 For example, see Porritt, V., Spence-Thomas, K. & Taylor, C. (2017). 'Leading Professional Learning and Development' in: Earley, P. & Greany, T. (eds.) *School Leadership and Education System Reform*. Bloomsbury Academic: London, UK.

a template from makingchangestick.co/map, or make your own version using the example in Table 14.

Baseline (Where are you now?)	Impact (Where do you want to be?)
Pupils say/think/feel: • Parents/carers say/think/feel: • Teachers say/think/feel: • School leaders say/think/feel: • Visiting adults say/think/feel: •	Pupils will say/think/feel: • Parents/carers will say/think/feel: • Teachers will say/think/feel: • School leaders will say/think/feel: • Visiting adults will say/think/feel: •

Table 14 – Mapping the journey

In this exercise, try to be really utopian in your thinking. Imagine your school a few years from now. Your school improvement initiative could not have gone better and your school is now considered to be a shining beacon of best practice. People flock from all over to come and see it for themselves… you get the idea.

In this imagined future, what might the following groups of people say, think and feel?

- Pupils
- Parents and carers
- Teachers
- School leaders
- Visiting adults

There may be other groups that you wish to consider, such as school governors, school improvement partners or prospective parents and carers. Choose the stakeholder groups most relevant to your improvement initiative.

This question – 'what might these people say, think and feel?' – is intentionally vague. Interpret this question in whichever way makes the

most sense to you. For example, when considering what pupils may say in this imagined future, you could consider:

- What might they say to you?
- What might they say to themselves?
- What might you overhear them saying to one another?
- What can you imagine them saying to their parents or carers when they get home from school?

First, complete the right-hand side of the mapping the journey template. Don't overthink it – just jot down whatever pops into your head. If nothing springs to mind, move on to the next part of the exercise and revisit it later.

Exercise 7.3: Where are we now?

Having imagined a positive vision of the future, let's now return to the present moment. Thinking about your area of focus, what do those same groups of people *currently* say, think and feel?

Complete the left-hand side of the mapping the journey template (using the download or your own version based on the example in Table 14 on page 191). Again, if you're in a team, do this individually at first and then collate your ideas in a master document.

Drawing it all together

Having now considered the past, present and future of your school improvement initiative, discuss the following questions as a team:

- What key points emerged from the timeline activity?
- What do we notice about the difference between the 'baseline' and 'impact' sides of the 'mapping the journey' exercise?
- What do these exercises make *us* say, think and feel about our school improvement initiative?

Over the last ten years or so, I've run these activities with thousands of teachers and leaders in a wide variety of settings. People often find it helpful to think about how far they've come and establish a rich picture of where they are now and where they want to be.

However, people sometimes find the 'mapping the journey' activity a bit daunting. They have a clear idea of where they are now (point A) and where they want to be (point B), they just can't see how they're going to get from point A to point B.

If you find yourself thinking along similar lines, fear not! In the next few chapters, we'll break down the journey from point A to point B into a series of logical, achievable steps. This process will start in the next chapter, on backward design.

CHAPTER SUMMARY

- This chapter contains three short exercises to help you map the journey from where you've been and where you are now to a time in the near future when you've achieved sustained, improved outcomes.
- First, reflect on the story so far. What are the key moments that have led you to this point?
- Next, create a utopian vision of the future in which your school improvement initiative could not have gone better. What might different stakeholder groups say, think and feel in this imagined future?
- Finally, return to the present moment. Thinking about your chosen area of school improvement, what do those same groups of people say, think and feel currently?
- Having completed these three exercises, ask yourself: what do *you* say, think and feel about your school improvement initiative currently?
- Sometimes, upon completing these exercises, people notice they have a clear idea of where they are and where they want to be – but they're a lot less clear about how they're going to get from point A to point B. The aim of the *Making Change Stick* programme is to break down that journey from point A to point B into a series of logical, achievable steps.

Making Change Stick

Phase I: Make a start

- ☑ Appoint a slice team
- ☑ Optimise the team
- ☑ Choose your focus
- ☑ Write a one-page research summary
- ☑ Draft a comms plan
- ☑ Build a glass box

Phase II: Make a plan

- ☑ Map the journey
- ☐ Plan backwards
- ☐ Conduct a root cause analysis
- ☐ Build your improvement strategy
- ☐ Plan tight but loose
- ☐ Build steps to success
- ☐ Plan for diffusion
- ☐ Optimise for habit change
- ☐ Plan professional learning
- ☐ Prepare data collection
- ☐ Timeline and streamline
- ☐ Write a logic model
- ☐ Conduct a pre-mortem

Phase III: Make it happen

- ☐ Manage your project
- ☐ Create individual improvement plans
- ☐ Run PDSA cycles
- ☐ Schedule regular 'pivot or persevere' meetings
- ☐ Embed and sustain improvements
- ☐ Review, reflect – and plan your next project!

CHAPTER 8
PLAN BACKWARDS

Start with the end in mind, and then figure out how to get there.

In the previous chapter we started to create a positive vision of the near future we intend to work towards. We also connected emotionally to our goal state, anticipating what we and others might say, think and feel in this imagined future. In this chapter, we're going to bring this vision into sharper focus using backward design.

Figure 7 shows the three steps of backward design proposed by McTighe and Curtis. In this scheme, we start at the right-hand side and work backwards to the left.

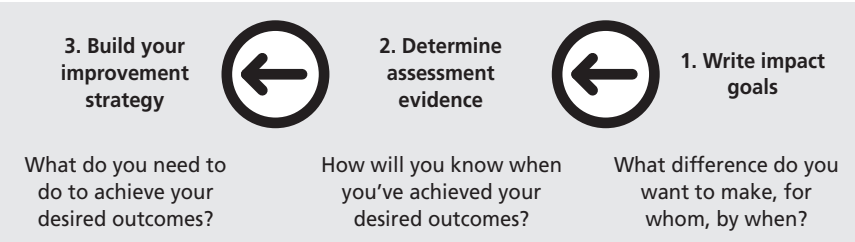


Figure 7 – Backward design[84]

First, we write a set of impact goals to specify precisely what difference we want to make, for whom and by when. It's important to do this because in education, as in life, people often have quite vague goals. We say things like 'our pupils need to be more resilient', 'we need to improve our maths

84 Adapted from McTighe, J. & Curtis, G. (2019). *Leading Modern Learning* (2nd ed). Solution Tree Press.

results' or 'we need to close the attainment gap'. But we rarely specify the details:

- Which pupils need to be more resilient? Is this true of all pupils? In what ways do they need to become more resilient? By when?
- By how much do we need to improve our mathematics results? In which year groups does this need to happen? Do we want to be in line with the national average, or above it – and if so, by how much? By when?
- Do we want to close the attainment gaps between all demographic groups, or just some? Do we want to eradicate the attainment gap entirely, or just narrow it to an acceptable level? By when can we realistically achieve this closing of the gap?

Next, we determine assessment evidence, asking, 'How will we *know* when we've achieved our impact goals?'

- When pupils become more resilient, what behaviours will we see more of – or less of – in lessons? What measurable milestones will tell us when we've achieved our goal?
- How will we know when we've achieved our goal in terms of mathematics results? Will this be measured in terms of external exams, internal assessments or both? What percentage pass rate do we need to reach to achieve our ultimate goal? What intermediate goals do we need to achieve along the way?
- How will we know when we've achieved our goal in terms of closing the attainment gap? How will we monitor progress towards achieving this goal?

Finally, we think about what we need to do in order to achieve our impact goals:

- What do teachers, leaders and support staff need to do in order to help our pupils develop greater resilience? What will this look like in practice on a day-to-day basis?
- How do we need to change the way we teach mathematics in order to achieve our impact goals? What do we need to do more of? What do we need to do less of?

- How are we going to close the attainment gap to our target level? What habits or behaviours do teachers and pupils need to change in order to close the attainment gap?

To reframe the three stages of backward design as questions, we ask:

(a) Which measurable outcomes do we need to achieve, for whom and by when?

(b) How will we know when we've achieved our impact goals (a)?

(c) What do we need to do in order to amass the evidence (b) that we've achieved our impact goals (a)?

In this chapter, we'll look at questions (a) and (b). In *Chapter 9: Conduct a root cause analysis* and *Chapter 10: Build your improvement strategy*, we'll turn our attention to (c).

Two types of impact goals

Having clearly defined impact goals is perhaps the most important driver of school improvement because it informs every aspect of the change process. Impact goals provide you with a measurable marker of success – they enable you to determine when you've achieved what you still need to achieve and whether you're making meaningful progress along the way.

Put simply, an impact goal is a measurable target that specifies what difference you want to make, for whom and by when. There are two types of impact goal: **disciplinary** (subject-based) and **transdisciplinary** (across or beyond subjects). The type of impact goals you create will depend on the nature of your school improvement initiative – you may require both.

Table 15 on page 200 shows some examples of disciplinary impact goals. Often, when people first write an impact goal they come up with something quite broad – a general direction of travel. For example, someone joining a gym may tell themselves, 'I need to exercise more' or 'I need to lose some weight'. Vague goals such as these can be helpful as an initial step in marking out the direction of travel you want to go in. However, when writing impact goals you need to push beyond such broad strokes and arrive at something more specific.

Because a subject is a broad category, it can be helpful to focus on a particular aspect within each subject. For example, in Table 15 the science example focuses on the use of scientific language while the art example focuses on colouring and shading. In each example there's a broad goal that provides a general direction of travel and a more specific impact goal that is time-bound, provides a numerical measure of success and identifies who the change is for.

Subject	Aspect	Broad goal	Impact goal
Science	Scientific language	Pupils understand the language of scientific inquiry.	By the end of Year 7, 90% of pupils should understand the difference between dependent, independent and control variables and be able to identify these in a range of scientific investigations.
English	Figurative language	Pupils are able to use figurative language in writing.	In the Year 6 spring writing assessments, all pupils should include similes and metaphors in both fiction and non-fiction writing.
Art	Colouring and shading	Pupils understand a range of shading techniques.	By the end of Year 4, all pupils will be able to use three different pencil shading techniques.

Table 15 – Disciplinary impact goals (worked example)

Table 16 shows some examples of transdisciplinary impact goals. These goals may include generic dispositions such as being independent as well as more specific skills such as presentational talk and the ability to self-regulate. Again, here we start with broad strokes and then create more specific, measurable goals.

Category	Broad goal	Impact goal
Independence	Pupils are more independent.	By term 2, all pupils in Year 4 will regularly access independent learning resources such as number squares and vocab mats.
Self-regulation	Pupils are able to manage distractions and focus on learning.	By autumn half term, all Year 7 pupils will be able to use three self-regulation techniques (mind, body and breath) to help them manage distractions and focus on learning.
Presentational talk	Pupils are confident in public speaking.	By the end of Year 8, all pupils will have presented to their year group on a topic of their choosing as part of 'Project Soapbox', using at least three persuasive rhetorical techniques.

Table 16 – Transdisciplinary impact goals (worked example)

Exercise 8.1: Write impact goals

Using the worked examples as a model, draft a set of impact goals for your school improvement initiative. Depending on your area of focus, these could be disciplinary, transdisciplinary or both. Start with broad goals and then write impact goals with the following three features:

1. Identify a measurable difference you want to make (ideally a numerical target).
2. Specify for whom (e.g. SEND children in Year 4, underachieving Year 8 girls, learning support assistants or trainee teachers).
3. Set a deadline (e.g. by term 2, within two years or by the end of Year 4).

The number of goals you set depends on your context. Aim for not too many, not too few – around three is a good number to aim for, but it's OK to have just one.

Exercise 8.2: Determine assessment evidence

Having written your impact goals, you're now ready to take a step backwards and ask, 'How will we *know* when we've achieved our impact goals?'

When we enter *Phase III: Make it happen*, monitoring and evaluation becomes the beating heart of the *Making Change Stick* programme. We'll look at this in detail in *Chapter 16: Prepare data collection*. This is one of the final chapters in *Phase II: Make a plan*, because you need to know precisely what you're going to do before you can figure out how best to evaluate it. However, it's important to make a *rough* data collection plan early in the process because the need to make a demonstrable impact should shape your thinking throughout the planning process.

The aim of this exercise is to draft a plan for how you could collect and analyse data throughout the implementation period. Use the following three questions to help shape your thinking:

1. What kinds of evidence might help you measure the gap between your impact goals and the status quo?
2. What evidence do you need to collect now, to set a baseline against which you can compare future performance?
3. How might you collect and analyse data in a way that minimises the impact on workload?

In *Chapter 3: Choose your focus*, we looked at the advantages and disadvantages associated with various sources of data. It's worth revisiting this table here (Table 17).

Because each data source has advantages and disadvantages, no single source can provide the full picture. However, each source provides a valuable lens through which to bring a different part of the picture into focus. The aim, therefore, should be to combine the use of several different data collection instruments to create the most complete understanding of the problem you're trying to solve. As always, use sampling to achieve maximum insight for minimum workload.

Data source	Advantages	Disadvantages
National test data	• Easy, quick, 'naturally occurring'. • Valid and reliable. • Allows comparisons across schools.	• Not designed for your issue. • Often more general than you need.

Data source	Advantages	Disadvantages
In-school test data	• Can be 'naturally occurring'. • Can be designed to suit your purposes.	• Low validity and reliability. • Can be influenced by many factors. • Cannot be compared with other schools.
Surveys	• Easy to collect large samples. • Can be anonymous. • There are many existing surveys you can use with established validity and reliability. • Can be tailored to meet your needs and interests.	• Surprisingly difficult to write high-quality questions. • Can have a low response rate – and who responds can bias your sample. • One-way communication – you can't sense check.
Pupil work	• Authentic, 'naturally occurring'. • Can be linked to your area of focus.	• Difficult to analyse in large numbers. • You can only work with what is there – you can't capture what is missing. • You can't sense check (unless you use it as a stimulus in an interview).
Interviews	• Flexible – individual, pairs or focus groups. • Enables sense checking ('Do you mean…'). • High completion rate from a representative sample of participants.	• Can require interpretation – subject to bias. • Time consuming. • Not anonymous. • Responses may be affected by a desire to 'please the teacher'.
Observations	• You can see what's happening in real time. • You can use different types of observation to fit the purpose (e.g. in person or video).	• The presence of an observer can affect what is observed. • Low validity and reliability. • You can only capture what is observable.

Table 17 – Data sources: advantages and disadvantages

By way of a worked example, in Table 18 we can see the kinds of assessment tools we could use to evaluate our progress towards achieving the impact goals we identified earlier.

Type of data	Subject/ category	Impact goal	Assessment tools
Disciplinary	**Science**	By the end of Year 7, 90% of pupils should understand the difference between dependent, independent and control variables and be able to identify these in a range of scientific investigations.	• Science assessments. • Pupil survey. • Pupil interviews.
	English	In the Year 6 spring writing assessments, all children should include similes and metaphors in both fiction and non-fiction writing.	• Writing assessments. • Hands-down questioning. • Classroom observations.
	Art	By the end of Year 4, all children will be able to use three different pencil shading techniques.	• Portfolio assessments. • Classroom observations.
Transdisciplinary	**Self-regulation**	By term 2, all children in Year 4 will regularly access independent learning resources such as number squares and vocab mats.	• Classroom observations. • Pupil survey. • Pupil focus group (random sample).
	Independence	By autumn half term, all Year 7 pupils will be able to use three self-regulation techniques (mind, body and breath) to help them manage distractions and focus on learning.	• Classroom observations (pupil tally).
	Presentational talk	By the end of Year 8, all pupils will have presented to their year group on a topic of their choosing as part of 'Project Soapbox', using at least three persuasive rhetorical techniques.	• Formal assessment of speeches.

Table 18 – Assessment tools for evaluating impact goals (worked example)

Using these examples as a model, identify which assessment tools you could use to determine whether – and when – you've achieved your impact goals. Depending on your area of focus, these could be disciplinary, transdisciplinary or both. Remember, this is just a rough statement of intent at this stage – we'll return to look at assessment tools in more detail in *Chapter 16: Prepare data collection*.

The third step

The third step in backward design is to build your school improvement strategy. What do you need to do more of, less of or differently in order to amass the evidence that you've met your impact goals? This will be the focus of the next two chapters.

CHAPTER SUMMARY

- As the name suggests, in backward design we start with the end in mind and work backwards in three successive steps:
  1. Write impact goals.
  2. Determine assessment evidence.
  3. Build your improvement strategy.
- First, we get granular, asking, 'What difference do we want to make, for whom and by when?' We address this question by writing impact goals. These can either be disciplinary (within subjects) or transdisciplinary (across or beyond subjects).
- Next, we determine assessment evidence, asking, 'How will we know when we've achieved our desired outcomes?' We address this question by identifying which data collection tools will enable us to know when we have met (or are on our way to meeting) our impact goals.
- Finally, we design our improvement strategy, asking, 'What do we need to do more of, less of or differently in order to achieve our desired outcomes?'

Making Change Stick

Phase I: Make a start

- ☑ Appoint a slice team
- ☑ Optimise the team
- ☑ Choose your focus
- ☑ Write a one-page research summary
- ☑ Draft a comms plan
- ☑ Build a glass box

Phase II: Make a plan

- ☑ Map the journey
- ☑ Plan backwards
- ☐ Conduct a root cause analysis
- ☐ Build your improvement strategy
- ☐ Plan tight but loose
- ☐ Build steps to success
- ☐ Plan for diffusion
- ☐ Optimise for habit change
- ☐ Plan professional learning
- ☐ Prepare data collection
- ☐ Timeline and streamline
- ☐ Write a logic model
- ☐ Conduct a pre-mortem

Phase III: Make it happen

- ☐ Manage your project
- ☐ Create individual improvement plans
- ☐ Run PDSA cycles
- ☐ Schedule regular ‘pivot or persevere’ meetings
- ☐ Embed and sustain improvements
- ☐ Review, reflect – and plan your next project!

CHAPTER 9
CONDUCT A ROOT CAUSE ANALYSIS

Locate the source of the problems you wish to address.

In school improvement, it's important to start with the end in mind and establish a positive vision of the future. However, you also need to have clarity about the nature of problems you currently face. You then simply need to join the dots and chart a path from where you are (point A) to where you want to be (point B).

In *Chapter 8: Plan backwards*, we focused on point B, writing detailed impact goals and identifying what evidence you need to collect in order to determine when you've met those goals. In this chapter, we'll turn our attention to point A, looking at the problems you currently face and seeking to understand their root causes.

To do this, we're going to undertake a **root cause analysis** (RCA). RCA is widely used in industries such as manufacturing, healthcare and aviation, and many tools and strategies have been developed to help people locate the source of the problems they face. In this chapter, we'll use two such tools:

1. **The problem tree –** Identify the core problem, its consequences and its root causes.
2. **The five whys –** For each root cause identified, ask, 'But why?' repeatedly until you get to the heart of the matter.

Let's consider each in turn, and then look at a worked example.

Exercise 9.1: The problem tree

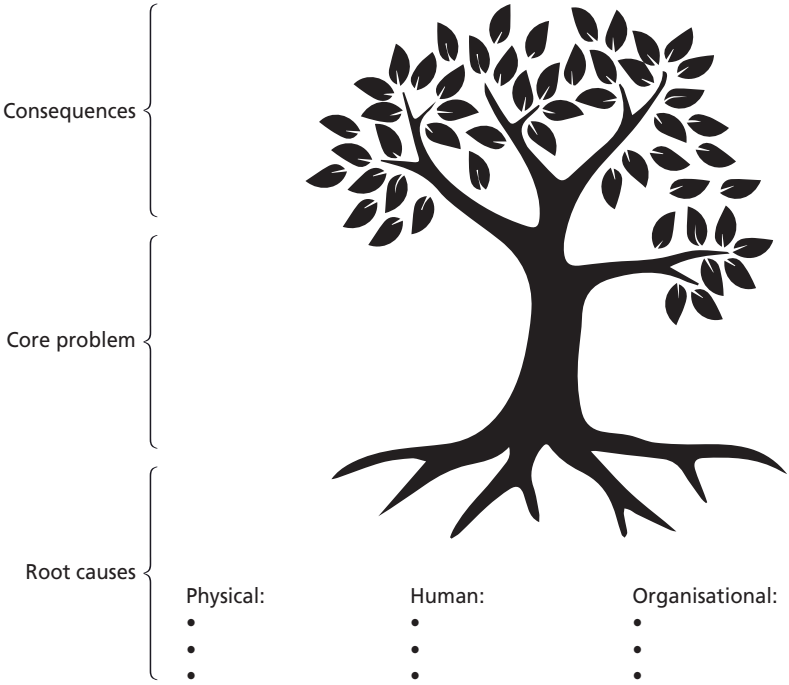


Figure 8 – The problem tree (blank template)

As we can see in Figure 8, the problem tree has three levels:

- The **core problem** (the trunk).
- The **consequences** of the core problem (the branches).
- The **immediate root causes** (the roots). These tend to fall into one of three categories:
  - **Physical** (e.g. school buildings, resources or transport).
  - **Human** (e.g. misunderstanding, inconsistent application of a school's policy or deficit thinking).
  - **Organisational** (e.g. policy is absent or unclear, lack of organisational support for change or culture of low expectations).

Exercise 9.2: The five whys

If the problem tree allows you to identify the *immediate* root causes of a problem, the 'five whys' exercise enables you to further excavate those roots to see how deep they go and to identify the *ultimate* root causes.

As the name would suggest, in this activity you simply ask, 'But why?' repeatedly until you arrive at the source of the problem. There don't have to be five 'whys' – just as many as it takes for you to arrive at the heart of the matter.

Let's look at an example about punctuality.

Problem: I was late for work

But why?

I missed the bus.

But why?

I overslept.

But why?

I went to bed late.

But why?

I watched a movie and lost track of time.

You *could* take the line of questioning further here to ask why you were watching a movie and so on. But it would be unnecessary because it feels like we've arrived at the root of the problem. Watching movies is not the problem – it's watching them late at night and losing track of time.

Once you've addressed the problem at its root you can check your reasoning by reversing the process, using 'Therefore…' instead of 'But why?'

In this example, the person decides to set a bedtime alarm on their phone.

Solution: Set a bedtime alarm

Therefore…

I'll remember to go to bed on time.

Therefore…

I'll wake up on time, having had enough sleep.

Therefore…

I'll have plenty of time to catch the bus.

Therefore…

I'll be on time for work.

Worked example: Low-level disruption

Having completed *Chapter 3: Choose your focus*, the slice team at Limefield Academy has decided to focus on behaviour and relationships. In particular, they've identified that too much learning time in lessons is being lost due to low-level disruption and they're keen to tackle this problem at its roots.

Step 1: The problem tree

Core problem (trunk)

- Low-level disruption in lessons.

Consequences (branches)

- Lost learning time (due to the teacher having to spend lesson time dealing with low-level disruption).
- Detentions (lots of pupils are in detention every day for low-level disruption).
- Workload (e.g. entering behaviour incidents on a tracking system, setting and following up detentions or making phone calls home).
- Teacher stress (managing behaviour is not the most fun aspect of a teacher's job).
- Pupil progress (lost learning time means pupils aren't learning as much as they otherwise could).

Carrying out the first two stages of the problem tree activity helps the slice team understand the nature and seriousness of the problem they wish to address. Next, they turn to the final stage in this process. Here, they undertake some baseline data collection to explore the root causes of low-level disruption at three levels: physical, human and organisational.

Root causes (roots)

- At the physical level, the slice team identifies that some of the behaviour problems relate to the layout of the school. Through analysing the behaviour logs, they notice many of the problems with behaviour originate at break and lunchtimes, which then spill over into lessons. Many of these incidents take place on the school field and behind adjacent buildings, which are not adequately covered by the staff duty rota. Also, some of the corridors are very narrow, meaning large numbers of pupils pass through narrow spaces at lesson changeovers where conflicts can occur. In addition, a teacher voice survey highlights the fact that detentions are not centralised. This means that detentions physically take place in multiple locations every day and are administered separately, increasing teacher workload.
- At the human level, the slice team identifies that the school's behaviour management policy is not being applied consistently. For example, some teachers set a detention if a pupil is just a few seconds late to a lesson while others don't set detentions if a pupil is several minutes late. Through pupil voice interviews, the slice team also identifies that many of the behaviour problems relate to friendship issues in Year 8. Several social groups are in the process of fracturing and reforming, and shifting loyalties are creating conflicts between former friends.
- At the organisational level, the slice team identifies that there is an issue relating to school rules. There are too many to easily recall and they're located in several different policy documents. In focus groups, neither pupils nor teachers were able to name all of them. In a teacher voice survey, several respondents reported that the system for recording behaviour incidents is too bureaucratic and time consuming. Teachers are asked to select from a drop-down menu with 23 different options to choose from. They are then required to write a short description of the incident. Because time is in short supply during the school day, this means a teacher may have several incidents to write up at the end of the school day, which can take up to 30 minutes.

We can see a summary of Limefield Academy's problem tree in Figure 9.

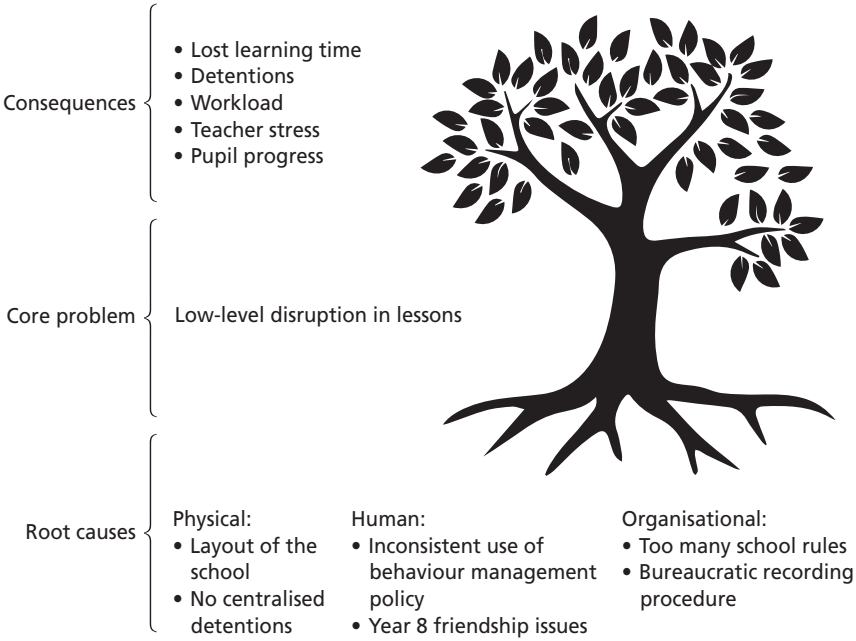


Figure 9 – The problem tree (worked example)

Step 2: The five whys

To excavate these root causes further, the slice team undertakes the 'five whys' exercise to arrive at the ultimate root causes.

> **Problem: teachers and pupils are unable to say what the school rules are**
>
> *But why?*
>
> There are too many rules.
>
> *But why?*
>
> The school rules have been added to over the years in a piecemeal way.
>
> *But why?*

To date, nobody has adopted a strategic approach to creating a small number of school rules, which can be easily remembered and applied in a range of contexts.

The slice team then repeats this process for each of the root causes they identified in the problem tree.

Drawing it all together

At the end of the root cause analysis, you will have identified the core problem you want to solve, its consequences and its root causes. You're now ready to address the million-dollar question: 'What do you need to do (more of, less of or differently) to achieve your impact goals while addressing these problems at their roots?'

CHAPTER SUMMARY

- Root cause analysis (RCA) is widely used in industries such as manufacturing, healthcare and aviation. In this chapter, we use two RCA tools: the problem tree and the five whys.
- The problem tree has three levels:
  - The trunk (the core problem).
  - The branches (the consequences of the core problem).
  - The roots (the root causes). These can take one of three forms:
    - Physical.
    - Human.
    - Organisational.
- The 'five whys' exercise allows you to further excavate the root causes identified in the problem tree to see how deep they go. In this activity you simply ask, 'But why?' repeatedly until you get to the heart of the matter.
- At the end of the RCA, you should have the following information:
  - The core problem you want to solve.
  - The consequences of that core problem.
  - The immediate root causes of the problem.
  - The ultimate causes of the problem.

Making Change Stick

Phase I: Make a start

- ☑ Appoint a slice team
- ☑ Optimise the team
- ☑ Choose your focus
- ☑ Write a one-page research summary
- ☑ Draft a comms plan
- ☑ Build a glass box

Phase II: Make a plan

- ☑ Map the journey
- ☑ Plan backwards
- ☑ Conduct a root cause analysis
- ☐ Build your improvement strategy
- ☐ Plan tight but loose
- ☐ Build steps to success
- ☐ Plan for diffusion
- ☐ Optimise for habit change
- ☐ Plan professional learning
- ☐ Prepare data collection
- ☐ Timeline and streamline
- ☐ Write a logic model
- ☐ Conduct a pre-mortem

Phase III: Make it happen

- ☐ Manage your project
- ☐ Create individual improvement plans
- ☐ Run PDSA cycles
- ☐ Schedule regular ‘pivot or persevere’ meetings
- ☐ Embed and sustain improvements
- ☐ Review, reflect – and plan your next project!

CHAPTER 10
BUILD YOUR IMPROVEMENT STRATEGY

Design the vehicle that will take you from where you are to where you want to be.

In *Chapter 8: Plan backwards*, we completed the first two steps of backward design. We started with the end in mind and wrote a set of **impact goals** and identified **assessment tools** to help you determine when you've achieved those goals – or whether you're heading in the right direction. And in *Chapter 9: Conduct a root cause analysis*, we returned to the current situation and explored the problems you want to solve.

In this chapter, we're going to join the dots between these two processes, identifying what you need to do in order to address the problems at their roots and achieve your impact goals. This is where you design the vehicle that will take you from where you are to where you want to be.

The rationale for thinking about a school improvement initiative as something you need to 'build' is expressed powerfully by Thompson and Wiliam:

> Even the simplest intervention is in reality extraordinarily *complex*, with many components, some of which will be more effective than others. Without a strong *theory of action* for the intervention, there is a real danger the modifications of the intervention leave out or neutralise the effects of the most powerful components.[85]

85 Thompson, M. & Wiliam, D. (2008). 'Tight but loose: a conceptual framework for scaling up school reforms' in E. C. Wylie (ed.), *Tight but loose: scaling up teacher professional development in diverse contexts* (RR-08-29, pp1–44). Princeton, NJ: Educational Testing Service. Emphases added.

There are two important ideas here: the notion of a school improvement initiative as a **complex intervention** and the importance of having a strong **theory of action**. Let's look at each in turn.

School improvement as a 'complex intervention'

According to the Medical Research Council (MRC), a complex intervention is defined simply as 'an intervention with several interacting elements.'[86] (We'll soon see the significance of the fact that this definition comes from the MRC.)

It's useful to think about a school improvement initiative as 'an intervention with several interacting elements' because schools are often trying to solve problems that are complex. There may be several moving parts with a number of different people involved – or perhaps the problem is dynamic and changes over time, and so you need to be responsive and adapt your thinking and practices as new information comes to light. It therefore stands to reason that we need to create solutions that reflect the complexity of the problems we're trying to solve. In short, complex problems require complex solutions.

A rationale for complex interventions can be found in **marginal gains theory**, an idea that's gained popularity in recent years thanks to the remarkable success of the British cycling team. In 2003, British Cycling hired Sir David Brailsford as its performance director. At this time, Britain had won just one Olympic gold medal for cycling in almost 100 years, and no British cyclist had won the Tour de France in 110 years.

Brailsford adhered to a philosophy he described as the 'aggregation of marginal gains'. As he describes it:

> The whole principle came from the idea that if you broke down everything you could think of that goes into riding a bike, and then improve it by 1%, you will get a significant increase when you put them all together.[87]

86 Craig, P., Dieppe, P., Macintyre, S., Michie, S., Nazareth, I. & Petticrew, M. (2008). Developing and evaluating complex interventions: the new Medical Research Council guidance, *British Medical Journal*, 337, 979–83.

87 Slater, M. (2012). Olympics cycling: Marginal gains underpin Team GB dominance. *BBC Sport*. Retrieved from: https://www.bbc.co.uk/sport/olympics/19174302.

The team started looking for ways to make marginal improvements to everything that might influence a cyclist's performance. This included things like improving hand hygiene to reduce illnesses and infections, using the best-performing massage gel to aid muscle recovery, and taking their own pillows and mattresses to hotels to improve the riders' sleep.

The rest, as they say, is history. Within five years of Brailsford's appointment, the team had achieved world domination. At the 2008 Olympic Games in Beijing, the British team won 60% of the gold medals available. At the 2012 London Games, they set nine Olympic records and seven world records. Between 2007 and 2017, British cyclists won 66 Olympic or Paralympic gold medals, 178 world championships and the Tour de France five times.

Put simply, marginal gains theory suggests that if you improve your performance by a small amount across a number of different areas, the improvements will stack up – and possibly interact – leading to a significant improvement in overall performance.

Marginal gains theory provides a compelling rationale for treating school improvement as a complex intervention that involves improving several things at once. Complex interventions are widely used in other fields such as medicine, social work and psychotherapy.

An example of a complex intervention from the world of healthcare is **multimodal analgesia**. Usually, when a patient is recovering from an operation they're given morphine, a highly effective painkiller that is associated with many unpleasant side-effects. In multimodal analgesia, the patient receives a combination of therapies with different **mechanisms of action**, targeting a variety of pain receptors. For example, alongside a low dose of morphine, they may receive pre-emptive analgesia (pain relief administered prior to surgery), local anaesthetic at the site of the injury, general anaesthesia, heat and cold therapy, transcutaneous electrical nerve stimulation or massage. Many studies have found that multimodal analgesia is associated with a wide variety of benefits, including improved pain relief, fewer side-effects,

faster recovery, reduced hospital costs and higher patient satisfaction.[88] It's another example of a win-win-win-win-win-win!

By comparison, complex interventions are relatively rare in education, where people often try to apply single-variable, 'silver bullet' solutions to complex problems.[89] For my PhD, I carried out a wide-ranging review of the medical and educational research literature looking for explicit examples of complex interventions. In the medical literature I found literally thousands of studies. In the educational literature, using the same search terms, I could find only a handful.[90]

It's not that complex interventions don't exist in education; it's just that they're relatively rare – and where they do exist, educational researchers tend not to explicitly describe interventions as complex or multifaceted, or appreciate the importance of this design feature.

Let's now turn to the second of the key ideas mentioned by Thompson and Wiliam – the theory of action.

Theories of action

In her excellent book, *Reduce Change to Increase Improvement*, building on earlier work by Argyris and Schön, Viviane Robinson suggests that a theory of action comprises three levels:[91]

1. Belief and values.
2. Actions.
3. Consequences.

88 See, for example, Ntalouka, M. P., Brotis, A. G., Bareka, M. V., Stertsou, E. S., Fountas, K. N. & Arnaoutoglou, E. M. (2021). Multimodal Analgesia in Spine Surgery: An Umbrella Review. *World Neurosurgery* 149:129–39.

89 Ofgang, E. (2002). Why Silver Bullet Solutions Persist in Education. *Tech & Learning*, July 21. Retrieved from: https://www.techlearning.com/news/why-silver-bullet-solutions-persist-in-education.

90 Mannion, J. (2018). *Metacognition, self-regulation, oracy: A mixed methods case study of a complex, whole-school Learning to Learn intervention*. Doctoral thesis: Hughes Hall, University of Cambridge.

91 Robinson, V. (2018). *Reduce Change to Increase Improvement*. Corwin: Thousand Oaks, CA. See also Argyris, C. & Schön, D. A. (1974). *Theory in Practice: Increasing professional effectiveness*. San Francisco: Jossey Bass. See also Argyris, C. & Schön, D. A. (1996). *Organisational Learning II: Theory, Method, and Practice.* Reading, MA: Addison-Wesley.

Robinson suggests there are two types of theory of action: an existing version and an alternative (desired) version. Robinson shares examples of each as they relate to how school principals use their time. It's worth sharing these at length because they illustrate the idea so well. First, Table 19 shows the **existing theory of action** for principals' use of time.

Beliefs and values	• Principals are servant leaders who should sacrifice their own time in order to protect teacher time. • Principals should protect teachers from unpleasantness (e.g. parental complaints). • Principals need to maintain control as they are legally responsible and accountable for everything in the school. • If principals do it themselves, they can be more confident it will be done well. • The system is unclear about what is reasonable to delegate.

Actions	On average…
	• Principals spend too little time on core improvement activities.
	• Principals spend considerable time on tasks such as:
	  • Filling in and performing tasks for others.
	  • Managing pupil behaviour issues (e.g. suspensions and parental complaints).
	  • Personally managing infrastructure issues (e.g. buildings).
	• Principals spend widely variable amounts of their time on discretionary tasks (variation 17–54% of time use). They:
	  • Delegate less than their equivalents in other industries.
	  • Consult widely on many issues.
	  • Attend many meetings.

Consequences	On average… • Decline in health and wellbeing indicators. • High stress. • 94% of principals are considered overloaded. Yet… • High levels of satisfaction. • Average of seven applicants for every principal position.

Table 19 – Principals' time use: existing theory of action[92]

92 Adapted from Robinson, V. (2018). *Reduce Change to Increase Improvement*. Corwin: Thousand Oaks, CA, p94.

Next, we'll look at the **alternative (desired) theory of action** in Table 20.

Beliefs and values	• An important part of a principal's job is to develop the leadership capability of others. • Leading collaborative improvement in teaching and learning is the core work of the principal. • A strategic principal is proactive rather than reactive. • Principals' health and wellbeing must be a high priority as they can't lead effectively if they are unhealthy. • Principals are responsible for their own health and wellbeing.
Actions	On average, principals should… • Reduce the number of staff they manage. • Establish clearly delegated responsibilities. • Develop the leadership capabilities of their team. • Act strategically to identify and prevent the causes of repeated incidents such as parental complaints and pupil behaviours. • Create time for their leadership of the improvement of teaching and learning. • Give greater priority to their own professional development. • Give greater priority to their own health and wellbeing by accessing and advocating for appropriate forms of support.
Consequences	• Increased trust of other leaders, a sense of teamwork and reduced isolation. • Faster progress in school improvement. • Improved principal health and wellbeing (e.g. improved sleep, better work–life balance, increased self-efficacy and greater job satisfaction). • Improved and better utilised health and wellbeing services. • Principal role seen as more attractive and less stressful.

Table 20 – Principals' time use: alternative theory of action[93]

The examples in Tables 19 and 20 illustrate how theories of action can help us understand both the status quo and how we might bring about more desirable outcomes – in this case, more effective, less burnt-out school principals.

93 Adapted from Robinson, V. (2018). *Reduce Change to Increase Improvement*. Corwin: Thousand Oaks, CA, p99.

We can also see how change needs to happen at the level of beliefs and values rather than actions. It's not that people need to *change* their beliefs or values; rather, they often simply need to *expand the range* of things they believe and value to lay the foundations for an alternative course of action.

Later in this chapter, we'll write an existing and alternative theory of action for your chosen area of school improvement. First, we need to briefly alight on an issue relating to language. In the literature on change management, three terms are often used interchangeably – **theory of action**, **theory of change** and **logic model** – and this naturally leads to some confusion. So, let's iron it out!

Theory of action, theory of change and logic models

As we've just established, a theory of action comprises beliefs and values, actions and consequences. An existing theory of action helps us understand the status quo, and an alternative (desired) theory of action helps us imagine an alternative future. Theories of action help us understand why things are the way they are and the ways in which different beliefs, values and actions lead to different consequences.

In contrast, a theory of change is a one-page snapshot that captures all the moving parts of your change initiative. It sets out what you want to achieve (point B), what problem you want to solve (point A), and how you're going to get from point A to point B.

A logic model is very similar to a theory of change. There are many articles online that claim to explain the difference between a theory of change and a logic model. But if you read 10 such articles and make a list of what they all agree on, it won't be a very long list! (Trust me, I've tried). Essentially, both a theory of change and a logic model set out what you're trying to achieve and how you intend to achieve it. They both serve as a tool for succinctly communicating your strategy for improvement and evaluation. And they are both often expressed on a single sheet of paper as a series of boxes and arrows working from left to right.

To avoid confusion, in the *Making Change Stick* programme we use just two of these terms – the theory of action (as defined above) and the logic model, which we'll look at in *Chapter 18: Write a logic model*.

It's now time to address the million-dollar question: 'What do you need to do more of, less of or differently in order to achieve your impact goals?'

Exercise 10.1: Draft your improvement strategy

As with the comms plan, this exercise begins with the word 'draft'. As the implementation period unfolds, it's likely your thinking will change about what you need to do in order to achieve your impact goals. This is a good sign, as it suggests you're being light on your feet and following the process where it leads. So, whatever you come up with in this chapter, don't get too attached to it because your thinking is likely to develop as you work your way through the remainder of the programme.

Drafting your improvement strategy involves six stages:

1. Longlist all the things you could do less of (or stop doing entirely).
2. Longlist all the things you could do more of (or start doing).
3. Identify the mechanisms of action.
4. Refine your strategy.
5. Write an existing theory of action.
6. Write an alternative (desired) theory of action.

Let's look at each in turn.

1. Longlist all the things you could do less of (or stop doing entirely)

Before you start adding things to your to-do list, it's important to create some time and space in which this work can take place. So, as a first step, identify what you might start doing less of (or stop doing entirely).

In their book, *Making Room for Impact: A de-implementation guide for educators*, Hamilton et al suggest four possible courses of action when it comes to de-implementing existing practices:[94]

1. Remove them completely.
2. Reduce the scale or frequency of the tasks.
3. Replace them with something else.
4. Re-engineer them so it takes less time or they become more effective and impactful.

94 Hamilton, A., Hattie, J. & Wiliam, D. (2023). *Making Room for Impact: A de-implementation guide for educators.* Corwin.

At this stage, we're concerned with either removing or reducing existing practices with a view to replacing them with something else. Later, in *Chapter 22: Run PDSA cycles* and *Chapter 23: Schedule regular 'pivot or persevere' meetings*, we'll turn our attention to re-engineering aspects of your school improvement strategy.

With each candidate for de-implementation that you identify, estimate how much time this will save. For example, if your chosen area of school improvement is feedback, you could consider the following:

- **Report-writing.** We will remove the requirement for teachers to write a descriptive paragraph for each pupil. Instead, the admin team will provide parents with numerical data relating to attendance, punctuality, attainment, progress and attitude to learning. This will save teachers an average of ___ hours each year.
- **Written feedback in books.** Instead of marking everything the pupils write in their exercise books, teachers will provide detailed written feedback on one piece of written work each half term and provide verbal feedback each week. This will save teachers an average of ___ hours each week.
- **Homework.** Instead of asking teachers to set and mark homework each week, we will use software that marks and tracks homework automatically. This will save teachers an average of ___ hours each week.

You could also consider whether there are any other tasks unrelated to your chosen area of focus that you could stop doing, or do less of, such as:

- Reducing the frequency of departmental meetings.
- Reducing the frequency of data drops.
- Reducing parents' evening appointments from 10 minutes to five minutes.

When identifying potential candidates for de-implementation, it's a good idea to bear in mind **Chesterton's fence**. This is a heuristic inspired by the author and philosopher G. K. Chesterton, who wrote:

> There exists in such a case a certain institution or law; let us say, for the sake of simplicity, a fence or gate erected across a road. The more modern type of reformer goes gaily up to it and says,

> 'I don't see the use of this; let us clear it away.' To which the more intelligent type of reformer will do well to answer, 'If you don't see the use of it, I certainly won't let you clear it away. Go away and think. Then, when you can come back and tell me that you do see the use of it, I may allow you to destroy it.'[95]

A more concise version of this is simply to say, 'Don't remove or change any strategy or practice until you understand why it exists in the first place.'

Even more concisely, proceed with caution. Approach anything you plan to remove as you would a Jenga brick. Gently tap it at first to see whether there may be any undesirable consequences before deciding whether to proceed with the removal.

2. Longlist all the things you could do more of (or start doing)

The next step is to identify everything you could do to meet your impact goals. Throw the net wide at this stage and list everything you can possibly think of. We'll whittle the list down later.

To complete this task, you may find it helpful to refer to:

- The research summary you wrote in *Chapter 4: Write a one-page research summary*.
- The vision of a utopian future you sketched out in *Chapter 7: Map the journey*.
- The impact goals you identified in *Chapter 8: Plan backwards*.
- The root causes and potential solutions you identified in *Chapter 9: Conduct a root cause analysis*.

Again, for each potential action or strategy you identify, estimate roughly how much time and resource it would require. For example, if your school improvement focus is to move away from written feedback to providing more verbal feedback, you could consider the following:

- Provide training for all teachers and teaching assistants on how to implement a system of verbal feedback. This would require:
  - Lead practitioners – seven hours total:

95 Chesterton, G. K. (1929). *The Thing*. London: Sheed & Ward.

    - three hours to collaboratively plan two training sessions.
    - three hours to deliver the sessions (2x 90-minutes).
    - one hour to review evaluation feedback and consider next steps.
  - All teachers and teaching assistants – three hours total:
    - three hours to attend the training sessions.
- For each class they teach, all secondary school teachers should spend one hour a fortnight reviewing their pupils' exercise books and preparing verbal feedback. For a teacher with 10 classes, this will take an average of 10 hours a fortnight (five hours a week, or one hour a day).
- All teachers should allocate 30 minutes of a lesson, once a fortnight, to directed improvement and reflection time (DIRT). In this time, they will provide verbal feedback to the pupils (firstly at the level of the whole class, then to small groups, then to any pupils who require individual feedback), and pupils will respond accordingly.

3. Identify the mechanisms of action

At this point, you should have two longlists: things you can stop doing (or do less of) and things you could start doing (or do more of).

In step 4, we're going to whittle these down, making sure that the two lists are roughly evenly balanced in terms of time. To help inform your decisions about which items should be discarded and which should be retained, you firstly need to identify the mechanism of action for each item in your longlists.

Put simply, a mechanism of action specifies how your proposed actions will help you bring about the changes you want to see. To identify the mechanism of action for each item in your lists, use the following sentence frame: 'When we implement X, Y will happen because Z.'

Identify the mechanisms of action for things you want to *stop* doing as well as for things you want to *start* doing. In some cases, the mechanism of action might be the same or similar for multiple items. To extend the feedback examples provided earlier, here are some things you could stop doing, or do less of:

- When we reduce the frequency of department meetings, the quality of lesson planning will improve because teachers will use the gained time to collaboratively plan and share best practice.
- When we stop asking teachers to write a descriptive written report for each pupil, the quality of lesson planning will improve because teachers will use the gained time to plan lessons and create resources.
- When we use software that tracks and marks homework automatically, pupils will make more progress in their learning because teachers will use the gained time to review pupil work and to plan verbal feedback.

And here are some examples of things you might start doing, or do more of:

- When lead practitioners collaboratively plan training sessions on verbal feedback, we will improve the suitability of the training for all staff because it will be informed by experts from a range of subject disciplines.
- When we plan verbal feedback together as a department, we will improve the quality of feedback provided because teachers will support one another and share best practice.
- When teachers allocate 30 minutes of lesson time to DIRT, pupils will be able to close the gap between where they are and where they need to be because they will be provided with the time and feedback they need to improve their work.

As well as writing a mechanism of action for each item in your list, you should also write a mechanism of action for the overall improvement strategy. For example: When we move to a system of verbal feedback, pupil learning outcomes will improve because teachers will have an additional ___ hours a week to spend planning lessons and creating learning resources.

4. Refine your strategy

As we saw above, 'complex problems require complex solutions.' However, complexity comes with its own problems. The improvement strategy you come up with needs to be complex – but no more complex than it needs to be.

So, it's now time to refine your strategy by deciding which items on your longlists to include and which to discard (or to park for now). To do this, use a **decision matrix** (see Tables 21 and 22).

Complete one decision matrix for things you plan to stop doing (or do less of) and another for things you plan to start doing (or do more of). In the left-hand column, list your mechanism of action statements. In Tables 21 and 22, the 'action' has been highlighted in bold. In the three columns to the right, for each item:

- Estimate how effortful it would be to implement. Score out of 5, where 1 is very easy and 5 is very effortful.
- Estimate how impactful it would be, meaning how likely it is that it will help you achieve the impact goals you identified in *Chapter 8: Plan backwards*. Score out of 5, where 1 is not at all impactful and 5 is very impactful.
- Estimate how much time it would either save or require.

Mechanism of action	Effort (score/5)	Impact (score/5)	Estimated time saved
When we **reduce the frequency of department meetings**, the quality of lesson planning will improve because teachers will use the gained time to collaboratively plan and share best practice.	1	4	3h/term
When we **stop asking each teacher to write a descriptive written report for each pupil**, the quality of lesson planning will improve because teachers will use the gained time to plan lessons and create resources.	1	2	12h/year or 4h/term
When we **use software that tracks and marks homework automatically**, pupils will make more progress in their learning because teachers will use the gained time to review pupil work and to plan verbal feedback.	2	4	3h/week or 18h/term
Teacher time saved			25h/term

Table 21 – Decision matrix: things you could stop doing, or do less of

Mechanism of action	Effort (score/5)	Impact (score/5)	Estimated time required
When **lead practitioners collaboratively plan training sessions** on verbal feedback, we will improve the suitability of the training for all staff because it will be informed by experts from a range of subject disciplines.	3	3	7h total (lead practitioners only)
When we **plan verbal feedback together as a department**, we will improve the quality of feedback provided because teachers will support one another and share best practice.	2	4	3h/term
When **teachers allocate 30 minutes of lesson time to DIRT**, pupils will be able to close the gap between where they are and where they need to be because they will be provided with the time and feedback they need to improve their work.	2	5	No additional time required
Lead practitioner time required **Teacher time required**			7h total 3h/term

Table 22 – Decision matrix: things you could do, or do more of

Having completed your decision matrices, discuss the following questions as a team:

1. Which items are the most impactful?
2. Which are the most effortful?
3. Which save or require the most time?
4. Which of these options should we try first?
5. Are the things we plan to stop doing (or do less of) and the things we plan to start doing (or do more of) roughly balanced in terms of time?
6. How many things should we attempt to do at once?

7. Which of these strategies do we need to implement first, second, last…?
8. Which can we rule out (or park for now)?

Once you've refined your improvement strategy, to make sure you have crystal clarity about what you're doing and why, take a few moments to write a short summary using the OST model we discussed in *Chapter 2: Optimise the team*. Here's a worked example, using the feedback initiative:

- Objectives:
  - Free up teacher time to focus on planning.
  - Improve pupil learning in lessons.
- Strategies:
  - Move from written feedback to verbal feedback.
  - Improve the way in which pupils respond to feedback.
- Tactics:
  - Reduce the frequency of department meetings.
  - Stop asking each teacher to write a descriptive written report for each pupil.
  - Use software that tracks and marks homework automatically.
  - Deliver training for all staff on verbal feedback.
  - Plan verbal feedback together in departments.
  - Allocate 30 minutes a week of DIRT in lessons.

Now that you've identified the objectives, strategies and tactics that characterise your school improvement initiative, you're ready to compare your existing theory of action with an alternative (desired) theory of action.

5. Write an existing theory of action

Thinking about your chosen area of school improvement, identify the beliefs and values, actions and consequences that describe the current situation. To do this, you may find it useful to refer to:

- The worked example in Table 19 (page 223).

- The Table 23 template (below).
- The 'baseline versus impact' activity you completed in *Chapter 7: Map the journey* (pages 190–1).

Beliefs and values	
Actions	
Consequences	

Table 23 – Theory of action template

6. Write an alternative (desired) theory of action

Finally, write an alternative theory of action that sets out a more desirable set of beliefs and values, actions and consequences.

You may find it helpful to refer to:

- The worked example in Table 20 (page 224).
- The Table 23 template (above).
- The 'baseline versus impact' activity you completed in *Chapter 7: Map the journey* (pages 190–1).
- The 'mechanisms of action' you identified in step 3.

Update your comms plan

Once you've drafted your improvement strategy, you need to update your comms plan to share your thinking with the wider school community. Think carefully about how you can explain your thinking around your improvement strategy (one-to-many comms). You may find it helpful at this stage to ask people to share their thoughts (many-to-one comms).

While your improvement strategy may be complex, always strive to be clear and simple in your messaging. You don't need to share every detail about what you're planning – if you do, people are likely to become overwhelmed and your messaging may appear confused. So, keep the complexity under the hood – and keep your messaging simple!

CHAPTER SUMMARY

- Two key ideas should shape your thinking in drafting an improvement strategy:
  - Complex intervention – recognising that a school improvement initiative has many moving parts.
  - Theory of action – the difference between the status quo and an alternative (desired) future can be described at three levels: beliefs and values, actions and consequences.
- As the implementation period unfolds, it's highly likely that your thinking will change about what you need to do (more of or less of) in order to achieve your impact goals. Therefore, at the outset, think in terms of *drafting* an improvement strategy, rather than writing a final version.
- To draft your school improvement strategy, complete the following six stages:
  1. Longlist all the things you could do less of (or stop doing entirely).
  2. Longlist all the things you could do more of (or start doing).
  3. Identify the mechanisms of action.
  4. Refine your strategy.
  5. Write an existing theory of action.
  6. Write an alternative (desired) theory of action.
- Once you've drafted your improvement strategy, update your comms plan. While your improvement strategy may be complex, the messaging needs to remain clear. So, keep the complexity under the hood – and keep your messaging simple!

Making Change Stick

Phase I: Make a start

- ☑ Appoint a slice team
- ☑ Optimise the team
- ☑ Choose your focus
- ☑ Write a one-page research summary
- ☑ Draft a comms plan
- ☑ Build a glass box

Phase II: Make a plan

- ☑ Map the journey
- ☑ Plan backwards
- ☑ Conduct a root cause analysis
- ☑ Build your improvement strategy
- ☐ Plan tight but loose
- ☐ Build steps to success
- ☐ Plan for diffusion
- ☐ Optimise for habit change
- ☐ Plan professional learning
- ☐ Prepare data collection
- ☐ Timeline and streamline
- ☐ Write a logic model
- ☐ Conduct a pre-mortem

Phase III: Make it happen

- ☐ Manage your project
- ☐ Create individual improvement plans
- ☐ Run PDSA cycles
- ☐ Schedule regular ‘pivot or persevere’ meetings
- ☐ Embed and sustain improvements
- ☐ Review, reflect – and plan your next project!

CHAPTER 11
PLAN TIGHT BUT LOOSE

Implement with integrity, rather than fidelity.

The f-word of implementation science

In the implementation science literature, one word is talked about perhaps more than any other: **fidelity**. For example, in the Education Endowment Foundation (EEF) report, *A School's Guide to Implementation: Guidance Report*, the word fidelity appears 18 times.[96] And in the review of evidence on which the EEF guidance report is based, it appears 709 times in 444 pages![97]

In general use, the word 'fidelity' refers to the state of being loyal or faithful, as in marital fidelity. The word is also often used to describe the extent to which electronic devices accurately reproduce sounds and images. Hence, hi-fi – 'high fidelity'.

In implementation science, the word 'fidelity' is used to describe the faithful replication of ideas and practices. According to Carroll et al:

> Implementation fidelity refers to the degree to which an intervention or programme is delivered as intended. Only by understanding and measuring whether an intervention has been implemented with fidelity can researchers and practitioners gain

96 EEF (2024). *A School's Guide to Implementation: Guidance Report*. London: Education Endowment Foundation. Retrieved from: https://educationendowmentfoundation.org.uk/education-evidence/guidance-reports/implementation.

97 Moore, D., Proctor, R., Benham-Clarke, S. et al. (2024). *Review of evidence on implementation in education*. London: Education Endowment Foundation. Retrieved from: https://educationendowmentfoundation.org.uk/education-evidence/evidence-reviews/implementation-in-education.

> a better understanding of how and why an intervention works, and the extent to which outcomes can be improved.[98]

It's easy to see why fidelity is viewed as being important. When you're implementing an improvement strategy across a large, complex organisation like a school – let alone a group of schools or a school system – it's important to ensure, as far as possible, that 'everyone is singing from the same hymn-sheet'.

However, fidelity can be a double-edged sword. If we implement a new idea or strategy in a way that is too rigid or inflexible, this can cause problems because not all schools, teachers or pupils are exactly alike, and it's often necessary to make reasonable adjustments to adapt ideas to different contexts. For this reason, implementation scientists often emphasise the importance of **adaptability** – that in order to be effective, ideas and strategies may need be modified or customised to meet the needs of different local contexts.

But adaptability too can be a double-edged sword. If we're too flexible or 'loose' in the way we implement a particular practice or strategy, over time things tend to mutate and become quite different to the original idea, potentially compromising the effectiveness of the innovation.

Beware the lethal mutation

In biology, the phrase **lethal mutation** is used to describe a genetic mutation – a copying error that takes place during reproduction – that results in the premature death of the organism. For example, a genetic mutation that causes a change in the colour of an animal's coat could make it more visible to predators.

In education, the phrase 'lethal mutation' has been co-opted to describe the phenomenon whereby a beneficial idea or strategy can become

98 Carroll, C., Patterson, M., Wood, S. et al. (2007). A conceptual framework for implementation fidelity. *Implementation Science* 2 (40).

ineffective or even harmful through a series of small changes in how it is practised, which can build up over time.[99]

A good example of a lethal mutation that became widespread in recent years is **formative assessment**. Formative assessment was defined in Black and Wiliam's influential 1998 article, 'Inside the Black Box', as information, gathered through assessment, that teachers use to adapt their teaching to meet the needs of their pupils.[100]

In England, the government decided to get behind formative assessment in a big way. The first lethal mutation they committed was to change the name to 'assessment for learning'. In the years that followed, a number of rather gimmicky practices were implemented under this banner. For example, in my own school it was expected that:

- Each pupil should be given a set of red, yellow and green paper cups, which they were supposed to use to signal to the teacher whether they were stuck (red), working away (yellow) or had finished what they were doing and were ready for further instruction (green).
- Teachers should use a set of lollipop sticks to choose pupils at random to answer questions.
- All pupils should always know which sub-level they're currently working at and what they need to do to get to the next level.

My school was not alone in pursuing such practices, which – setting aside the question of whether they have any merit – bore little resemblance to the original research on formative assessment. There was also an interesting paradox in the fact that these lethal mutations were expected to be delivered with fidelity, hence the whole-school policies. It was all a bit of a mess.

Over time, formative assessment found its feet. For example, a recent large-scale randomised controlled trial found that the 'embedding

99 The phrase was first used in this way by Edward Haertel, Emeritus Professor of Education at Stanford University. See Brown, A. L. & Campione, J. C. (1996). 'Psychological theory and the design of innovative learning environments: On procedures, principles, and systems' in L. Schauble & R. Glaser (eds.), *Innovations in learning* (pp289–325). Mahwah, NJ: Erlbaum.

100 Black, P. & Wiliam, D. (1998). Inside the Black Box: Raising standards through classroom assessment. *Phi Delta Kappan*, 80, 139–48.

formative assessment' approach led to statistically significant gains in subject learning, compared with control schools.[101] But there had been many a lethal mutation along the way. Almost twenty years after the publication of 'Inside the Black Box', Wiliam reflected, 'Looking back at the subsequent development of this work […] if we had realised how long it would take, I doubt that either of us would have had the courage to begin.'[102]

Fidelity versus integrity

To resolve the tension between the need for fidelity and the need to adapt practices to local contexts, some scholars have called for school improvement initiatives to be implemented not with fidelity but with **integrity**.[103] As the Carnegie Foundation's Paul LeMahieu explains:

> What we need is less *fidelity of implementation* (do exactly what they say to do) and more *integrity of implementation* (do what matters most and works best while accommodating local needs and circumstances). This idea of integrity in implementation allows for programmatic expression in a manner that remains true to essential empirically warranted ideas while being responsive to varied conditions and contexts.[104]

This balancing act – remaining true to the essence of an improvement strategy while being responsive to local contexts – is often described as being **tight but loose**. This idea has been around for many years. As Professor Thomas Sergiovanni wrote in 1984:

101 Speckesser, S., Runge, J., Foliano, F., Bursnall, M., Hudson-Sharp, N., Rolfe, H. & Anders, J. (2018). *Embedding Formative Assessment: Evaluation report*. Education Endowment Foundation, NIESR.

102 Wiliam, D. (2016). *Leadership for Teacher Learning: Creating a Culture Where All Teachers Improve So That All Students Succeed*. West Palm Beach, FL: Learning Sciences International, p208.

103 Tichnor-Wagner, A., Allen, D., Socol, A. R. et al. (2018). Studying Implementation within a Continuous-Improvement Process: What Happens When We Design with Adaptations in Mind? *Teachers College Record*, 120(5), 1–52.

104 LeMahieu, P. (2011). What we need in education is more integrity (and less fidelity) of implementation [Blog post]. Retrieved from https://www.carnegiefoundation.org/blog/what-we-need-in-education-is-more-integrity-and-less-fidelity-of-implementation; original emphases.

> My interpretation of the school effectiveness excellence literature leads me to believe that [effective schools] are both tightly coupled and loosely coupled. […] There exists in excellent schools a strong culture and a clear sense of purpose, which defines the general thrust and nature of life for their inhabitants. At the same time, a great deal of freedom is given to teachers and others as to how these essential core values are to be honoured and realised. This combination of tight structure around clear and explicit themes, which represent the core of the school's culture, and of autonomy for people to pursue these themes in ways that make sense to them, may well be a key reason for their success.[105]

Sergiovanni's key insight is often expressed in the idea that schools need to be 'culturally tight and managerially loose'. In this approach, school leaders set a clear direction of travel and some clear whole-school expectations, and then teachers and support staff are given a degree of autonomy over how to make sense of those whole-school expectations in their own context. Table 24 on page 244 includes some examples of what this might look like in practice.

105 Sergiovanni, T. J. (1984). Leadership and Excellence in Schooling. *Educational Leadership*, 41(5), 4–13.

Focus	Tight components	Loose components
Teaching and learning	All teachers are expected to have a starter task on the board as pupils enter the room.	• The nature of the task (e.g. topic, puzzle, open-ended vs 'correct answers', past paper question, retrieval quiz). • How the task is completed (e.g. in silence vs discussion-based, marked vs not marked).
Homework	All pupils in Year 11 are expected to complete a piece of homework for every subject once a fortnight.	• The nature of the homework task (e.g. extension, consolidation, past paper practice). • Who marks it (teacher, self, peer). • On paper or digital. • Provide a homework menu at the start of each half term. Pupils can choose which tasks will be most helpful for them, when to do it, how to present their learning, etc.
Professional development	All teaching and support staff are expected to carry out a practitioner inquiry project to improve their use of feedback.	• Focus of inquiry (e.g. written feedback, verbal feedback, focus of feedback, timing of feedback, how pupils respond to feedback). • Whether to do it individually or in a pair/small group. • Whether to collaborate within departments or across. • Which year group/class/pupils to focus on.

Table 24 – Examples of 'tight but loose' implementation

Teachers and school leaders often talk about the importance of **collaboration** for both educators and pupils. However, collaboration is often poorly defined and high-quality collaboration can be difficult to achieve in practice. Rather than focusing on collaboration, the examples of 'tight but loose' implementation in Table 24 capture what

Michael Fullan describes as **connected autonomy**.[106] This approach enables people throughout the school community to make meaningful choices about the way in which they adapt whole-school expectations to their own context, while making sure that they're all pulling in the same direction.

Exercise 11.1: Plan tight but loose

Thinking about your school improvement strategy, discuss as a team:

- What could be the 'tight' and 'loose' aspects of how you develop your innovation?
- What examples of 'tight but loose' implementation could you share with your colleagues to help them visualise how they could adapt key ideas and strategies to their context without slipping into 'lethal mutation' territory?
- How could you monitor and evaluate the 'tight' and 'loose' aspects of your school improvement initiative as they're implemented throughout your school, and across time?

In *Chapter 10: Build your improvement strategy*, we built the vehicle that will deliver you to your utopian vision of the future. In this chapter, we fine-tuned that vehicle to make sure the engine is purring silently and ready for the journey ahead.

In the next chapter, we'll map out the journey from where you are to where you want to be as a series of stages.

CHAPTER SUMMARY

- When you're implementing an improvement strategy it's important to ensure, as far as possible, that 'everyone is singing from the same hymn-sheet'. This is often referred to as implementation fidelity – the extent to which an intervention or programme is delivered as intended.

106 Fullan, M., Spillane, B. & Fullan, B. (2022). Editorial: Commentary: connected autonomy. *Journal of Professional Capital and Community*, 7(4), pp. 329–33.

- Fidelity can be a double-edged sword. If you implement something in a way that is too rigid or inflexible, this can cause problems because it's often necessary to adapt ideas to different contexts.
- People often emphasise the importance of adaptability, but this too can be a double-edged sword. If you're too flexible in the way you implement a particular practice or strategy, over time things tend to mutate and become quite different to the original idea, potentially compromising the effectiveness of the innovation.
- In education, the phrase 'lethal mutation' is used to describe the situation whereby a beneficial educational idea can become ineffective or even harmful through a series of small changes in how it is practised, which can build up over time.
- To resolve the tension between the need for fidelity and the need to adapt practices to local contexts, several scholars have called for school improvement initiatives to be implemented not with fidelity but with integrity.
- This balancing act – remaining true to the essence of an improvement strategy while being responsive to local contexts – is often described as being tight but loose, or culturally tight and managerially loose.
- Thinking about your school improvement strategy, discuss as a team:
    - What could be the tight and loose aspects of how you develop your innovation?
    - What examples of 'tight but loose' implementation could you share with your colleagues to help them visualise how they could adapt and incorporate key ideas and strategies into their practice without slipping into 'lethal mutation' territory?
    - How could you monitor and evaluate the tight and loose aspects of your school improvement initiative as it is implemented throughout your school, and across time?

Making Change Stick

Phase I: Make a start

- ☑ Appoint a slice team
- ☑ Optimise the team
- ☑ Choose your focus
- ☑ Write a one-page research summary
- ☑ Draft a comms plan
- ☑ Build a glass box

Phase II: Make a plan

- ☑ Map the journey
- ☑ Plan backwards
- ☑ Conduct a root cause analysis
- ☑ Build your improvement strategy
- ☑ Plan tight but loose
- ☐ Build steps to success
- ☐ Plan for diffusion
- ☐ Optimise for habit change
- ☐ Plan professional learning
- ☐ Prepare data collection
- ☐ Timeline and streamline
- ☐ Write a logic model
- ☐ Conduct a pre-mortem

Phase III: Make it happen

- ☐ Manage your project
- ☐ Create individual improvement plans
- ☐ Run PDSA cycles
- ☐ Schedule regular ‘pivot or persevere’ meetings
- ☐ Embed and sustain improvements
- ☐ Review, reflect – and plan your next project!

CHAPTER 12
BUILD STEPS TO SUCCESS

Plan how to get from where you are to where you want to be in a series of logical, manageable steps.

> The 'steps to success' tool models what we want to show to pupils in a classroom in terms of how they make progress. Steps to success really worked for us. It made us feel that change was realistic in different time scales. We can see how we're going to move forward week by week, month by month, and we can also measure progress. We can see how we've moved on from where we started, which can be the biggest challenge. You worry about how change is going to be seen – how are we going to notice what's happening? How are we going to measure it? The 'steps to success' part of the training was great.
>
> **Alasdair Kennedy**
> **Headteacher, Trinity School**

In *Chapter 7: Map the journey*, we established a vision of where you are now and where you want to be. Mapping the journey is a powerful exercise because you start with the end in mind and create an emotional connection to a positive vision of the near future.

However, mapping the journey in this way can be rather daunting. On completing this exercise, people often say, 'I know where we are and where we want to be. I just don't know how we're going to get from point A to point B.'

In this chapter, we're going to close that gap. The idea in this chapter is adapted from Gene Hall and Shirley Hord's 'concerns-based adoption

model'. Hall and Hord refer to this idea as an 'innovation configuration'.[107] In the *Making Change Stick* programme, we call it **steps to success**.

Steps to success

The process of school improvement is not as simple as flicking a light switch. Often, change progresses through a series of stages. 'Steps to success' is a powerful tool for breaking down the journey from where you are to where you want to be into a series of manageable, logical steps. This tool can be used at a number of different levels, such as whole school, department, phase or individual practitioners. We'll return to this later in this chapter.

To illustrate how this tool works, let's start with a worked example of a teacher who would like to develop a more dialogic approach to teaching and learning (Table 25). To be clear, this isn't supposed to be a comprehensive account of what a high-performing dialogic classroom looks like – the aim of this worked example is simply to illustrate the tool.

107 Hall, G. E. & Hord, S. M. (2015). *Implementing change, patterns, principles, and potholes*. (4th ed.). Upper Saddle River, New Jersey: Pearson.

A (Baseline)	B (Next steps)	C (Mid-point)	D (Almost there)	E (Target)
• Teacher asks most of the questions. These tend to be short and frequent, requiring correct answers. • Teacher defaults to 'hands-up questioning', allowing confident pupils to dominate classroom discussions. • Teacher questions are often directed at individuals (e.g. 'Thomas, tell me…'). • Teacher does not allow much 'thinking time' when asking questions. • No use of dialogic moves such as think-pair-share, turn-and-talk or targeted questioning.	• Teacher still asks most of the questions, but now asks follow-up questions to probe for deeper understanding. • Alongside questioning, teacher starts using talking points (provocative statements) to elicit extended discussions and reasoning. • Teacher starts giving 'thinking time' to allow pupils to formulate a response before answering. • Teacher asks questions to the whole class before selecting pupils to respond.	• Questions are designed to elicit short explanations as well as answers; pupils are primed to use the word 'because'. • Follow-up questioning used to good effect – teacher asks clarifying questions to elicit deeper explanations before pivoting to other pupils. • Some pupil-to-pupil discourse – but talk is often 'disputational' or 'cumulative' rather than 'exploratory'. • Teacher uses dialogic moves such as thinking time, think-pair-share, turn-and-talk and targeted questioning in most lessons.	• Alongside teacher questioning, pupils are given 'tickets' to permit and encourage them to ask up to three questions per lesson. • Pupil-to-pupil talk is increasingly characterised as 'exploratory' (e.g. all pupils contribute, take turns and give reasons for their thinking). • Pupils are encouraged to build on each other's ideas, making reference to previous contributions before sharing their views.	• Teacher uses questions and talking points to elicit, engage and challenge thinking and reasoning. • Dialogic moves such as thinking time, turn-and-talk, think-pair-share and targeted questioning are used consistently to good effect. • Pupils listen carefully to each other as well as the teacher, regularly making reference to previous contributions. • Pupils are prompted to reason, explain and justify.

Table 25 – Steps to success: dialogic teaching and learning (worked example)

As with mapping the journey, the 'steps to success' framework has a **target** level and a **baseline** level. However, there are now three stages in between: **next steps**, **mid-point** and **almost there**. (NB you don't have to have five stages, and I encourage you to adapt any of these ideas as you see fit. However, having five stages does work well, as we will see.)

I recommend you complete your 'steps to success' framework in the following order. At each stage, try to identify specific, observable behaviours that teachers and pupils will exhibit.

1. Start by writing a detailed description of what would constitute your target level of use (E).
2. Next, turn your attention to the baseline (A). Where are you currently? (This might include positive aspects of current practice as well as areas for development.)
3. Next, turn your attention to the mid-point (C). What will it be like when you're half-way there?

At this point, we have a three-point scale. However, there's probably quite a big leap to get from A (baseline) to C (mid-point), and again from C (mid-point) to E (target level). So, we're now going to split the difference. This is where we really get into the granular detail of classroom practice.

4. Next, ask yourselves – what will it look like when you're almost there (D)?
5. Finally, turn your attention to next steps (B). What will it look like next week, next month, next term? What's your next move? What's the first step in your journey towards the target level of use?

We now have a five-point scale. When you make your own version of a 'steps to success' scale, I recommend you write a draft and then return to it a week or so later with fresh eyes. In particular, it's important to make sure the five stages are evenly distributed. If the leap from A to B is too great, people won't make the rest of the journey. So, you may need to shuffle things around a bit. The aim is to break down the process of change into five achievable steps where you can see precisely how you can get from A to B, from B to C and so on, creating a smooth, shallow on-ramp from where you are to your target level of use.

As mentioned previously, the 'steps to success' framework can be used for a range of different contexts and purposes. The example in Table 25 (page 251) is designed to scaffold and sequence the improvement journey of an individual teacher. You could also create a whole-school version, or a version for a group of schools such as a local authority or a multi-academy trust. You could have a version for a department in a secondary school, or a year group or phase in a primary school. This tool can also be adapted for use at the level of individual pupils, to scaffold and sequence increasing levels of expertise or mastery relating to complex tasks such as essay writing, musical composition or designing and conducting a scientific investigation.

The logic of the 'steps to success' tool is clear: when the majority of your colleagues consistently achieve their target level of use – that's when you'll have made it from where you are to where you want to be!

Exercise 12.1: Steps to success

As a team, write a 'steps to success' scale for your improvement strategy. You may wish to create multiple versions at different levels, such as:

- Whole school.
- Department.
- Year group.
- Classroom teachers.
- Support staff.
- Pupils.

If you use this tool at the level of individual teachers, I recommend you get each teacher to create their own version. The target level of use may be the same for every teacher, but there will likely be many different starting points and ways to map the journey towards that target level.

The 'steps to success' framework also provides us with a powerful coaching tool. For example, following a lesson observation, you could refer to the framework to ask:

- Where would you say the pupils were at the start of that lesson?
- Where were they in the middle, or at the end?
- Where are they on average at the moment?

- Where do you want them to be by the end of this term?
- What support do you need in order to get to the next step on the ladder?

CHAPTER SUMMARY

- The process of school improvement is not as simple as flicking a light switch. Often, change progresses through a series of small stages.
- 'Steps to success' is a powerful framework for breaking down the journey from where you are to where you want to be into a series of manageable, logical steps.
- There are five stages or variations:

  (A) Baseline.

  (B) Next steps.

  (C) Mid-point.

  (D) Almost there.

  (E) Target.

- To write a 'steps to success' scale for your improvement strategy, follow these steps:

  - Write a detailed description of what would constitute your target level of use (E).
  - Next, do the same for the baseline (A).
  - Next, turn your attention to the mid-point (C).
  - Next, consider what it will look like when you're almost there (D).
  - Finally, turn your attention to next steps (B).

- 'Steps to success' can be adapted for a number of different contexts and purposes and at a number of levels, such as individual teachers, department, year group, whole school or groups of schools. You can also adapt this tool for use at the level of individual pupils.
- When the majority of your colleagues consistently achieve their target level of use – that's when you'll have made it from where you are to where you want to be!

Making Change Stick

Phase I: Make a start

- ☑ Appoint a slice team
- ☑ Optimise the team
- ☑ Choose your focus
- ☑ Write a one-page research summary
- ☑ Draft a comms plan
- ☑ Build a glass box

Phase II: Make a plan

- ☑ Map the journey
- ☑ Plan backwards
- ☑ Conduct a root cause analysis
- ☑ Build your improvement strategy
- ☑ Plan tight but loose
- ☑ Build steps to success
- ☐ Plan for diffusion
- ☐ Optimise for habit change
- ☐ Plan professional learning
- ☐ Prepare data collection
- ☐ Timeline and streamline
- ☐ Write a logic model
- ☐ Conduct a pre-mortem

Phase III: Make it happen

- ☐ Manage your project
- ☐ Create individual improvement plans
- ☐ Run PDSA cycles
- ☐ Schedule regular ‘pivot or persevere’ meetings
- ☐ Embed and sustain improvements
- ☐ Review, reflect – and plan your next project!

CHAPTER 13
PLAN FOR DIFFUSION

Plan how to spread effective practice through the school population.

This chapter focuses on a powerful theory that helps explain why some ideas, innovations and improvement strategies seem to spread successfully with apparent ease, while others falter and fizzle out. This theory – known as the **theory of diffusion of innovations** – is one of the foundations of implementation science.

The theory of diffusion of innovations has its roots in rural sociology in 1940s Iowa – it's not often you can say that! Two researchers from Iowa State University, Bryce Ryan and Neal Gross, were puzzled by the fact that while some farmers were quick to adopt innovations that increased the productivity of their farms, others were resistant to change.[108]

In particular, a new type of seed had recently been developed that increased the yield of corn by around 20%. You'd think farmers would be quick to adopt something that would increase the profitability of their farms by such a margin. Indeed, *some* farmers soon capitalised on this innovation. And yet, on average it took seven years for farmers to start using this new type of corn seed – and it was 13 years before all 257 farmers in the study sample had adopted its use.

This study by Ryan and Gross has been described by Everett Rogers, the pre-eminent scholar of diffusion research, as 'the most influential diffusion study of all time'.[109] Over the next several decades of research,

108 Ryan, B. & Gross, N. C. (1943). The Diffusion of Hybrid Seed Corn in Two Iowa Communities. *Rural Sociology* 8, 15–24.

109 Rogers, E. M. (2003). *Diffusion of Innovations* (5th ed.). New York: The Free Press, p31.

Rogers noticed that the way in which ideas spread (or fail to spread) is remarkably consistent across a range of contexts, from farming to car manufacturing to healthcare. Thus, Rogers developed the general theory of change known as 'diffusion of innovations', which he published in a book of the same name.

Defining terms

Before we consider how this theory applies to schools, let's take a moment to clarify the phrase 'diffusion of innovations'. First, Rogers defines an innovation as an idea or practice that is *perceived* as new. It doesn't need to have never existed before – it just needs to be novel to a particular setting.

Second, the word 'diffusion'. You may recall this word from school science. Technically, diffusion describes the net movement of a substance from an area of high concentration to an area of low concentration. I can vividly recall the way in which this invisible process was brought to life by my biology teacher, Mrs Suddaby. She climbed onto the bench in her huge laboratory and sprayed a blast of air freshener into the top corner of the room for about three seconds. We had to stand up once we could smell it. Within seconds, the pupils nearest to her took to their feet. Within a minute or so, the whole class was standing.

In science, diffusion is understood to be a passive process. Over time, particles of air freshener will become evenly distributed throughout the room as a consequence of the way in which air particles bounce off one another.

In social science, the diffusion of ideas is not considered to be a passive process. Instead, Rogers described diffusion as an active process whereby ideas and practices spread throughout a population as a consequence of **people talking to people**. For instance, in the study by Neal and Gross, the most important influence on whether a farmer adopted hybrid seed corn was whether their neighbours were using it. This is an important distinction, as we will soon see.

A deadly dearth of diffusion

The theory of diffusion of innovations powerfully explains why some new ideas and innovations seem to spread effortlessly throughout a population, while other equally brilliant ideas never get off the ground.

Let's consider two examples of innovations from the history of medicine, one of which spread like wildfire, and one that didn't, leading to many avoidable deaths.

The idea that spread rapidly is anaesthesia. The first public demonstration of anaesthesia was in October 1846 by the Boston dentist William Morton, who had discovered that the use of a gas (ether) prevented patients from feeling pain during surgery.

In November 1846 – the following month – there was an article in *The Boston Medical and Surgical Journal* reporting on the discovery. According to the surgeon and medical historian Atul Gawande, 'By mid-December, surgeons were administering ether to patients in Paris and London. By February, anaesthesia had been used in almost all the capitals of Europe, and by June in most regions of the world.'[110]

Naturally, there were pockets of resistance. But within seven years, virtually every hospital in Britain and the US had adopted the new discovery. As an example of how an effective innovation can diffuse through a population, anaesthesia is about as good as it gets.

Around this time, the biggest cause of death among surgical patients was sepsis, claiming the lives of up to half of those who underwent major operations. Not long after anaesthetic had successfully spread throughout the world, the Scottish surgeon Joseph Lister read a paper by Louis Pasteur and became convinced that sepsis was caused by micro-organisms. Over the next few years, Lister started using carbolic acid to clean hands and wounds during surgery, significantly reducing rates of sepsis and death. He published his results in leading medical journal *The Lancet* in 1867.[111]

110 Gawande, A. (2013). Slow Ideas. *The New Yorker*, July 22. Retrieved from: https://www.newyorker.com/magazine/2013/07/29/slow-ideas.

111 Lister, J. (1867). Illustrations of the Antiseptic System of Treatment in Surgery. *The Lancet*. 90(2309), 668–9.

Twenty years later, handwashing among surgeons was 'still perfunctory', and they often operated in coats covered in the blood of previous patients.[112] It took a generation for the penny to drop and for the medical profession to adopt hygienic practices similar to those used today. Many thousands of people died prematurely as a result.

What was the difference? Why do some ideas spread with apparent ease, while others are opposed or ignored? There are a number of reasons, but a major one relates to how ready for change people are – or how resistant.

Five adopter types

Rogers suggested that you can divide any human population, be they farmers, motorists or teachers, into five **adopter types** according to how ready for change they are. Let's run through these in turn.

A. Innovators

Innovators are the gatekeepers – new ideas have to go through them first. By their nature, innovators require little to no encouragement. They're often on the look-out for new ideas. They're willing to take risks. They're ready for change. In education, innovators may be teachers and leaders who like to reason from first principles and carve their own path. Alternatively, they may be evidence-informed practitioners who read lots of education research and think hard about how to translate research into practice.

B. Early adopters

If you've ever seen the short video, 'First Follower: Leadership Lessons from Dancing Guy', narrated by the entrepreneur and philanthropist Derek Sivers, you'll understand the power of early adopters. If you haven't seen this video before, I recommend that you do so – you can find it at bit.ly/mcs-follow.

Early adopters are quick to embrace promising new ideas, practices and technologies. They're motivated to go the extra mile to improve outcomes for their pupils and they require little encouragement or incentivisation to do so.

112 Gawande, A. (2013). Slow Ideas. *The New Yorker*, July 22. Retrieved from: https://www.newyorker.com/magazine/2013/07/29/slow-ideas.

C. Early majority

The early majority are not 'thought leaders', but they do adopt new ideas before the average person. Typically, someone in the early majority will require some persuasion from an innovator or early adopter. They may be convinced to try a new strategy upon seeing case studies, success stories or evidence of impact.

D. Late majority

By nature, the late majority tend to be more sceptical about change initiatives, though they can be persuaded to adopt a new idea or practice once it's been proven to work by others. The late majority will require more encouragement and support than the early majority – possibly through observation, coaching, mentoring or training by trusted colleagues.

E. Resistors

Finally, there are those who are resistant to change. These people are strongly attached to established ways of doing things, and they may be deeply sceptical of anyone who tries to change their ways. They often resist early attempts at persuasion, and this can persist – though even resistors can change their ways when the conditions are right.

Rogers referred to this group as 'laggards'. This is technically true, in that they take longer to adopt change than others (i.e. they 'lag behind'). However, it's probably a good idea to avoid using this term to describe your dear and valued colleagues. Indeed, it's important to recognise that there are many perfectly valid reasons why someone might be resistant to change at a particular point in time.

It may be that they've seen similar ideas like this come and go in the past and they think, 'This is just the latest fad. I don't really need to get on board with this because it won't last and there'll be another one along any minute.' Or they may be able to point to evidence or prior experience to explain why a particular change initiative is unlikely to work in their context.

Alternatively, they may be struggling with workload and feeling overwhelmed and are therefore unable to take anything else on at this point in time. Perhaps they have a particularly challenging timetable this year, or they may have difficulties at home. There are many reasons

why someone might find themselves in this category with regard to a particular change initiative at a particular point in time. We'll return to this idea of reasonable resistance shortly.

There are two key things to point out about these five adopter types. First, the categories are not fixed. For example, someone may be vehemently opposed to a particular change initiative while being ready, willing and able to adopt other initiatives. Also, people's attitudes towards a particular school improvement initiative – and even towards change itself – often changes over time.

Second – as you may suspect, given that two of the categories include the word 'majority' – the five adopter types are not evenly distributed throughout a population. Instead, Rogers suggested that we can visualise the change process as a kind of bell curve, progressing through each of the five stages from left to right in a more or less sequential way as an innovation spreads through a population (see Figure 10).

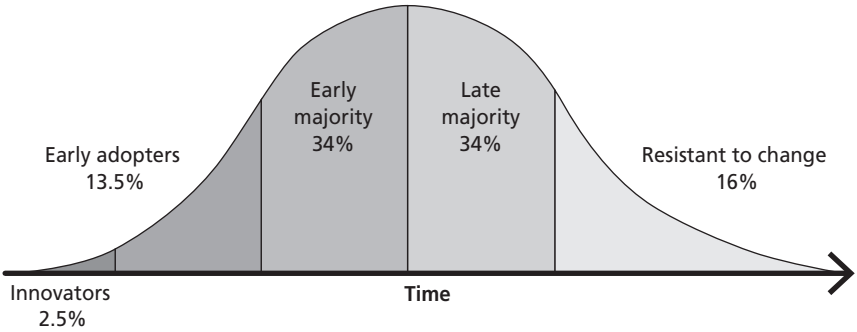


Figure 10 – Diffusion of innovations: five adopter types

As we can see in Figure 10, Rogers used a mathematical formula to calculate the proportion of people that typically fall into each of the five adopter types, but these figures are only estimates. In the real world, the proportion of people in each category varies from one context to the next. However, the theory of diffusion of innovations has been studied in many different contexts over several decades, and these figures provide us with a fairly reliable guide to the proportion of people who are likely to fall into each category in any given context.

The tipping point

Often, when school leaders are rolling out a change initiative, they become concerned early on with those who are resistant to change – the vocal minority who they know it will to be difficult to get on board. They might think, 'If I can get Person X onside, everyone else will be a breeze.'

This is perhaps the most common mistake people make in change implementation: to expect everyone to get on board with a new way of doing things from Day 1 – regardless of how ready, willing or able they are to make that change.

The key insight of the theory of diffusion of innovations is this: you don't need to be concerned about the resistors at the outset. Instead, focus your energy and attention at the other end of the curve. Your initial aim should be to recruit a small but influential band of innovators and early adopters who will multiply, rather than frustrate, your early efforts.

The reason you should focus your attention on the left-hand side of the bell curve relates to an important idea known as **critical mass**, also known as the **tipping point**. As an idea or improvement strategy spreads through a population, once you reach a critical mass of people the rate of change 'tips' in your favour. This is the point at which the spread of the idea accelerates and becomes self-sustaining and everybody else gets on board. It's the point of no return, if you like. Reaching the tipping point is your goal. The 'dancing guy' video mentioned on page 260 perfectly illustrates this idea.

Look again at Figure 10 on page 262. Where do you think the tipping point will occur?

Many people assume the tipping point will be reached around the halfway mark – at the peak of the curve, somewhere between the early majority and the late majority. However, a consistent finding from diffusion research – a wonderful, surprising and entirely welcome finding – is that the tipping point comes much sooner than you might imagine.

Research reliably suggests that, as a general rule, the tipping point occurs somewhere around the boundary between the early adopters and the early majority. When 15–20% of innovators and early adopters get on board with an idea – especially if those people are influential within the organisation – other people start to follow suit. As the early adopters

establish a new norm, first the early majority adopt it, then the late majority – and the momentum of change tips in your favour.

One of the key insights of behavioural science is that people like to be in the majority and can be quite easily persuaded to act accordingly. For example, a speeding fine letter that included the sentences, '**Two out of three** people pay their administrative fine on time. Will you follow this example?' significantly increased the proportion of recipients who paid on time.[113]

This desire for conformity is a huge asset when implementing change. At the outset of a change initiative, many people feel hesitant to adopt a new approach because doing so would place them in the minority, and there is not yet a strong evidence base to suggest that doing this new thing will pay off. This is why it's so important to recruit early adopters who are ready, willing and able to get on board at the start of the implementation period, because you're asking people to take a risk and not everyone is willing to do that.

However, once the momentum for change spreads through the school community, the desire to be in the majority starts to work in your favour. If a growing number of your colleagues are using a new idea or strategy, the early and then the late majority will get on board because they don't want to be left behind.

Engineer ways for 'people to talk to people'

As we've established, the way ideas spread through a population is largely through people talking to other people. This 'neighbour effect' is also important for maintaining momentum once a practice has become widespread. It's therefore essential to engineer regular opportunities for people to engage in professional dialogue around your improvement initiative. This could include:

- Professional learning programmes, such as:
  - Instructional coaching.
  - Lesson study.

113 Migchelbrink, K. & Raymaekers, P. (2023). Nudging people to pay their parking fines on time. Evidence from a cluster-randomized field experiment, *Journal of Behavioural and Experimental Economics*, 105, 102033. Original emphasis.

  - Practitioner enquiry.
  - Journal clubs.
  - Reciprocal lesson observations.
- Department or phase meetings. Ask each participant to speak for a minute or two about an aspect of the school improvement initiative they are working on currently, such as:
  - Target pupils.
  - Areas of focus.
  - Strategies they've tried.
  - Progress to date.
  - Any issues they're currently struggling with.
  - Strategies for overcoming obstacles.
  - Next steps.

If time is in short supply, you could ask people to discuss these points in pairs and then ask a few volunteers to share their thoughts with the wider group. If more time is available, you may wish to go around the table so that each person addresses the whole group. It's a good idea to alternate the format from one meeting to the next.

Other examples of opportunities to engage professional dialogue include:

- Wall displays designed to stimulate conversation, with evidence, quotes, questions and talking points. These could be aimed at:
  - Pupils (corridors, classrooms).
  - Visitors (reception, main corridor, main hall).
  - Staff (staff room, shared office space).
- Assemblies designed to get people thinking and talking about their chosen areas of focus. These can be one-to-many (e.g. a presentation) or many-to-many (e.g. talking assemblies).
- Tutor time activities designed to encourage discussion about the chosen areas of focus.
- Parents' evenings – discussing the ways in which pupils are engaging with your change initiative with their parents and carers.

- Lesson resources – build in regular opportunities for reflection around a chosen theme, such as weekly reviews (reflecting on the previous week, anticipating the week ahead) or homework activities.
- Postcards and letters to stimulate discussion between pupils and their parents and carers at home.

What about the resistors?

Let's return now to thinking about the people on the right-hand side of Figure 10 on page 262 – those who are resistant to change. As we saw earlier, there are many perfectly valid reasons why somebody may be resistant to a particular change initiative at a particular point in time. So, there should be no judgement here. Still, people who are resistant to change naturally present a challenge to those who would like to see an improvement initiative applied consistently throughout the school.

When a school leader first announces a school improvement initiative, someone who feels resistant to that change may be unlikely to immediately voice their concerns. Alternatively, they may be the kind of person who is prepared to raise their hand in a whole-staff meeting and point out why a proposed change is a terrible idea. At this point in time – before any changes to the practice have taken place, and before any evidence of impact has been established – these people are powerful. The change hasn't happened yet, and they are simply – helpfully, from their perspective at least – pointing out why it's not going to work.

However, once the momentum for change has tipped – when the early and late majority are on board – those who are resistant to change are in the minority. By this point, there is an established social norm for doing things differently, and the desire to be a part of the majority starts to work in your favour. It's therefore a lot easier to deal with the problem of resistance to change when we get to that stage. At this point, strategies that may not have worked previously, such as an offer of additional coaching or mentoring or sharing case studies that demonstrate evidence of impact at your school, are more likely to be effective.

If the problem persists, it's important to understand *why* people feel resistant to a particular change initiative. Set out to understand their theory of action by asking the following questions:

- What are the beliefs and values that underpin their resistance?
- What actions arise from these beliefs and values?
- What are the consequences of these actions?

Compare their theory of action with the theory of action that underpins your change initiative. You don't need to ask them to change their beliefs and values, or to stop believing things that they hold to be true. However, if they understand the theory of action that underpins the suggested improvement initiative, they may be persuaded to expand their repertoire of beliefs and values, building the foundations for new ways of working.

Be transparent

It's a good idea to use the theory of diffusion of innovation in a transparent way by asking people to self-identify how ready for change they feel. This can be done quickly and easily using a short survey. For example, when you first mention a school improvement initiative to the whole staff, you could say:

> We don't expect everyone to get on board with this straight away. Some people are ready for change; others may feel resistant, or indifferent. Most people are probably somewhere in the middle. This is fine – however you feel, we can work with you. To help us create a strategy for how to develop this practice over time in a way that takes into account how you feel about it, please complete this short survey.

The survey would be something like the following – you may need to adapt it to suit your context. In this example, the school plans to get everyone on board within two years (six school terms).

Name: _____

Department (Secondary)/Year group (Primary): _____

Thinking about the initiative to improve _____, which of these adopter types do you most identify with? (Circle *one* only.)

A. Innovator – I'm already doing this, or I'm keen to get started straight away. (Term 1)
B. Early adopter – Once the innovators have established that this can work at our school, I'll be ready to get on board. (Term 2)
C. Early majority – I'll be ready to get on board once the early adopters have shown than this can work in a range of departments/age groups. (Terms 3–4)
D. Late majority – I'll be ready to get on board once I can see this working for other colleagues in my department/year group. (Terms 4–5)
E. Resistor – I have some reservations about this initiative. I may need some persuasion/support to get on board. (Term 6)

You may find that people surprise you with how they respond to this question, and that potential resistors will be more willing to come on board eventually if they have time to prepare themselves for the fact that change is coming down the track.

Mind the chasm

Often, when people talk about diffusion of innovations, they talk about 'the chasm' – a kind of stubborn gap that needs to be bridged in order to reach that magical tipping point. Many blogs and articles and even entire books have been written about 'crossing the chasm'.

However, there is no evidence in the literature for the existence of a chasm. On the contrary, Rogers suggests that 'innovativeness is a continuous variable', and that there are 'no sharp breaks' between adjacent adopter types.[114]

114 Rogers, E. M. (2003). *Diffusion of Innovations* (5th ed.). New York: The Free Press.

So, if you come across people talking about 'crossing the chasm', you can safely ignore it. Instead, focus on building a team of influential early adopters to multiply your early efforts, and then engineer ways to get people talking to other people about your innovation. As we saw earlier, you may need different strategies to get different groups of people on board. Some colleagues will need little to no encouragement; others may require case studies, training by trusted colleagues or ongoing support through coaching or mentoring.

The main insight of the theory of diffusion of innovations is this: change is an active, social process. Instead of announcing a change initiative and enforcing it through surveillance and accountability, spread new ideas and practices by finding ways for people to innovate, collaborate and engage in ongoing dialogue.

Now that we've examined how ideas spread through a population, let's turn our attention to the medium through which those changes take place.

CHAPTER SUMMARY

- The theory of diffusion of innovations describes how ideas spread (and often fail to spread) through a population. It's based on the idea that we can divide any human population into five adopter types according to how ready for change they are:
  - Innovators
  - Early adopters
  - Early majority
  - Late majority
  - Resistors
- A key insight of the theory of diffusion of innovation is that you don't need to concern yourselves with the resistors at the outset. Instead, your initial aim should be to recruit a small but influential band of innovators and early adopters who will help multiply your early efforts.
- As an idea or improvement strategy spreads through a population, once you establish a critical mass you will reach a tipping point.

This is the point at which the spread of an idea accelerates and becomes self-sustaining and everybody else gets on board.

- Research suggests that when you get 15–20% of people on board with an idea – especially if those early adopters are influential within the organisation – other people start to come on board and momentum of change tips in your favour.
- To spread your innovation through the school community, engineer ways to get people talking to other people about your innovation. This is also important for maintaining momentum once a practice has become widespread.
- It's a good idea to use the theory of diffusion of innovation in a transparent way by asking people to self-identify how ready for change they are. This can be done very easily using a short survey.
- Ignore any talk of 'crossing the chasm'. Instead, focus on building a team of influential early adopters to multiply your early efforts and then engineer ways to get people talking to other people about your innovation.

Making Change Stick

Phase I: Make a start

- ☑ Appoint a slice team
- ☑ Optimise the team
- ☑ Choose your focus
- ☑ Write a one-page research summary
- ☑ Draft a comms plan
- ☑ Build a glass box

Phase II: Make a plan

- ☑ Map the journey
- ☑ Plan backwards
- ☑ Conduct a root cause analysis
- ☑ Build your improvement strategy
- ☑ Plan tight but loose
- ☑ Build steps to success
- ☑ Plan for diffusion
- ☐ Optimise for habit change
- ☐ Plan professional learning
- ☐ Prepare data collection
- ☐ Timeline and streamline
- ☐ Write a logic model
- ☐ Conduct a pre-mortem

Phase III: Make it happen

- ☐ Manage your project
- ☐ Create individual improvement plans
- ☐ Run PDSA cycles
- ☐ Schedule regular ‘pivot or persevere’ meetings
- ☐ Embed and sustain improvements
- ☐ Review, reflect – and plan your next project!

CHAPTER 14
OPTIMISE FOR HABIT CHANGE

School improvement largely depends on the extent to which people change their habitual behaviours. To plan for habit change is to plan for success.

Habit change is a huge topic, and much has been written and said about this aspect of behavioural science in recent years.[115] In this chapter, we'll consider why we should think about school improvement through the lens of habit change (i.e. by increasing desirable behaviours and dialling down undesirable behaviours). We'll cover the following topics:

- What is a habit?
- Why focus on habit change?
- Why is it so hard to form good habits and kick bad habits?
- Goals.
- Systems.
- Nudges.

115 Here are three books and one podcast that I've found particularly informative: Clear, J. (2018). *Atomic habits: An easy & proven way to build good habits and break bad ones.* New York: Penguin Random House; Fogg, B. J. (2020). *Tiny Habits: The Small Changes That Change Everything.* NY: Houghton Mifflin; Wood, W. (2019). *Good Habits, Bad Habits: The Science of Making Positive Changes that Stick*. New York, NY: Farrar, Straus and Giroux; Huberman Lab Podcast (2022). *The Science of Making & Breaking Habits*. January 2. Retrieved from: https://www.hubermanlab.com/episode/the-science-of-making-and-breaking-habits.

- Norms.
- Routines.
- Action triggers.
- The valley of potential.
- Twelve levers of habit change.
- Habit stacking.
- The ethics of habit change.
- Choice architecture.

Let's get into it!

What is a habit?

The question of how to define a habit is surprisingly complex.[116] A habit is commonly understood to be a behaviour that is repeated to the point of near automaticity. Everyday examples include things like brushing your teeth, tying your shoelaces and washing your hands before dinner. In each of these examples, the habitual behaviour can be seen as a response to a stimulus (i.e. waking up, putting your shoes on, sitting down for a meal). In some cases, such as tying your shoelaces or driving a car, if you actually stop to think about what you're doing it can make the task seem a lot more difficult!

There's also a wider sense in which the word 'habit' is often used. If you search the phrase 'examples of habits' online, many of the results relate not to unconscious everyday acts but to behaviours associated with self-help or self-improvement. These habits are typically characterised as either desirable or 'good' – for example:

- Regular exercise.
- Daily reading.
- Meditation.

116 For example, see De Houwer, J. (2019). On How Definitions of Habits Can Complicate Habit Research. *Frontiers in Psychology,* 10:2642.

Or they may be undesirable or 'bad' – for example:

- Eating junk food.
- Doom scrolling.
- Procrastinating.

Rather than being an unconscious response to a stimulus, it's more helpful to think of these kinds of behaviours as goal oriented. 'Good' habits help us advance towards our goals (e.g. to be healthy, knowledgeable and mindful), while 'bad' habits move us away from such goals. 'Bad' habits are often an unconscious or unthinking response to a stimulus (e.g. doom scrolling when you pick up your phone to check the time, or suddenly finding yourself staring blankly into the fridge in response to a hunger pang). In contrast, 'good' habits are usually more conscious; even if you're 'in the habit' of exercising, reading and meditating every day, you're probably aware that you are doing so.

We can already see the complexity of habits and habitual behaviours start to emerge. This complexity is reflected in the more sophisticated definitions of habits suggested by behavioural scientists. Here are a couple of examples:

> [Habits are] behavioural patterns learned through context-dependent repetition: repeated performance in unvarying settings reinforces context-behaviour associations such that, subsequently, encountering the context is sufficient to automatically cue the habitual response.[117]
>
> [A habit is] a reliable solution to a recurring problem in our environment.[118]

It's interesting to note that both of these definitions emphasise the influence of the external environment on our behaviour. We'll return to the importance of environmental influences later in this chapter.

117 Gardner, B., de Bruijn, G. J. & Lally, P. (2011). A systematic review and meta-analysis of applications of the self-report habit index to nutrition and physical activity behaviours. *Annals of Behavioral Medicine.* 42, 174–87, p175.

118 Hreha, J. (n.d.). What is a habit? *The Behavioural Scientist.* Retrieved from: https://www.thebehavioralscientist.com/articles/what-is-a-habit.

In the context of school improvement, we can think of a habit simply as a behaviour that is repeated to the extent that we no longer give it much thought. For experienced teachers, this may include things like the following:

- How and when we plan lessons and how long we take to do so.
- Where we stand, perch or sit when teaching.
- The extent to which we move around in lessons.
- The ways in which we use questioning.
- The ways in which we respond to instances of low-level disruption.
- The ways in which we use (or don't use) technology.

Children and young people also often behave in quite predictable ways, such as:

- Whether they raise their hand in class to get involved in class discussions.
- Whether they speak out of turn.
- How they respond when they become 'stuck' (e.g. ask the teacher, check what's written on the board, stare into the mid-distance).
- Whether they compare several sources when searching for information online, or just accept the top search result as the truth.
- Whether, where, when and how they do homework or revise for tests.

In these two lists, we can see how important habits are in education. The ways in which educators and pupils routinely behave determines the quality and quantity of learning that happens to a significant degree. At this point, several important questions arise:

- Is it possible to change the habits of pupils?
- Is it possible to change the habits of educators?
- Is it always – or ever – ethical to do so?

We'll return to the question of ethics later in this chapter – such things are important to consider when you're seeking to rewire people's unconscious minds!

Why focus on habit change?

Professor Wendy Wood, a leading expert on habits and habit change, estimates that around 43% of all human behaviour is habitual.[119] In other words, people often do the same things in the same places at roughly the same time each day – and much of this happens on an unconscious level.

Schools are highly regimented places, with ringing bells and timetabled lessons and so on. It's therefore likely that the proportion of teacher and pupil behaviours that are habitual is far higher than 43%, because so many aspects of school life are routine and repetitive.

If we accept that the behaviour of educators and pupils is largely habitual, two conclusions follow:

1. The status quo is largely the sum of people's habits.
2. To a significant extent, our ability to implement school improvement depends on our ability to encourage people to behave differently – and for these new behaviours to become habitual.

Why is it so hard to form good habits and kick bad habits?

The fact that so many people give up on their New Year's resolutions after a week or two reveals an important truth: making good habits stick is easier said than done. In contrast, it can be incredibly difficult to kick bad habits. Why is this?

In his best-selling book, *Atomic Habits*, James Clear points out that the outcomes we associate with good habits are often a 'lagging measure' of the behaviour itself (i.e. the benefits only become apparent after a period of time has passed). For example:

- How much you know is a lagging measure of your reading habits.
- Your bank balance is a lagging measure of your spending habits.
- Your physical fitness is a lagging measure of what you eat and how much you exercise.

Whether you eat a salad or a burger for lunch, you'll probably look very much the same in the mirror afterwards. But if you were to eat salad

119 Wood, W. (2021). *Good Habits, Bad Habits: The science of making positive changes that stick.* Pan Macmillan.

every day for a year, you'd probably look a bit healthier than if you'd eaten 365 burgers.

In contrast, bad habits tend to 'pay out' straight away, giving you a dopamine hit in return for relatively little effort. For example:

- A pupil may feel more inclined to play their new video game than to revise for an exam that's several weeks away.
- For many people, a spending spree is more fun than saving for a rainy day.
- Binge-watching a box set may seem more enticing than going for a run in the rain.

The key point here is that whether you're trying to develop a 'good' habit or kick a 'bad' habit, you're working against human nature and the way in which your nervous system is wired. We'll look at how to minimise this problem later in this chapter when we look at levers of habit change. First, let's explore a few key ideas that can help us get a handle on habit change, starting with goals.

Goals

Goals can be really useful. We've used them several times in this book already – with the **slice team**, in **mapping the journey** and in **backward design**. There's a wealth of research evidence to suggest that goals can be motivating, especially if they provide a measurable way to determine whether and when you've been successful.

However, goals are also limited in their ability to bring about lasting, positive change. To paraphrase an example shared by James Clear, you may have a goal to tidy your home before some guests arrive. However, unless you're in the habit of tidying for a few minutes each day, it's likely that the clutter will accumulate again before long. The goal to tidy your home does not result in a permanently tidy home.

To consider some other examples: when seeking work, every applicant has the goal of filling the vacancy; likewise, several marathon runners may have the goal of winning the gold medal. However, in each case only one person will achieve their goal. Goals may be necessary for good things to happen – you probably won't win a gold medal unless you set out to do so – but they are by no means sufficient.

Process goals versus outcome goals

The extent to which goals help bring about habit change depends on two key questions. First, to what extent is your goal **time-bound**? For example, if your goal is to complete a marathon – a one-off event – there's a risk that you'll fall out of the habit of running regularly once the marathon has taken place. If, however, your goal is to become a runner – someone who's in the habit of running several times a week – it's more likely to deliver long-lasting health benefits.

Second – but linked to the first question – do your goals focus on **outcomes**, or on the **processes** that will lead to those outcomes? For example, a runner could shave a few seconds off their personal best (an outcomes focus) using sheer willpower. But they'd probably do better to focus on the processes involved in becoming an elite athlete – improving their training regime, their diet, their running technique and so on.

To return to education, consider the following performance management targets. Which do you think is the better goal?

- 90% of pupils in class 11x2 will hit or exceed their target grade at GCSE.
- I will formatively assess the learning and progress of pupils in 11x2 every week and adjust my planning and teaching accordingly.

It really depends on how you define 'better'. For example, you could argue that the first target is better because it provides a measurable milestone. However, if you get to results day and find that only 74% of pupils hit or exceeded their target grade, the goal is not much use. Perhaps the target grades were too ambitious. Perhaps the outcomes would have been better if the teacher had provided more regular feedback to the pupils. But you'll never know, because by the time you find out whether the goal was achieved it's too late to do anything about it.

In contrast, the second target focuses on the process by which the teacher will maximise the learning of pupils in class 11x2, thus increasing the likelihood that pupils will hit or exceed their target grade. Process-based goals generally make for better performance management targets, because they're more likely to change teachers' habitual behaviours and therefore improve pupil outcomes.

Self-set versus assigned goals

Among pupils, goals are more likely to improve performance when they're self-set than when they're assigned by their teacher.[120] There are two main reasons for this. First, people are more likely to be invested in a goal they've set for themselves because they were involved in making the decision. Put simply, 'People are more motivated to act when they feel volitional, [and they] fully endorse and have some choice in their behaviour.'[121]

Second, self-set goals can be tailored to the level of the individual. Let's say an English department implements a 'Project Soapbox' initiative to help pupils develop confidence in public speaking. The teacher could set an overarching whole-class goal, such as: 'Everyone will deliver a two-minute speech to the whole class.' They may also set various success criteria. However, some pupils may already be comfortable speaking to the whole class for two minutes. They will probably, however, have other areas for improvement – to tailor their talk to their audience, to use more sophisticated vocabulary, or to use a wider range of rhetorical techniques. It's far more likely that the whole class will develop greater confidence in public speaking if each pupil focuses on an area for development that is tailored to their needs, rather than working generically towards goals assigned to the whole class.

Systems

To recap, when it comes to improving outcomes, effective goals are process-based and self-set. Here are some examples:

- I will become a stronger reader by reading 30 pages a day.
- I will gain muscle definition by lifting weights three times a week.
- I will achieve my target weight within three months by restricting calories and drinking more water.

However, we still don't have a complete recipe for success. Goals such as these are much more likely to be realised when you have a **system** in place to help you achieve them. In the words of James Clear,

120 For example, see Seo, E., Patall, E. A., Henderson, M. D. & Steingut, R. R. (2018). The Effects of Goal Origin and Implementation Intentions on Goal Commitment, Effort, and Performance, *The Journal of Experimental Education*, 86:3, 386–401.

121 Ibid, p387.

'Goals are good for *planning* your progress and systems are good for actually *making* progress.'[122]

For example, a five-point system to achieve the goals listed opposite could include the following:

- To help me read 30 pages a day, I will:
  1. Join the local library and set a reminder to visit once a month.
  2. Acquire some highly rated books and keep them by my bed.
  3. Set a daily alarm to remind me to go to bed an hour earlier than usual.
  4. Place the book I'm currently reading on my pillow each morning.
  5. Avoid breaking the chain – record a daily reading streak on a wall chart.
- To help me lift weights three times a week, I will:
  1. Block out regular exercise sessions in my calendar and set reminders.
  2. Buy some energy bars and dry snacks to make sure I don't skip exercise because I'm hungry.
  3. Keep my gym bag by the front door so I can grab it on my way out of the house.
  4. Download some high-energy playlists that I can listen to while exercising.
  5. Arrange regular gym sessions with a friend.
- To help me achieve my target weight, I will:
  1. Plan my diet and weekly shop to make sure I have enough calories to get through the day without snacking on junk food.
  2. Buy a range of fresh and dry fruits to satisfy my sweet tooth.
  3. Ask family members or housemates to keep any unhealthy snacks in a lockable box and to hide the key.

122 Clear, J. (n.d.). *Forget About Setting Goals. Focus on This Instead*. Retrieved from: https://jamesclear.com/goals-systems. Original emphases.

4. Set reminders to drink water regularly throughout the day.
5. Keep a running record of my weigh-ins.

We'll consider how to create a system to support your school improvement initiative later in this chapter. For now, the key point is expressed best in a famous quote by James Clear:

> You do not rise to the level of your goals. You fall to the level of your systems. Your goal is your desired outcome. Your system is the collection of daily habits that will get you there.[123]

Nudges

In recent years, behavioural science has been increasingly applied in real-world settings through so-called **nudge theory**. This is based on the idea that we can shape the environment in various ways to influence the likelihood that people will choose one course of action over another.[124]

For example, many studies have found that the ways in which school canteens arrange their food can have a significant impact on the choices pupils make when selecting their lunch.[125] This includes things like:

- Placing healthy snacks (e.g. fruit and carrot sticks) at eye-level or making them the first thing pupils see.
- Placing unhealthy snacks like crisps and milkshakes out of reach, so pupils need to ask a lunchtime supervisor to pass it to them.
- Placing fruit and water by the checkout instead of flapjacks and sugary drinks.

Similar thinking also informs the layout of supermarkets. For example, bread and milk, the most commonly purchased items, are often located at the back of the shop so that customers have to walk past lots of other tempting produce on the way.

123 Clear, J. (2020). *3-2-1: On systems vs. goals, identity-based habits, and the lessons of life.* Retrieved from: https://jamesclear.com/3-2-1/january-2-2020.

124 For the seminal text on this topic, see Thaler, R. H. & Sunstein, C. R. (2009). *Nudge: Improving decisions about health, wealth and happiness*. London, UK: Penguin.

125 Metcalfe, J. J., Ellison, B., Hamdi, N. et al. (2020). A systematic review of school meal nudge interventions to improve youth food behaviors. *International Journal of Behavioral Nutrition and Physical Activity* 17(77).

These ideas have been used to influence how people behave on a national level. In 2010, the UK government established a new unit within the Cabinet Office called the Behavioural Insights Team, known informally as the 'nudge unit'.[126] Over the last 14 years this team, which is no longer part of the government but continues to work closely with it, has been involved in many initiatives to influence public behaviour, including:

- Motivating people to pay their taxes on time.
- Increasing organ donation.
- Encouraging people to wash their hands during the COVID-19 pandemic.

There are many ways in which we can influence or nudge people's behaviour in schools. Let's briefly examine three examples of nudges that lend themselves to school improvement: **norms**, **routines** and **action triggers**.

Norms

A norm is a behaviour that many people follow as a matter of course. Everyday examples include shaking hands when greeting someone, thanking a motorist who gave you the right of way or understanding that if there's only one other passenger on a bus, it's not really OK to go and sit next to them.

Social norms powerfully influence behaviour because people are strongly inclined to align their behaviour with those around them. This makes sense for evolutionary reasons: as an outlier, you may receive unwanted attention; it's far safer to lose yourself in the anonymity of the crowd.

There have been many studies looking at the ways in which social norms can influence people's behaviour. For example, one study used three different signs to encourage people to reuse the towels in their hotel rooms:

> [When the sign] asked people to recycle their towels to save the environment, 35.1% did so. When the sign used social norms and said that most guests at the hotel recycled their towels at least once during their stay, 44.1% complied. And when the sign

126 Halpern, D. (2016). *Inside the Nudge Unit: How small changes can make a big difference*. Random House.

> said that most previous occupants of the room had reused towels at some point during their stay, 49.3% of guests also recycled.[127]

The Behavioural Insights Team has taken advantage of this phenomenon to encourage people to pay their taxes on time: 'When people were told in letters […] that most people pay their taxes on time, it [significantly increased] payment rates.'[128]

In a separate study, when people were told, '99% of people in your neighbourhood are paying on time', this led to a 9% increase in payments.[129]

In these examples, we can see evidence of a further influence on behaviour: **local norms**. People tend to obey social norms, and they're even more likely to do so if those norms are being followed by people in their immediate vicinity.

Social norms can have both positive and negative effects in schools. For example, let's say only a handful of pupils in a class hand in their homework one week. Their exasperated teacher might say, 'Only three people handed in their homework this week. Year 9, this is not good enough! I want to see 100% completion next week.'

This teacher is playing a dangerous game – in drawing attention to the raw numbers, they're reinforcing the prevailing norm within the class: homework is not handed in. Rather than encouraging all pupils to hand in their homework the following week, the three who did hand in their homework may think, 'Why should I bother doing the homework if nobody else does?' Instead, the teacher may find it helpful to find a positive norm they can refer to. For example, they could say, 'In all my

127 Cabinet Office and Institute for Government (2010). *MINDSPACE: Influencing Behaviour through Public Policy.* London: Cabinet Office and Institute for Government, citing Cialdini, R. (2003). Crafting normative messages to protect the environment. *Current Directions in Psychological Science* 12:105–09.

128 Behavioural Insights Team (2014). *EAST Four simple ways to apply behavioural insights*. Retrieved from: https://www.bi.team/wp-content/uploads/2015/07/BIT-Publication-EAST_FA_WEB.pdf.

129 Garland, M. (2022). *The role of behavioural insights within collections*. Retrieved from: https://www.linkedin.com/pulse/role-behavioural-insights-within-collections-mike-garland.

other classes, we have a 100% completion rate, so I expect to see 100% completion in this class from now on.'

Reinforcing positive norms can be hugely beneficial. For example, in recent years, many schools have implemented the practice of public appreciations in assemblies, where pupils stand up to verbally thank a fellow pupil, member of staff or family member who's helped them that week. There are often many hands in the air volunteering to share such appreciations. In this way, the school establishes and reinforces two positive social norms: 'In this school, we help one another', and 'In this school, we express thanks for the support we receive from others.'

Routines

In 2017, the British Pharmaceutical Society issued guidance to suggest that people should sing 'Happy birthday' twice while washing their hands, in an attempt to prevent the spread of germs and thus reduce the demand for antibiotics.[130] This guidance was reissued by the UK government during the COVID-19 pandemic as a way to reduce transmission of the coronavirus.

Many schools similarly use routines to promote desirable behaviours. For example, 'start of lesson' routines could include some or all of the following:

- At the start of the lesson, line up outside the classroom door.
- When you take your seat, take out your pencil case and planner.
- As soon as you receive your exercise book, begin the starter activity.

Routine behaviours can also be unconscious and potentially unhelpful. For example, in some classrooms, when the teacher addresses the class to set the homework at the end of a lesson, some pupils interpret this as a prompt to start putting on their coats and packing their things away. Typically, this is done surreptitiously by one or two pupils at first, but within a few seconds others follow suit. Before long, there's a wave of packing up activity and nobody's listening to the teacher set the

130 Press Association (2017). Sing happy birthday twice while washing your hands, say pharmacists. *The Guardian*, September 29. Retrieved from: https://www.theguardian.com/society/2017/sep/29/wash-your-hands-20-seconds-kill-germs-pharmacists.

homework or writing it in their planner. This is obviously an example of an unhelpful routine.

In his excellent book, *Motivated Teaching*, Peps Mccrea notes that routines have two components: a **chain** ('What exactly will your pupils do?') and a **cue** ('What will start this chain of action?'). Mccrea suggests that the most effective cues are distinct (i.e. different to other cues), multimodal (e.g. 'combining noise or speech with action and position') and punchy ('the 100m starter gun is your idol').[131]

Action triggers

One of the most powerful ways to increase the likelihood that someone will follow through on a particular behaviour is to ask them to state precisely what they will do, when and where. For example, in a sports psychology study looking at how to promote exercise, 248 people were randomly allocated to one of three groups – one control group and two experimental groups.

- The control group were asked to keep a record of how often they exercised for at least 20 minutes ('enough to cause a noticeable increase in heart rate, i.e. "a pounding sensation"') over a two-week period.[132]
- Experimental group 1 were asked to record their workouts, and they were also asked to read a 'motivational' leaflet containing information about coronary heart disease and the benefits of exercise.
- Experimental group 2 were the same as group 1, with one key difference. They were presented with the following passage:

> Many people find that they intend to take at least one 20-minute session of vigorous exercise but then forget or 'never get around to it.' It has been found that if you form a definite plan of exactly when and where you will carry out an intended behaviour, you are more likely to actually do so

131 Mccrea, P. (2020). *Motivated Teaching*. CreateSpace Independent Publishing Platform, p63.

132 Milne, S., Orbell, S. & Sheeran, P. (2002). Combining motivational and volitional interventions to promote exercise participation: protection motivation theory and implementation intentions. *British Journal of Health Psychology*, 7(2), 163–84, p168.

> and less likely to forget or find you don't get round to doing it. It would be useful for you to plan when and where you will exercise in the next week.

They were then asked to complete the following 'implementation intention' statement:

> During the next week, I will partake in at least 20 minutes of vigorous exercise on (day or days) _____ at _____ (time of day) at/or in (place) _____.[133]

The results of this study were quite remarkable. In the control group, 38% exercised at least once during the previous week. In experimental group 1, the figure was 35%. In this study, 'motivational' reading materials didn't increase exercise and may even have been counterproductive. In experimental group 2, however, all participants exercised in the locations specified in their implementation intention, 97% at the time specified and 88% on the day specified.[134]

There have been many similar studies on the importance of making an explicit commitment to a new behaviour or habit and the evidence is clear: when people make a public declaration specifying exactly what they will do, where and at what time, they're much more likely to follow through on their good intentions.

In their book, *Switch: How to change things when change is hard*, Chip and Dan Heath explain that implementation intentions, or 'action triggers', work because they 'pre-load the decision', making it easier to do the right thing when the time comes.[135]

In schools, teachers often ask their pupils to write their homework in their planner, but the pupils often just quickly scribble one or two words (for example, 'French quiz'). Instead, it may be worth taking a minute of lesson time to ask pupils to write an action trigger: 'I will do the French quiz at the kitchen table on Monday at 5.30pm.'

133 Ibid., p170.

134 Ibid., p176.

135 Heath, C. & Heath, D. (2010). *Switch: How to change things when change is hard*. New York, Broadway Books.

The valley of potential

As we've seen, it can be hard to make desirable behaviours stick because the benefits often take a while to become apparent. When you first start going to the gym, it's likely that your muscles will ache considerably, you'll have spent a chunk of time and money and you'll look very much the same in the mirror afterwards. It's only after a few weeks that the investment will start to pay off – you'll have more energy, you'll be able to lift heavier weights and you'll start to see some muscle definition in the mirror. At this point, it becomes a lot easier to motivate yourself to go to the gym – indeed, you'll *want* to go because you can see and feel the benefits.

James Clear describes the critical period before you feel the benefits as the **valley of potential**. It's a valley because at first there are mainly downsides. How long it takes to feel the benefit depends on a number of factors, such as how simple or complex the behaviour is, how often the behaviour is used, and the surrounding context. For simple behaviours, such as remembering to take a vitamin supplement in the morning, it may require 20 or 30 repetitions to become automated – especially if you 'stack' it (attach it to an existing routine, such as brushing your teeth or feeding a pet – we'll return to this idea later in this chapter). More complex behaviours, such as parallel parking or starting a lesson, may require several hundred repetitions to become fully automated.

Peps Mccrea describes the valley of potential as a trade-off between effort and value. At first, any attempt to create a new habit involves a lot of effort in return for little value. Over time, the behaviour will require less effort as it becomes automated, and the value will increase as the benefits accumulate. At some point, the investment will pay off and you'll enter the 'payback' phase where you reap high value in return for relatively little effort (see Figure 11).

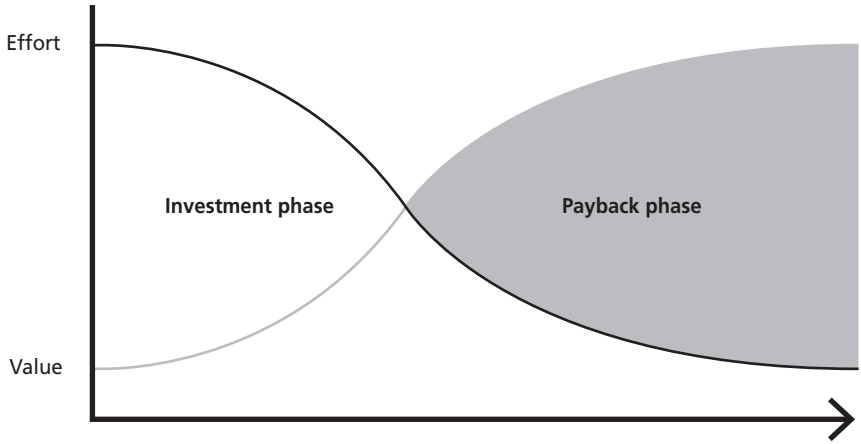


Figure 11 – Effort and value in the valley of potential[136]

The key takeaway is this: at the outset, when you're starting to establish a new routine or habit, be aware that you're entering the valley of potential. Manage your expectations, steady the ship and 'ready yourself for a period of increased effort, discomfort and reduced performance.'[137] And keep the faith that your routine will pay dividends before long.

Levers of habit change

Any behaviour can be broken down into four stages: cue, craving, response and reward.[138] For example, Fred hears an ice-cream van playing its tune on a sunny afternoon. This cue stimulates a craving – Fred wants an ice-cream. This leads to a response – Fred buys an ice-cream. And this, in turn, leads to a reward – Fred eats a cool, tasty ice-cream (see Figure 12 on page 290).

136 Adapted from Mccrea, P. (2024). Banking Routines. *Evidence Snacks*. Retrieved from: https://snacks.pepsmccrea.com/p/banking-routines.

137 Mccrea, P. (2023). The valley of potential. *Evidence Snacks*. Retrieved from: https://snacks.pepsmccrea.com/p/valley-of-potential.

138 Clear, J. (n.d.). *How To Start New Habits That Actually Stick*. Retrieved from: https://jamesclear.com/three-steps-habit-change.

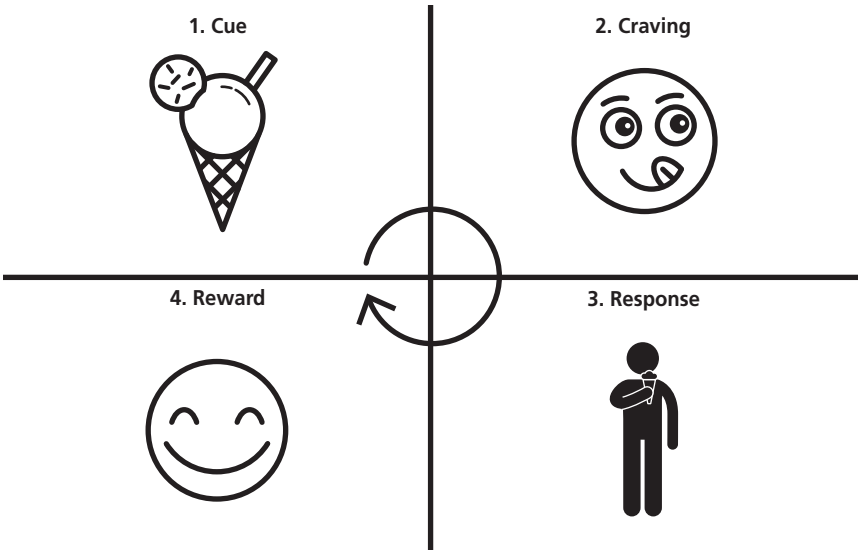


Figure 12 – The habit cycle (worked example)

The habit cycle provides us with four opportunities to interrupt our patterns of behaviour and steer them in a more healthy or desirable direction.

Let's say you want to get into the habit of reading more novels. At the level of **cue**, the trick is to make the stimulus for a desirable behaviour obvious. For example, you could set a reminder on your phone that goes off 30 minutes before bedtime every evening, saying 'read for 30 minutes'.

At the level of **craving**, the trick is to make the habit attractive. In this case, you could read some reviews and acquire some highly rated page-turners to make sure you *want* to read, because you can't wait to find out what happens next.

At the level of **response**, you want to make the desirable behaviour easy. For example, you could create a habit stack (attaching a new habit to an existing habit) whereby, when making your bed in the morning, you place your book on your pillow. This will make it easy to find when your 'time to read' alarm goes off in the evening because you won't have to go out of our way to find your book, which would introduce the possibility that you may get distracted.

Finally, at the level of **reward**, you want to make the behaviour satisfying. For example, you could use an app or a wall chart to record a satisfying streak. In writing this book, I used a system called 'don't break the chain'. This is a simple calendar wall chart whereby I take a marker pen and write a big 'X' every day that I write for at least an hour. The desire to maintain a streak – to not break the chain – is a surprisingly powerful motivator, and many apps (such as Duolingo, Audible and Snapchat) are designed to capitalise on this.

James Clear refers to these four insights – to make the desired behaviour obvious, attractive, easy and satisfying – as the four laws of behaviour change. These are effective tools to have at your disposal. However, they don't cover all the bases.

For example, the Behavioural Insights Team uses the EAST framework to guide its efforts in behaviour change.[139] This is similar to the four laws of behaviour change but differs in two important ways. According to the EAST framework, to nudge people into building more desirable habits you need to make the desired behaviour:

- Easy – for example, when employees were automatically enrolled into pension schemes, participation rates rose from 61% to 83%.
- Attractive (which can also be interpreted as making sure that it attracts people's attention) – for example, when letters to non-payers of car tax included a photo of the vehicle, payment rates rose from 40% to 49%.
- Social – harnessing the power of social norms. As we've seen, when people were told in letters that most people pay their taxes on time, it significantly increased payment rates.
- Timely – for example, texting people who owe court fines 10 days before the payment deadline doubled the value of payments made.[140]

The first two – easy and attractive – overlap with Clear's four laws. But the latter two – social and timely – are new. Taken together, we now have six levers for boosting desirable behaviours: make it obvious, easy,

139 Service, O., Hallsworth, M., Halpern, D. et al (2014). *EAST: Four simple ways to apply behavioural insights*. London: Behavioural Insights Team.

140 Ibid.

attractive, satisfying, social and timely. We can also apply these same insights in the opposite direction to dial down undesirable behaviours. For example, instead of making it obvious, we can bury the cue. Combining Clear's framework and the EAST model, then, we have 12 levers for habit change – six for boosting desirable behaviours and six for discouraging undesirable behaviours (see Table 26).

To encourage desirable habits	To discourage undesirable habits
Make it obvious	Bury the cue
Make it easy	Introduce friction
Make it attractive	Make it unappealing
Make it satisfying	Make it unsatisfying
Make it social	Use social influence
Make it timely	Use timely reminders

Table 26 – 12 levers of habit change

To encourage desirable habits, make the behaviour obvious, easy, attractive, satisfying, social and timely. And to discourage undesirable habits, you essentially do the opposite. For example, if you're trying to reduce the amount of time you spend on your phone, you could:

- Bury the cue, e.g. delete time-wasting apps and switch off notifications.
- Introduce friction, e.g. use a website or app blocker.
- Make it unappealing, e.g. turn your phone to black and white mode.
- Make it unsatisfying, e.g. keep track of your screen time.
- Use social influence, e.g. arrange to spend time with friends and family members when you would previously have been doom scrolling.
- Use timely reminders, e.g. set an alarm to switch your phone off at night.

To conclude this section, let's look at four worked examples of how these levers can be used in schools to help teachers and pupils build desirable habits and discourage undesirable habits. Please note – to discourage undesirable habits, it isn't quite as simple as using the six levers in the

right-hand column of Table 26 on page 292, because we can also often apply the levers in the left-hand column at the same time. For example, to discourage lateness, we can simultaneously make the desirable behaviour (being on time) easier by providing alarm clocks and bus timetables, and introduce friction to make the undesirable behaviour difficult by requiring students to report to the late office at breaktime.

Building desirable habits

Pupil example: boosting attendance at after-school revision classes

- Make it obvious – Give regular reminders during assemblies, tutor time, lessons, on wall and monitor displays.
- Make it easy – You only have to attend for 10 minutes at first, then 20, 30 minutes, etc. in subsequent weeks. Provide a choice of days.
- Make it attractive – Organise study groups, put music on, use nice lighting. Provide snacks. Call it 'Maths Cookie Club'. Make a promo video with pupils saying how much they enjoy it.
- Make it satisfying – Gamify attendance, e.g. loyalty cards, streaks, don't break the chain. Use regular low-stakes testing and secure a high success rate to track, narrate and celebrate progress over time.
- Make it social – Encourage pupils to bring their friends. Highlight how many people come to revision classes. Make it a social norm.
- Make it timely – Ask final period teachers to share room locations and times. Encourage pupils to set reminders on their phones.

Teacher example: moving towards verbal feedback

- Make it obvious – Use action triggers. Tell pupils, parents and carers, colleagues this is how you will provide feedback from now on (or that you are running a pilot study).
- Make it easy – Use an app to access pupils' work, so you can make notes for verbal feedback without having to take books home.
- Make it attractive – Share research about how verbal feedback saves time, giving teachers more time to plan.
- Make it satisfying – Make a list of the positive features of feedback conversations.

- Make it social – Arrange reciprocal peer observations. Time that would have been spent marking books is now spent on collaborative planning.
- Make it timely – Set well-timed reminders to make notes for verbal feedback. Have a routine, e.g. provide feedback in the first lesson each week.

Discouraging undesirable habits

Pupil example: minimising lateness

- Make it obvious – Communicate via multiple channels, e.g. assemblies, tutor time, write to parents and carers.
- Make it easy – Make punctuality easy, e.g. buy alarm clocks, provide bus timetables. Make lateness difficult, e.g. pupils to report to the late office at breaktime.
- Make it attractive – Make punctuality attractive, e.g. put table tennis tables in the hall from 8am, have music playing, provide breakfast. Make lateness unappealing, e.g. detentions, phone calls home.
- Make it satisfying – Provide rewards for a streak of five days of arriving on time, e.g. 'Hot Chocolate Fridays'.
- Make it social – Allow pupils to spend time with friends when early, e.g. playing table tennis, eating breakfast in the canteen.
- Make it timely – Encourage pupils to set reminders on their phones, e.g. morning alarms, bedtime alarms, when to leave to catch the bus.

Teacher example: stopping hands-up questioning

- Make it obvious – Put a sticky note saying 'hands down' on your monitor or in your planner to remind you.
- Make it easy – Start small, e.g. three-minute 'hands down' discussions at first. Add questions, talking points and 'thinking time' reminders to lesson slides.
- Make it attractive – Share research about hands-down questioning. Observe a colleague who uses hands-down questioning to good effect.
- Make it satisfying – Keep a record of how many more pupils now contribute regularly to lessons.

- Make it social – Use action triggers. Tell your pupils and colleagues what you're doing and why. Ask pupils to point out if you slip back into hands-up questioning. Narrate the social norm, e.g. '80% of lesson observations now feature hands-down questioning.'
- Make it timely – Set a 'hands-down' reminder to go off on your phone before each lesson.

Habit stacking

As we've already seen in this chapter, habit stacking can be a highly effective way to build new habits.[141] Habit stacking simply means attaching new habits to existing routines.

For example, I keep a jar of vitamin supplements on top of the plastic box that we keep our dog food in. I'm already in the habit of feeding Mr Pickles in the morning – if I were to forget, he would soon remind me! In order to feed him, I have to move the jar out of the way, which reminds me to take a tablet each morning.

In schools, there are many ways in which teachers and pupils can stack new habits onto existing routines. Here are three teacher examples:

- When greeting pupils at the start of a lesson, ask the first pupil in line to hand out the books.
- When taking the register, check in with each pupil by asking them how they're feeling.
- At the end of the lesson, walk through the room to make sure everything's tidy before dismissing pupils row by row.

And three pupil examples:

- As you enter the classroom, place your homework in the tray by the door.
- After taking out your exercise book, write down the date and complete the starter task on the board.
- When writing homework in your planner, use the action trigger format, stating what you'll do, where and when.

141 Clear, J. (2018). *Atomic Habits: An easy and proven way to build good habits and break bad ones.* New York: Penguin Publishing Group.

The ethics of habit change

Using nudges or levers to shape the behaviours and habits of colleagues or pupils opens up some interesting ethical questions. Understandably, people may not be enamoured with the idea that their unconscious behaviours are being manipulated using the tools of behavioural science. Likewise, many school leaders may feel uneasy about doing so.

Such concerns are not unfounded, and it's important to think carefully about how these ideas are used in schools. Behavioural scientists suggest that 'nudges' can be used ethically when certain conditions are met, such as:

- When goals are shared (i.e. there is agreement about what constitutes desirable and undesirable behaviours and outcomes).
- When there is choice (i.e. people are still free to opt for the 'less desirable' course of action should they choose to do so).
- When such nudges and levers are used transparently.[142]

The *Making Change Stick* programme is designed with these ethical principles in mind. Through the slice team, we make sure impact goals are shared. Through tight but loose implementation, we make sure people are provided with meaningful choices about how to tailor and adapt new behaviours, routines and strategies to their context. And through adopting a glass box approach to change management – as well as ongoing data collection and analysis – the change process is transparent, and there are many opportunities for people throughout the organisation to observe and influence the process of school improvement.

For the reasons outlined above, it's especially important to be transparent when it comes to habit change. Rather than viewing the levers of habit change as tools for manipulating the behaviour of others, people should be invited to consider how *they* might use the levers to change *their* habits and behaviours. In this way, you can harness the energy, agency and good will of people throughout the organisation, increasing the likelihood that you will achieve your desired goals in an inclusive and ethical manner.

142 Fletcher-Wood, H. (2021). *Habits of Success: Getting every student learning.* London: Routledge.

Exercise 14.1: Choice architecture

In this chapter, we've explored several key ideas within behavioural science. It's now time to think about how to draw them all together to boost your chances of a positive outcome for your school improvement initiative.

This process of working collaboratively to shape people's behaviours is known as **choice architecture** – designing your school improvement initiative and organising the physical environment in such a way as to guide people's behaviours towards the realisation of your impact goals.

As a slice team, discuss the following questions:

1. What are the habits or behaviours we want to encourage, discourage or change?
2. How can we use goals to achieve our desired impact?
    a. How can we use process goals?
    b. How can we use self-set goals?
3. What systems should we and others create to help us achieve our goals?
4. What nudges should we use to improve the likelihood of a successful outcome?
    a. How can we use social norms?
    b. How can we use routines?
    c. How can we use action triggers?
5. How will we manage people's expectations as we navigate the valley of potential?
6. How can we use habit stacking and the 12 levers of habit change:
    a. To dial up desirable behaviours.
        i. What do we want teachers to do more of?
        ii. What do we want pupils to do more of?
    b. To dial down undesirable behaviours.
        i. What do we want teachers to do less of?
        ii. What do we want pupils to do less of?

7. What ethical concerns arise in relation to habit change in our context, and how might we address these?

CHAPTER SUMMARY

- For the purposes of the *Making Change Stick* programme, we can think of a habit simply as a behaviour that is repeated to the extent that we no longer give it much thought.
- Schools are made of people, and people are creatures of habit. This leads us to two conclusions:
  1. The status quo is largely the sum of people's habits.
  2. To a significant degree, our ability to bring about lasting, positive change depends on our ability to encourage people to behave differently – and for these new behaviours to become habitual.
- It can be hard to pick up good habits because it usually takes a while to reap the rewards. In contrast, bad habits tend to 'pay out' straight away, giving you a dopamine hit in return for relatively little effort. This means that when we're trying to develop good habits or kick bad habits, we're working against human nature and the way in which our nervous system is wired.
- In bringing about habit change, goals are necessary but not sufficient.
- Goals are most effective when process-based and self-set.
- Goals are much more likely to be realised when you have a system in place to help you achieve them.
- Nudge theory is based on the idea that we can shape the environment in various ways to influence the likelihood that people will choose one course of action over another. We can nudge people's behaviour by:
  - Emphasising positive social norms (and de-emphasising negative social norms).
  - Promoting routines with a clear cue (stimulus) and chain (sequence).
  - Harnessing the power of action triggers.

- When you first start to establish a new routine or habit, be aware that you're entering the valley of potential. Manage your expectations, steady the ship and keep the faith that your routine will pay dividends before long.
- To encourage a desirable habit, behaviour or routine, make it:
  - Obvious
  - Easy
  - Attractive
  - Satisfying
  - Social
  - Timely
- To discourage an undesirable habit, behaviour or routine:
  - Bury the cue.
  - Introduce friction.
  - Make it unappealing.
  - Make it unsatisfying.
  - Use social influence.
  - Use timely reminders.
- Be mindful of the ethical questions that arise when you seek to use insights from behavioural science to shape people's behaviour. Generally, nudges can be used ethically when:
  - Goals are shared (i.e. there is agreement about what constitutes desirable and undesirable behaviours and outcomes).
  - There is choice (i.e. people are still free to opt for the 'less desirable' course of action should they choose to do so).
  - Nudges and levers are used transparently.

Making Change Stick

Phase I: Make a start

- ☑ Appoint a slice team
- ☑ Optimise the team
- ☑ Choose your focus
- ☑ Write a one-page research summary
- ☑ Draft a comms plan
- ☑ Build a glass box

Phase II: Make a plan

- ☑ Map the journey
- ☑ Plan backwards
- ☑ Conduct a root cause analysis
- ☑ Build your improvement strategy
- ☑ Plan tight but loose
- ☑ Build steps to success
- ☑ Plan for diffusion
- ☑ Optimise for habit change
- ☐ Plan professional learning
- ☐ Prepare data collection
- ☐ Timeline and streamline
- ☐ Write a logic model
- ☐ Conduct a pre-mortem

Phase III: Make it happen

- ☐ Manage your project
- ☐ Create individual improvement plans
- ☐ Run PDSA cycles
- ☐ Schedule regular ‘pivot or persevere’ meetings
- ☐ Embed and sustain improvements
- ☐ Review, reflect – and plan your next project!

CHAPTER 15
PLAN PROFESSIONAL LEARNING

Use Guskey's pyramid to point you in the right direction, plan professional learning with a balance of mechanisms and facilitate ongoing reflection and dialogue.

Any school improvement initiative is likely to involve an element of professional learning. Teachers, leaders and support staff need to learn what they need to do more of, what they need to do less of and what they need to do differently in order to achieve your impact goals.

Teacher effectiveness has a powerful influence on pupil outcomes. As Dylan Wiliam argues, 'Pupils taught by the most effective 25% of teachers […] make more than twice as much progress each year than those taught by the least effective 25%.'[143]

The aim of professional learning should therefore be to help your colleagues become more effective practitioners in strategic areas relating to your school improvement initiative.

At this point, several questions arise:

1. What needs to change?
2. How will professional learning lead to improved outcomes?
3. What forms should the professional learning take?

143 Wiliam, D. (2023). Teacher quality: What it is, why it matters, and how to get more of it. *Impact*, 17, 12–15.

In this chapter we'll address these three questions in turn.

1. What needs to change?

There are many ways in which we can think about this question. What needs to change in terms of:

- Pupil outcomes?
- What teachers, leaders and support staff do (and don't do)?
- How well the organisation is set up for change?
- What people know and understand?

To answer this question at each of these levels, we're going to draw on the work of Professor Thomas Guskey. Guskey suggests that we should evaluate professional learning at five levels, and although his work focuses on evaluation it's also helpful as a framework for designing professional learning, as we will soon see.[144]

Guskey's pyramid

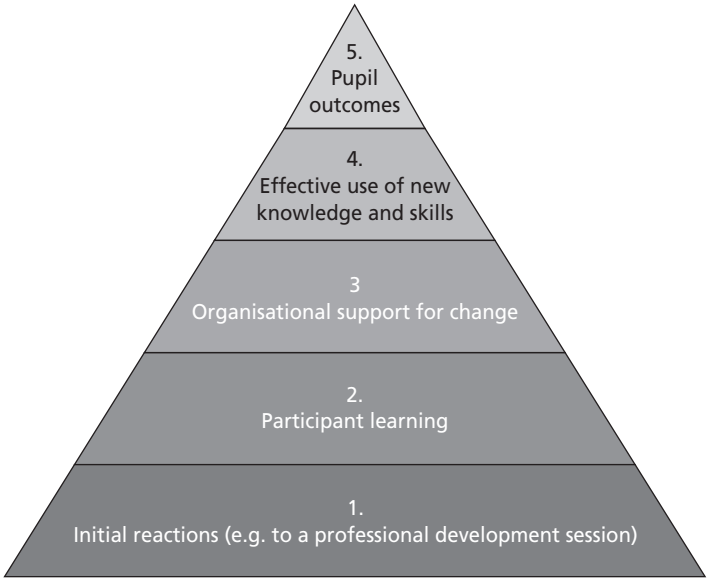


Figure 13 – Guskey's pyramid

144 Guskey, T. R. (2000). *Evaluating Professional Development*. Thousand Oaks, CA: Corwin Press.

We can think of Guskey's five levels of evaluation as a pyramid (Figure 13). At the base level, we have participants' **initial reactions** to a professional learning session or programme. This often takes the form of a sheet of paper (or a link to an online survey) shared at the end of a training session. Such evaluations typically include questions such as:

- How would you rate this session?

Excellent Good Satisfactory Poor

- Which aspects of the training did you find most helpful?
- What will you do differently having taken part in this training?

At the second level we have **participant learning**. To what extent did the participants learn what we wanted them to learn? As teachers, we know all too well that what is taught is not the same as what is learned. (If only it were so simple!) This applies to adults as much as to children and young people. It's therefore important to find out what people have taken away from a professional learning session. One way to do this is to send out a one-item survey a week or two after a professional learning session that asks participants to briefly summarise what they took away from the session. The range of answers provided can be quite revealing!

At the third level we have **organisational support for change**. To what extent has the school provided people with everything they need to translate their learning into routine practice? This includes things like:

- Time to create lesson plans and resources.
- Lesson cover to allow them to observe a colleague or attend a course.
- IT infrastructure such as hardware, software and Wi-Fi.

Organisational support for change is super important. It's also the level that is most often overlooked. All too often, working within time constraints and financial budgets already stretched to their limits, people are told: 'There's no money and no time – just find a way to make this happen on top of everything else you're already doing.' Needless to say, this is not usually a recipe for improved outcomes.

Some people argue that organisational support for change isn't really a 'level 3' thing because you can (and should) think about logistics at a number of different stages. This is a fair point. However, there is a rationale for placing it at level 3, as we will soon see.

At the fourth level we have the **effective use of new knowledge and skills**. This is the implementation level – to what extent are people doing what they need to do in a consistent and effective manner? To what extent have they stopped doing less effective things to make room for new ways of working? This is the most difficult level to get right, because it involves changing the behaviours and habits of a diverse group of individuals, and behaviour and habit change is notoriously difficult to pull off in a way that is sustained into the future. This is where we bring in the learning from *Chapter 14: Optimise for habit change*.

Finally, at the top of the pyramid we have **pupil outcomes**. Are pupils learning more effectively, and is this reflected in the data? At this level, it's important to consider side-effects as well as desired effects. To what extent has your improvement initiative led to any unintended or undesirable outcomes? For example, a reading intervention may improve reading scores *and* reduce enjoyment of reading. We therefore need to collect data on a range of pupil outcomes – not just those we want to see improving. We'll return to this important question in *Chapter 16: Prepare data collection*.

Three takeaways

Guskey suggests there are three important insights that we need to understand with regard to these five levels. First, each of the levels is really important. Often, people seem to think that if you want X to happen, you just need to get everyone together in a big room and tell them X needs to happen. In other words, people assume you can jump straight from level 1 to level 5 without realising things can fall down at a number of steps along the way. So, we can't afford to overlook any of the five levels.

Second, the levels are more or less sequential:

1. You need to have some sort of a professional learning experience in order for people to develop a shared understanding about important ideas.

2. When everyone agrees the ideas they've learned about are worth pursuing, you can make a strong case for organisational support for change.
3. The organisation needs to provide people with the time, space and resources they need in order to translate these ideas into practice.
4. Once people have learned how to implement these practices in a consistent and effective manner, we can expect to see improvements in terms of pupil outcomes.

The third and final insight of Guskey – and, I think, the most powerful – is one that harks back to the earlier chapter on backward design. In the planning process, you need to reverse these stages. For example, you could ask:

1. What do we want to see differently in terms of pupil outcomes? What do we want to see more of or less of?
2. What do teachers, leaders and support staff need to do differently in order to achieve these improved pupil outcomes?
3. What do we need to do as an organisation to support teachers, leaders and support staff in establishing these new behaviours and practices?
4. What do people need to know and understand that they don't currently know or understand?
5. What professional learning do we need to put in place to enable this learning to take place?

Guskey's pyramid provides us with a powerful framework for understanding why so many change initiatives in schools fail to achieve their intended goals. It's because the implementation process involves several important stages that are often overlooked, and each of them requires careful consideration. Guskey also provides us with a clear guide for how to implement change effectively, as well as how to evaluate the change process at multiple levels.

Working your way through questions 1–4 in the 'reversed stages' list will help you identify what needs to change in terms of:

- Pupil outcomes (level 5).
- What teachers, leaders and support staff do (and don't do) (level 4).

- Organisational support for change (level 3).
- What people know and understand (level 2).

In the next section, we'll turn our attention to question 5: 'What professional learning do we need to put in place to enable this learning to take place?' (level 1).

2. How will the professional learning lead to improved outcomes?

In recent years, Sam Sims and colleagues have done some groundbreaking work identifying the ways in which professional learning supports (and often fails to support) improved pupil outcomes.[145]

Sims et al suggest that professional learning needs to include four key elements in order to secure improvements in teaching (and therefore in pupil outcomes). These elements are:

1. Instil insight (I).
2. Motivate change (M).
3. Develop techniques (T).
4. Embed practice (P).

Breaking these four key elements down further, Sims et al have identified 14 **causal mechanisms** that drive improved outcomes. These are really useful, so let's briefly consider each in turn.

Instil insight (I)

This element addresses the second level of Guskey's pyramid: 'What do teachers, leaders and support staff need to know and understand that they don't currently know or understand?' Broadly speaking, such insights fall into one or more of the following three categories:

- Content knowledge – the stuff of subjects.

145 Sims, S., Fletcher-Wood, H., O'Mara-Eves, A. et al. (2023). Effective Teacher Professional Development: New Theory and a Meta-Analytic Test. *Review of Educational Research*, 0(0). See also Sims, S., Fletcher-Wood, H., O'Mara-Eves, A. et al. (2021). *What are the Characteristics of Effective Teacher Professional Development? A Systematic Review & Meta-analysis*. London: EEF. Retrieved from: https://educationendowmentfoundation.org.uk/education-evidence/evidence-reviews/teacher-professional-development-characteristics.

- General pedagogical knowledge – the stuff of teaching.
- Pedagogical content knowledge – how to teach particular subjects or topics.

The professional learning you design to support your school improvement initiative could focus on one of these areas; alternatively, it could incorporate aspects of all three.

Sims et al highlight two mechanisms that are important when seeking to instil insights:[146]

1. Manage cognitive load – 'Focusing on a single idea or task, removing redundant information, or by providing worked examples.'
2. Revisit prior learning – 'Reteaching or prompting recall of important ideas on separate occasions, both of which help to strengthen memory.'

Motivate change (M)

This stage builds the foundations for Guskey level 4: 'The effective use of new knowledge and skills.' As Sims et al point out:

> Insight alone is unlikely to bring about changes in practice. For example, diary studies have found that teachers report 50% of school-based learning experiences result in changes in their knowledge and beliefs, but in only a quarter of these cases do these changes in beliefs feed through into changes in their intended practice.

Motivation is not the only factor required to translate new knowledge and understanding into routine practice, but it is an essential one. To help your colleagues feel motivated to change their practice, Sims et al highlight three mechanisms:

3. Goal setting – 'Teachers consciously agree on an objective around changing a specific part of their practice.'
4. Credible sources – 'Sharing findings from empirical research.'

146 Any quotes in the remainder of this section are from Sims, S., Fletcher-Wood, H., O'Mara-Eves, A., Cottingham, S., Stansfield, C., Goodrich, J., Van Herwegen, J. & Anders, J. (2023). Effective Teacher Professional Development: New Theory and a Meta-Analytic Test. *Review of Educational Research*, 0(0).

5. Reinforcement – 'Praising or restating the value of a certain teaching practice.'

Develop techniques (T)

At this stage, we harness that motivation to translate the new knowledge and insights (Guskey level 2) into routine classroom practice (Guskey level 4). Sims et al identify five mechanisms that can help in this regard:

6. Instruction – Providing 'directive advice on how to implement some teaching method. Instruction works by eliminating ambiguity about what is required to successfully use a procedure.'
7. Modelling – Providing 'an observable example of the target teaching practice, which provides a visual guide for subsequent practice.'
8. Rehearsal – 'Structured practice outside of a real classroom setting. This improves accuracy and speed of future performance.'
9. Practical social support – 'Arranging advice on how to implement a practice from a teacher's colleagues.'
10. Feedback – Providing 'evaluative guidance based on prior observation of the focal practice. It works by identifying and then advising on areas for improvement.'

Embed practice (P)

The fourth element of effective professional learning is to think carefully about how these techniques will become embedded in routine practice. This is important because, although professional learning usually brings about an initial change in practice ('What will you do differently having attended this session?'), these changes to practice often fade out over a period of weeks or months.

Sims et al define embedding practice as 'rooting a technique firmly within a teacher's repertoire', and they suggest four mechanisms for increasing the likelihood that changes to practice will become embedded as 'part of the way we do things around here':

11. Prompts/cues – 'Introducing environmental stimuli with the purposes of prompting the desired practice.' (Here, we draw on the learning from *Chapter 14: Optimise for habit change*.)

12. Action planning – 'Specifying when and how a change in practice will be made in a future lesson.'
13. Self-monitoring – 'Establishing a method for somebody to record and then review their own practice.'
14. Context-specific repetition – 'Rehearsing the target practice in a realistic classroom setting. This helps overwrite existing cue-response relationships (habits) by reassociating the classroom setting with the new practice.'

A cumulative effect

Sims et al do not suggest that all professional learning efforts need include all 14 mechanisms. However, their research does suggest that when professional learning includes at least one element from each of the four categories (I, M, T and P), it's far more likely to be effective.

Indeed, in a systematic review and meta-analysis of 104 randomised controlled trials, Sims et al found that when a professional learning programme featured elements from all four categories, the effect size was approximately three times higher than when either one, two or three of the key elements were in place. Helpfully, they provide a table to highlight the problems that arise when one or more of the four key elements are missing (Table 27).

Instil insight	Motivate change	Develop techniques	Embed practice	Consequences
✔	✔			Knowing-doing gap.
✔				Knowing-doing gap.
✔	✔	✔		Revert to established habits.
	✔	✔	✔	Misapplication.
✔	✔	✔	✔	More likely to be effective.

Table 27 – How professional learning can fail[147]

147 From Sims, S., Fletcher-Wood, H., O'Mara-Eves, A., Cottingham, S., Stansfield, C., Goodrich, J., Van Herwegen, J. & Anders, J. (2023). Effective Teacher Professional Development: New Theory and a Meta-Analytic Test. *Review of Educational Research*, 0(0).

Harry Fletcher-Wood highlights three lessons to take away from this research when designing professional learning:

1. Address all four purposes with as many mechanisms as you can. 'Don't teach techniques through modelling alone: model, then have teachers rehearse the techniques, then offer feedback.'
2. Address all four purposes, whatever the size of your 'programme'. 'In a year-long programme, I want to address all four purposes. In a half-hour session, I *also* want to address all four purposes. In a two-minute conversation with a teacher, I *still* want to address all four purposes.'
3. Address all four purposes as many times as you can within a programme. 'It often takes multiple attempts to change: to grasp a new idea, to master a technique, to make something a habit. We try something once, twice, and then ideas and experiences somehow click into place. […] So don't plan to cover insight then move on; introduce it early, and come back to it. Don't plan to spend ages on insight and move to techniques and practice later. Start practising as soon as possible – then return to the underlying insight with that fresh experience. Address each purpose as many times as you reasonably can.'[148]

In the final part of this chapter, we'll consider the overall shape your professional learning programme may take.

3. What forms should the professional learning take?

Adapting the work of Oliver Caviglioli (via Ollie Lovell), when planning a professional learning programme, it's helpful to think in terms of **paths** and **stepping stones**.[149] In this case, the path is the overarching form the professional learning will take and the stepping stones are the episodes of professional learning.

148 Fletcher-Wood, H. (2024). What must professional development achieve? The four purposes of PD. Improving teaching, May 12. Retrieved from: https://improvingteaching.co.uk/2024/05/12/what-must-professional-development-achieve-the-four-purposes-of-pd.

149 Lovell, O. (2023). Containers and paths: Objects for thinking with. *EdThreads*. Retrieved from: https://edthreads.ollielovell.com/p/containers-and-paths-objects-for-thinking-with.

Stepping stones

In terms of when and where professional learning can happen in schools, we have three main options:

- During the school day, such as lesson observations or coaching sessions during free periods.
- Twilight sessions, where people come together at the end of the school day.
- In-service training (INSET) days. Some schools disaggregate their INSET days, breaking them up and distributing the time throughout the year to allow for more regular professional learning sessions, usually twilights.

These three types of stepping stones are each associated with advantages and disadvantages (Table 28).

Stepping stone	Advantages	Disadvantages
During the school day	• You can observe lessons and root professional learning in classroom practice (e.g. instructional coaching, lesson study).	• May use up people's free periods. • May require lesson cover.
Twilight sessions	• You can run several sessions in parallel on different topics. • They allow for regular reflection, dialogue and action.	• People may be fatigued or preoccupied with tasks they need to complete. • You can't observe lessons.
INSET days	• You can get everyone together for a decent amount of time. • You can run several sessions in parallel on different topics.	• They are infrequent. • You can't observe lessons.

Table 28 – Professional learning stepping stones

As is usually the case when you have competing options with advantages and disadvantages, it's a good idea to combine all three – INSET days, twilight sessions and activities that take place during the school day.

This combined approach allows you to capitalise on all the advantages offered by each option while minimising the disadvantages.

It's also important to tailor the professional learning activity to the stepping stone. For example, if you're introducing challenging new material, the morning session on an INSET day is probably the best time to strike, when people are well rested and freshly caffeinated. Conversely, twilight sessions are great if you want people to reflect on the lessons they've taught that day.

When planning professional learning, it's important to be aware of how many stepping stones you have at your disposal and to know something of their size, shape and nature. I once taught at a school where the main approach to professional learning one year was called 'lesson study lite'. The word 'lite' was added once it became apparent that people found it almost impossible to find the time to do everything that lesson study requires (researching the area of focus, co-planning, observing a lesson, carrying out an in-depth post-lesson review), as the school was unwilling to provide people with the time they needed to undertake these tasks. This is a good example of a 'Guskey level 3 fail' caused by a mismatch between paths and stepping stones. Perhaps unsurprisingly, 'lesson study lite' did not bring about lasting behaviour change or improved pupil outcomes at my school.

Let's turn now to consider how we might use these stepping stones to chart a path from where you are to where you want to be – and how the stepping stones might connect across a school year (or two, or three…).

Paths

Next, we need to consider what forms our professional learning may take. The plural 'forms' is important here, because once again different approaches to professional learning are associated with advantages and disadvantages (see Table 29 on pages 315–16). It therefore makes sense to combine a few different forms to make sure you harness the advantages of a range of approaches.

PL path	Advantages	Disadvantages
Online course	• Can be done at a time, place and pace to suit the user. • Low-cost (usually) and scalable.	• Lacks interactivity. • Quality can vary hugely.
External course	• You can access specialist expertise not available in school (e.g. around leadership or subject knowledge).	• Often expensive and not easily scalable. • Often require whole days of teacher cover.
In-school workshops/ trainings	• You can access specialist expertise not available in school (e.g. from visiting speakers). • Can be facilitated or co-facilitated by colleagues with in-school expertise.	• Can be expensive to bring in external support. • When facilitated in-school, can lack the benefit of external expertise.
Mentoring	• Can be regular and supported by lesson observations.	• Better suited to early career practitioners.
Practitioner learning communities	• Allow colleagues to come together regularly to reflect, engage in dialogue and support one another.	• Time-consuming, as it often requires regular sessions spread over several years.
Practitioner inquiry	• Empowers people to identify areas for improvement and to drive their own professional development. • Data-driven and research-informed.	• Collecting and analysing data can be time-consuming and beyond some people's comfort zone. • Better suited to more advanced practitioners.
Lesson study	• Rooted in classroom practice. • Collaborative and dialogic. • Enables peer-to-peer learning.	• Can be difficult to get people off-timetable, requires lesson cover. • Better suited to more advanced practitioners.

PL path	Advantages	Disadvantages
Non-directive coaching	• Empowers people to identify areas for improvement and to drive their own professional development. • Dialogic and highly personalised.	• People may lack the necessary knowledge or insights to solve the problems they face.
Directive coaching	• Professional learning broken down into bite-sized steps. • Rooted in classroom practice.	• Dependent on the expertise of the coach. • Lacks the agency afforded by other forms of professional development.
Peer observations	• Rooted in classroom practice. • Enables peer-to-peer learning.	• Not all aspects of successful teaching are observable. • Not easily scalable. • Often requires lesson cover.

Table 29 – Professional learning paths: advantages and disadvantages

Create individual improvement plans

Most of the thinking in the *Making Change Stick* programme is carried out at the organisational level. However, when it comes to planning professional learning and development, we also need to start thinking about change at the level of the individual.

Many of the ideas and strategies in the *Making Change Stick* programme are applicable at the level of the individual as well as the organisation. It's a good idea to set aside a whole day early in the implementation period when colleagues can create an improvement plan that's tailored to their context. This might involve thinking about how to adapt ideas and strategies to their year group (primary), subject (secondary), or to their particular pupils and classes. We'll examine this in more detail in *Chapter 21: Create individual improvement plans*.

Create opportunities for dialogue

When planning professional learning, recall the key insight from *Chapter 13: Plan for diffusion*. According to Everett Rogers, the way in

which innovative practice spreads through a population (innovators → early adopters → early majority → late majority → resistors) is through 'people talking to people' about the innovation.

In recent years there has been a huge amount of progress around **oracy**, a word invented in the 1960s in an attempt to give spoken language and communication the same status as written literacy and numeracy. Usually, oracy education focuses on developing the spoken language of children and young people. However, we also know that teacher talk is incredibly important as a driver of professional learning.[150]

It's therefore important to think about how to create regular opportunities to enable 'people to talk to people' about your school improvement initiative. In terms of the overarching structure of your professional learning programme, you may wish to include some of the more dialogic approaches to professional learning listed in Table 29 on pages 315–16, such as:

- Practitioner learning communities.
- Lesson study.
- Practitioner inquiry.
- Directive coaching.
- Peer observations.

In addition, consider how to exploit further opportunities to facilitate ongoing professional dialogue around your school improvement initiative, such as:

- Staff briefings.
- Assemblies (especially 'talking assemblies', which allow pupils, teachers and support staff to engage in dialogue around a topic of choice).[151]
- Meetings (senior leaders, middle leaders, departments, year groups/phases, pastoral and support staff).

150 Mannion, J. (2019). Teacher talk: the beating heart of effective professional learning and development. *Oracy Cambridge*. Retrieved from: https://oracycambridge.org/teacher-talk.

151 Voice 21 (n.d.). *Teacher Voices: Talking Assemblies*. Retrieved from: https://membership-hub.voice21.org/watch-talking-assemblies.

Again, each of these methods is associated with advantages and disadvantages, and combining several of them in your professional learning programme will help you to maximise the benefits while overcoming the limitations of any individual approach. At this point, if you have not done so already, you may wish to add opportunities for 'people to talk to people' to the communications plan you created in *Chapter 5: Draft a comms plan*.

Design dialogic meetings

Many teachers I know complain that they regularly sit through meetings where one person does most of the talking – often about things that aren't relevant to everyone in the room – and they sit there thinking, 'This is a waste of time. This could have been shared in an email.'

Clearly, this does not mean that people should only communicate via email. Instead, it means we need to take steps to ensure meetings enable people to think and talk together in inclusive, productive ways.

There are many things we can do to improve the quality of professional dialogue in staff meetings. Here are a few examples:

- Train all middle and senior leaders in how to plan and chair effective meetings. Chairing meetings effectively is a sophisticated skill set, and teachers and school leaders are often not trained in this important aspect of their work.
- Have a 50:50 rule in meetings: 50% presentational talk, 50% people discussing ideas. This is a rule of thumb – you don't need to follow it slavishly – but it's a good way to avoid the 'meeting as email' phenomenon.
- Have a rule that you will only meet when it's absolutely necessary – for example when a decision needs to be made – and abolish pre-scheduled meetings.
- Use dialogic teaching moves like think-pair-share to enable ideas to emerge from the group.

- Use ground rules to help ensure people will talk productively together in meetings. Here are some suggestions for ground rules you may wish to use – there are parallels here with the ground rules we used in *Chapter 2: Optimise the team*:

    1. Everyone should have the opportunity to contribute.
    2. All relevant information should be shared.
    3. Only use tech when it is essential to the running of the meeting.
    4. Everyone should feel free to air their honest views without fear of repercussion.
    5. Everyone should be prepared to have their views challenged where appropriate.
    6. Everyone should work towards agreement where possible.
    7. Confidentiality should be maintained.
    8. The ground rules should be reviewed regularly.

You may wish to tweak these suggested ground rules to suit your purposes. It's a good idea to do this with your colleagues as a starting point for creating more dialogic meetings.

CHAPTER SUMMARY

- The aim of professional learning should be to help your colleagues become more effective practitioners in strategic areas relating to your school improvement initiative.
- When planning professional learning, three questions are helpful:

    1. What needs to change?

        - Guskey's pyramid is really helpful to help you determine what needs to change at five levels:

            - Pupil outcomes.
            - Effective use of new knowledge and skills.
            - Organisational support for change.
            - Participant learning.
            - Initial reactions to professional learning.

2. How will the professional learning lead to improved outcomes?
    - Planning your professional learning includes a balance of mechanisms:
        - Instil insight (I).
        - Motivate change (M).
        - Develop techniques (T).
        - Embed practice (P).
3. What forms should the professional learning take?
    - Think in terms of stepping stones (episodes) and paths (general approaches to professional learning).
    - As well as thinking about change at an organisational level, take the time to create individual improvement plans.
    - Create opportunities for dialogue – recall the importance of 'people talking to people' about your school improvement initiative.
    - Design dialogic meetings:
        - Train all middle leaders in how to plan and chair effective meetings.
        - Have a 50:50 rule in meetings – 50% presentational talk, 50% people discussing ideas informally.
        - Have a rule that you will only meet when absolutely necessary.
        - Use dialogic teaching moves like think-pair-share to enable ideas to emerge from the group.
        - Use ground rules to help ensure people will talk productively together in meetings.

Making Change Stick

Phase I: Make a start

- ☑ Appoint a slice team
- ☑ Optimise the team
- ☑ Choose your focus
- ☑ Write a one-page research summary
- ☑ Draft a comms plan
- ☑ Build a glass box

Phase II: Make a plan

- ☑ Map the journey
- ☑ Plan backwards
- ☑ Conduct a root cause analysis
- ☑ Build your improvement strategy
- ☑ Plan tight but loose
- ☑ Build steps to success
- ☑ Plan for diffusion
- ☑ Optimise for habit change
- ☑ Plan professional learning
- ☐ Prepare data collection
- ☐ Timeline and streamline
- ☐ Write a logic model
- ☐ Conduct a pre-mortem

Phase III: Make it happen

- ☐ Manage your project
- ☐ Create individual improvement plans
- ☐ Run PDSA cycles
- ☐ Schedule regular ‘pivot or persevere’ meetings
- ☐ Embed and sustain improvements
- ☐ Review, reflect – and plan your next project!

CHAPTER 16
PREPARE DATA COLLECTION

Collect data on every aspect of your improvement strategy and use it to inform decision-making in an ongoing way.

Data-driven decision-making is the beating heart of the *Making Change Stick* programme. The approach used is rooted in four premises:

1. Any school improvement initiative is a complex intervention comprising several component parts.
2. In order to evaluate a school improvement initiative effectively, you need to evaluate each element of the complex intervention.
3. For each element, it's important to collect data at three levels:
    - **Baseline –** This serves two functions:
        - To establish an accurate understanding of the problem you're trying to solve at the outset (adopting a 'scout mindset').
        - So you have something to compare back to later on.
    - **Impact –** To what extent are you meeting your intended goals?
    - **Side-effects –** Has your school improvement initiative led to any unintended or undesirable outcomes?
4. The aims of monitoring and evaluation are both formative, to inform ongoing decision-making about the implementation of your school improvement initiative, and summative, to determine whether and when you've met your impact goals.

A broadcast comms plan in reverse

In *Chapter 5: Draft a comms plan*, we described a broadcast communications plan as an outward-facing (one-to-many) process of conducting a chorus of voices, with different people delivering different messages to different audience groups through different channels at different times.

A monitoring and evaluation plan is essentially a comms plan in reverse. This inward-facing (many-to-one) operation involves collecting different types of data on different aspects of your school improvement initiative, using different instruments at different points in time to build up a rich, accurate understanding of how your school improvement initiative is playing out throughout the implementation period.

Implementing a high-effort, high-impact school improvement initiative over a period of several years is rarely plain sailing. There will be bumps in the road, twists in the tale and curveballs aplenty – whichever metaphor you prefer – and you will need to be light on your feet and respond accordingly as new evidence comes to light.

In *Chapter 23: Schedule regular 'pivot or persevere' meetings,* we'll look at an approach from the world of lean business management where the slice team comes together to review the data as it comes in and make evidence-informed decisions about what to do next.

In this way, you can continually reorient your school towards achieving optimal outcomes. If you adopt this approach, you can't go wrong. At the outset, you design the best school improvement strategy you can possibly think of. Then, you collect and analyse data from day one, meeting regularly to review the data and to realign your actions with your impact goals. Two years into the implementation period, your school improvement initiative may look quite different to how it looked at the outset. However, you will have followed the data at every step along the way, becoming increasingly surefooted as the implementation period unfolds.

In this chapter, we'll look at the three levels at which we need to collect and analyse data – baseline, impact and side-effects – looking at different kinds of research questions you can use to focus your attention at each of these three levels. Following this, we'll look at different types of data and data collection tools, weighing the advantages and disadvantages

of each. Finally, drawing these ideas together, we'll look at a worked example of how a school might monitor and evaluate a whole-school behaviour initiative.

Three areas of focus

Baseline

Often, when people want to try out a new idea or introduce some change to their practice, they're keen to crack on straight away. However, it's really important that you don't implement any changes to practice until you've collected baseline data.

There are two main reasons for collecting baseline data. First, it enables you to build up a rich picture of current practice before any changes have been introduced. This will inform how you design your improvement strategy. Here, we establish a user-centred understanding of the problem – a key component of improvement science. This type of baseline data collection is usually qualitative and involves capturing people's existing views about your chosen area of focus:

- What do different stakeholders (e.g. teachers, support staff, pupils, parents and carers) say, think and feel about the problem you're seeking to address?
- How does this problem play out in different areas of the school?

Second, collecting baseline data provides you with a standard against which you can compare future outcomes. This type of baseline data collection is usually quantitative and involves things like test scores, psychometric surveys, reading ages, behaviour logs, attendance data and so on.

Baseline research questions

Writing research questions at baseline is a **divergent** stage of the process, where we adopt an outward-facing stance as we seek to understand current practice. These questions can either be quantitative (where we analyse numbers) or qualitative (where we analyse words). For example, an innovation focusing on a new way of setting homework might include the following quantitative research questions:

- How often do teachers set and mark homework?
- How often do pupils hand in homework on time?

Such questions tend to lead to numerical responses. An anonymous survey reveals that 78% of teachers set homework each week currently, 55% of teachers mark homework each week, 62% of pupils hand in their homework on time, and so on.

To understand what's going on behind these figures, you might also wish to ask some more qualitative research questions, such as:

- What do teachers say about homework currently?
- What do pupils say about homework?
- What kind of homework do teachers set?
- What kind of homework do pupils say they learn the most from?

Impact

This is collected once any changes to practice have been introduced. It's important to collect impact data at regular intervals, rather than just at the end of the implementation period. This enables you to evaluate progress over time and to use impact data in a formative way.

Collecting impact data enables you to determine the extent to which any changes to practice have led to desired outcomes, or whether you have been able to achieve your impact goals. It also enables you to track progress over time. Impact data collection usually involves a combination of qualitative and quantitative methods. We'll look at these in more detail later in this chapter.

Impact research questions

In writing an impact research question, we transition to a more **convergent** phase in our thinking. A useful sentence frame for an impact research question is as follows:

> To what extent does [*innovation*], implemented for [*length of time or frequency*], improve [*desired outcome*] among [*target pupils*]?

To return to the homework example, through carrying out baseline data collection, a science teacher discovers that different kinds of homework are effective for different pupils. They are also aware that in their Year 7 class, pupils with speech, language and communication needs (SLCN) struggled with a recent unit on electricity because it involved learning lots of new vocabulary relating to abstract concepts (current, amps, voltage,

etc.). Other pupils demonstrated that they were able to use these words accurately in context, and were capable of a higher level of challenge.

Based on this baseline data collection, the teacher plans to implement a weekly homework menu, with some exercises designed to help pupils understand key words and concepts, and others that provide more open-ended, problem-based challenges for pupils who are ready to be stretched further. Because the teacher is interested in two different things, there are two impact research questions:

> To what extent does a homework menu, implemented weekly for six weeks, improve the understanding of key words among SLCN pupils?
>
> To what extent does a homework menu, implemented weekly for six weeks, provide stretch and challenge for pupils with high prior attainment?

Side-effects

Whenever you introduce a change to practice, it can lead to undesirable side-effects as well as desirable effects. For example, in his insightful book, *What Works May Hurt*, Professor Yong Zhao describes how the 'No Child Left Behind' policy introduced in the United States in 2002 led to a range of adverse side-effects.

The policy was introduced in an attempt to raise educational outcomes for all pupils and close the attainment gap between different groups of pupils. Though well-intentioned, evaluations of the 'No Child Left Behind' policy found that it led to a range of undesirable side-effects, including a narrowing of the curriculum, increased teaching to the test, teachers giving more attention to some pupils and neglecting the needs of others and increased emotional stress and anxiety among pupils.[152]

In this example, we can see that the side-effects of well-intentioned improvement initiatives can be incredibly serious. It is therefore really important that you seek to capture all the consequences of any changes to practice – those you want to see and those you don't.

152 Zhao, Y. (2018). *What Works May Hurt: Side effects in education*. New York: Teachers College Press.

Side-effects research questions

To return to our homework example, during the six-week implementation period the teacher is keen to capture information relating to side-effects, asking, 'Has the introduction of a homework menu led to any unintended or undesirable consequences?'

To answer this question, the teacher reviews the pupils' homework after the first week and conducts a five-minute focus group with three pupils whose perspectives they want to understand in more detail. Through this, they discover that some pupils have made inappropriate choices from the homework menu in the following ways:

- Some pupils with high prior attainment chose an easier option because they thought it would take less time to complete.
- Some pupils struggled with the more challenging, open-ended problems, when they really needed to focus on securing foundational knowledge, understanding and vocab.
- Some pupils hadn't followed the instructions and thought they were supposed to compete all the options on the menu.

Following this brief data collection exercise, in the following week the teacher allocated different homework tasks to different pupils according to their strengths and areas for development.

We'll look at some more worked examples of the ways in which the three levels of analysis give rise to different types of research question later in this chapter. First, let's explore what we mean by 'data'.

Types of data

It's useful to think of data types as four overlapping pairs.

First, we have the broad distinction between **primary** and **secondary** data. In a nutshell, primary data is information you collect yourself, or data that is collected in your school. Secondary data is information derived from other sources – books, articles, blogs and so on. In *Chapter 4: Write a one-page research summary*, we mainly focused on gathering and summarising secondary data from credible sources, although you may have supplemented this with some primary data collection through the use of surveys, interviews or focus groups. In this chapter, we're mainly concerned with primary data collection.

Next, we have the distinction between **qualitative** and **quantitative** data. Qualitative data is usually text-based and involves things like observations, interviews, focus groups, pupils' work and text-based survey questions. Quantitative data is usually number-based and involves things like test scores, psychometric surveys, attendance records, behaviour logs and scale-based survey questions. It's usually a good idea to collect both types of data if you can, for reasons we'll explore later in this chapter.

Third, we have the distinction between **naturally occurring** and **elicited** data. Schools are data collecting machines; they collect a huge amount of data as a matter of course, on a wide range of things such as attainment, attendance, behaviour, bullying, reading ages, pupil voice and so on. As far as possible, you should use this rich resource to support your evaluation efforts. If your school or trust has a data manager, I strongly recommend you go and speak with them – you may be surprised at just how much information is lurking around if you know where to look! However, it's unlikely that the data your school collects as a matter of course will provide everything you need to evaluate your school improvement initiative thoroughly. It's therefore likely that you'll have to go out of your way to elicit further data in order to shine a light on any areas that are not currently illuminated.

Finally, we have the distinction between **hard** and **soft** data. Hard data is information you use an instrument to collect – a quiz, a survey or an observation rubric, perhaps. Soft data, by comparison, is information that comes to light through lived experience – conversations, things you overhear, the feeling you get when you walk into a particular school or classroom. Sometimes, such things are dismissed as mere 'anecdotal data'. People apologise for it, saying things like 'this is a bit anecdotal, but…', or 'the plural of anecdote is not data.' But anecdotes, stories and feelings can be an incredibly rich source of information, and we shouldn't disregard such things too easily.

Collecting data: Seeing the whole elephant

In *Chapter 3: Choose your focus* and *Chapter 8: Plan backwards*, we looked at a table comparing the advantages and disadvantages of different data collection methods. Let's now return to this table once more (Table 30).

Data source	Advantages	Disadvantages
National test data	• Easy, quick, 'naturally occurring'. • Valid and reliable. • Allows comparisons across schools.	• Not designed for your issue. • Often more general than you need.
In-school test data	• Can be 'naturally occurring'. • Can be designed to suit your purposes.	• Low validity and reliability. • Can be influenced by many factors. • Cannot be compared with other schools.
Surveys	• Easy to collect large samples. • Can be anonymous. • There are many existing surveys you can use with established validity and reliability. • Can be tailored to meet your needs and interests.	• Surprisingly difficult to write high-quality questions. • Can have a low response rate – and who responds can bias your sample. • One-way communication – you can't sense check.
Pupil work	• Authentic, 'naturally occurring'. • Can be linked to your area of focus.	• Difficult to analyse in large numbers. • You can only work with what is there – you can't capture what is missing. • You can't sense check (unless you use it as a stimulus in an interview).
Interviews	• Flexible – individual, pairs or focus groups. • Enables sense checking ('Do you mean…'). • High completion rate from a representative sample of participants.	• Can require interpretation – subject to bias. • Time consuming. • Not anonymous. • Responses may be affected by a desire to 'please the teacher'.

Data source	Advantages	Disadvantages
Observations	• You can see what's happening in real time. • You can use different types of observation to fit the purpose (e.g. in person or video).	• The presence of an observer can affect what is observed. • Low validity and reliability. • You can only capture what is observable.

Table 30 – Data sources: advantages and disadvantages

You may have heard the apocryphal story of the elephant in a room with several people who are blindfolded. One touches its side and says, 'This is a wall!' One touches its tusk and says, 'This is a spear!' One touches its tail and says, 'This is a rope!' One touches its ear and says, 'This is a carpet!' One touches its trunk and says, 'This is a snake!' And the wisest among them says, 'Perhaps, in order to learn the truth, we need to put all the parts together.' This is a useful metaphor for thinking about data collection.

Evaluating a complex school improvement initiative is no mean feat because it has many moving parts, it involves many people, and things vary across the school and at different points in time. A data collection tool such as a quiz, a focus group or a survey is a bit like a lens that brings part of the picture briefly into focus – no single instrument can ever capture the full complexity of what is happening. But the more data collection tools we use – and the more frequently we use them – the richer and more complete our understanding becomes.

In addition, using a wider variety of data collection tools also helps you overcome the limitations and disadvantages associated with any single data source.

A note on surveys

One advantage of surveys is that they're relatively quick and easy to administer, and they can be completed anonymously. This can be really helpful because it allows people to respond honestly and without fear of repercussion rather than just saying what they think whoever wrote the survey wants to hear.

However, surveys also have several disadvantages. For example, they often don't have a 100% response rate. This can bias your results because people who choose to respond to a survey are likely to provide different answers to those who prefer to keep their views to themselves. Also, written language can be interpreted in different ways, and with surveys it's not possible to know whether the respondent understood the question in the way you intended when you wrote it.

When researchers write a new survey, it often takes months of careful testing and statistical analysis, tweaking the language and testing it again until they can say that their instrument is valid (i.e. it captures something approaching the truth) and reliable (i.e. if you administered the same survey a few weeks later you'd likely get the same or similar results). Most teachers have neither the time nor the statistical training to do this.

This doesn't mean we shouldn't ever write our own surveys. But it's important to bear in mind that something you rattle off on Google Forms at the end of a busy day is unlikely to be as valid or reliable as one that's been rigorously tested and published in the literature.

One way in which we can overcome this is to use published surveys where possible. The Education Endowment Foundation (EEF) and the RAND corporation both have excellent, searchable databases of (often freely available) data collection tools. These instruments can be used to reliably measure a wide range of constructs such as metacognition (for example, the junior metacognition awareness inventory), resilience (for example, the adolescent resilience questionnaire) and emotional regulation (for example, the adolescent emotion regulation questionnaire).[153]

If you do write your own surveys, there are a few steps you can take to increase their validity and reliability. One is to vary the way in which you phrase questions, so that some are negative ('I really dislike science lessons') and others are positive ('Science is one of my favourite subjects'). This helps to neutralise the effects of **agreement bias**, the

153 RAND Corporation (n.d.). *Educational Assessments*. Retrieved from: https://www.rand.org/education-and-labor/projects/assessments/tool.html. See also EEF (n.d.) *Spectrum database*. Retrieved from: https://educationendowmentfoundation.org.uk/spectrum-essential-skills-and-non-academic-outcomes/spectrum-database. NB some of these instruments are behind paywalls.

phenomenon whereby people tend to agree with any statement you put in front of them.

It's also a good idea to share your survey with a few people before you ask larger groups to complete it and ask those people to explain what they think each item means. This allows you to check whether people understand the questions in the way you wrote them.

A third useful technique is to alternate scale-type questions ('Rate your enjoyment of science lessons on a scale of 1 to 5') with open text questions that ask people to provide a reason ('Why did you choose this rating?'). In this way you can collect qualitative data about quantitative data, which helps you understand the reasons behind people's responses as well as checking they understood the question.

Triangulate your findings

Another way to overcome the disadvantages of surveys is to combine the use of surveys with interviews. Interviews also have some disadvantages. For example, it isn't possible to interview somebody anonymously, and this increases the risk that the respondent will just say what they think the researcher wants to hear rather than being completely open and honest. Also, interviews take more time than surveys because an interviewer can only collect data from one person at a time.

On the other hand, interviews allow you to sense check the data in a way that surveys do not. For example, when a respondent answers a question, you can repeat their words back to them and ask, 'Is this what you mean?' This often elicits further information, as the respondent searches for language that more accurately conveys their true thoughts and feelings. So, although interviews take more time than surveys and can't be anonymous, they often elicit a more refined quality of information because of this ability to sense check.

Finally, combining the use of different methods of data collection allows you to triangulate your findings. Triangulation is defined as 'the use of multiple methods or data sources […] to develop a comprehensive understanding of phenomena.'[154] If you collect multiple sources of data and they all point in the same direction, that's great! And if you collect

154 Patton, M. Q. (1999). Enhancing the quality and credibility of qualitative analysis. *Health Sciences Research*, 34, 1189–208.

conflicting data, this is where things get really interesting because conflicting data can be a huge driver of professional learning.

For example, if teacher voice, lesson observations and test data all suggest that retrieval practice is having a positive impact on pupils' learning, then you can have greater confidence in embedding retrieval practice as a core feature of teaching and learning at your school.

However, life in schools is rarely so simple. What happens when teacher feedback and lesson observations suggest that retrieval practice is having a positive impact on pupil learning, but this is *not* reflected in the test data? Now you have conflicting evidence. This doesn't mean you should stop doing retrieval practice. But it does mean there may be more to this picture than meets the eye. In this example, a pupil feedback survey or focus group may reveal that the retrieval practice is not being implemented in a way that maximises learning. Perhaps it's too infrequent. Perhaps the questions are too easy. Perhaps the retrieval quizzes are not being marked, and so the pupils are not receiving the feedback they need to improve.

In short, collecting multiple sources of data is a really good idea and you should aim to collect as many different kinds of data as you possibly can, while minimising the impact on workload – which brings us to the final point in this chapter before we look at a worked example that draws all of these ideas together.

Maximising impact while minimising workload

Workload is a burning issue within the teaching community and a significant reason why so many teachers choose to leave the profession each year. Collecting and analysing lots of data may sound like a lot of work – but it doesn't have to be.

There are three important ways in which we can minimise the impact on workload. The first is sampling. When collecting data, you don't need to ask every pupil, parent, carer or teacher for their views. Through the judicious use of sampling, you can collect a small amount of data from a representative sample of respondents, which you can take as representing the views of the wider population.

The second idea is to spread the load. Usually, when we move into *Phase III: Make it happen*, senior members of the slice team take the lead in coordinating data collection and analysis. But it shouldn't fall on their shoulders entirely. For example, let's say you want to conduct some focus groups to capture the views of Year 7 pupils about the use of retrieval quizzes in subject learning. And let's say there are seven tutor groups in Year 7. If you ask each Year 7 tutor to interview three pupils each, and to record their responses in a shared document, this will take 15 minutes for each tutor – easily achievable within a single 20-minute tutor session. Altogether, you would have data from 21 pupils – a decent sample size – in return for relatively little effort. To save further time in analysing the data, the slice team could then use an AI engine to summarise the findings.

The third way to minimise workload is to think carefully about the timing of data collection. You should aim to spread data collection evenly throughout the implementation period and align it with the school calendar to make sure that data collection doesn't clash with other pinch points throughout the year, such as assessment week, parents' evenings and report writing. We'll look at this in more detail in *Chapter 17: Timeline and streamline*.

Let's now draw all these ideas about data collection together in a worked example looking at a whole-school behaviour initiative.

Worked example: Whole-school behaviour

Limefield Academy is planning to refresh its behaviour policy and practices. Having carried out a 'root cause analysis', the slice team has identified five problems they would like to address:

1. There are too many school rules – neither pupils nor teachers know them all.
2. Many problems with pupil behaviour happen at break and lunchtime in areas of the school site not adequately covered by the duty rota.
3. Teachers find the procedure for recording behaviour incidents overly bureaucratic and cumbersome.
4. Teachers find it time consuming to set and host after-school detentions and chase up pupils who fail to attend.

5. A significant proportion of behavioural incidents are caused by friendship issues in Year 8.

In response to this, the slice team designs a complex intervention that initially comprises five strands:

1. Create new behaviour rules.
2. Design and implement a new duty rota.
3. Streamline the procedure for recording behaviour incidents.
4. Implement a new centralised detention policy.
5. Establish a peer mentoring programme for pupils in Year 8 to help address friendship issues and prevent bullying.

Having prepared each of these elements, the slice team decides to undertake a further round of baseline data collection in the summer term to capture people's thoughts on their plans before they move to the implementation phase in the autumn term.

First, because they have learned that a significant number of behaviour problems have their roots in conflicts that take place at lunchtimes, the slice team agrees to undertake a series of lunchtime observations over a two-week period to get a sense of what's happening on the ground.

This approach to data collection is one of the key principles of the famous Toyota Production System known as *genchi genbutsu*, which translates roughly as 'actual place and actual thing.' In other words, if you really want to understand a problem, go and see it for yourself!

Table 31 breaks down the research questions and data collection methods the slice team plans to use at each of the three levels – baseline, impact and side-effects. It also identifies when each strand of data collection takes place.

Area of focus	Level	Research question	Data collection tools	Sample	When to collect?
Behaviour rules	Baseline	To what extent do pupils know the new behaviour rules?	Pupil survey	One form group from each year	July
	Impact	To what extent do the new rules minimise low-level disruption?	Teacher survey	All teaching staff	Dec, Mar, Jun
	Side-effects	Have the new rules caused any unintentional problems?	Teacher survey	All teaching staff	Dec, Mar, Jun
Duty rota	Baseline	What do teachers think of the new duty rota?	Teacher focus group	One from each department	July
	Impact	To what extent does the new duty rota reduce lunchtime incidents?	Behaviour log	Sample of recent recorded	Half-termly
	Side-effects	Has the new duty rota caused any unintentional problems?	Teacher survey	All teaching staff	Dec, Mar, Jun
Recording procedure	Baseline	What do teachers think about the new recording procedure?	Teacher focus group	One from each department	July
	Impact	To what extent does the new system minimise workload?	Teacher survey	All teaching staff	Dec, Mar, Jun
	Side-effects	Has the new recording procedure caused any unintentional problems?	Teacher survey	All teaching staff	Dec, Mar, Jun

Area of focus	Level	Research question	Data collection tools	Sample	When to collect?
Centralised detentions	Baseline	What do teachers, leaders and support staff think about the new centralised detentions policy?	Teacher survey	All teaching staff	July
	Impact	To what extent does the new policy reduce detentions overall?	Behaviour log	Detention trends	Half-termly
	Side-effects	Has the new detention policy caused any unintentional problems?	Teacher survey	All teaching staff	Dec, Mar, Jun
Peer mentoring	Baseline	What do pupils think about the idea of peer mentoring?	Pupil focus group	Pupils with friendship issues	July
	Impact	To what extent does peer mentoring reduce bullying in Year 8?	Behaviour log	Year 8 data	Half-termly
	Side-effects	Has the new detention policy caused any unintentional problems?	Teacher survey	All teaching staff	Dec, Mar, Jun

Table 31 – Data collection plan (worked example)

At a glance, the data collection plan in Table 31 may look like a lot of work. However, many of these strands of data collection can be achieved at the same time. For example, eight of the 15 strands in this example are covered by a teacher survey, administered termly to all teaching staff.

Planning data collection in this way enables you to make sure every element of your complex intervention is being thoroughly evaluated. It also allows you to plan when to collect each strand of data, maximising impact while minimising workload.

CHAPTER SUMMARY

- Data-driven decision-making is the beating heart of the *Making Change Stick* programme. The approach is rooted in four premises:
  1. Any school improvement initiative is a complex intervention comprising several component parts.
  2. You need to evaluate each element separately.
  3. For each element, it's important to collect data at three levels – baseline, impact and side-effects.
  4. The aims of monitoring and evaluation are both formative and summative.
- Implementing a high-effort, high-impact school improvement initiative over a period of several years is rarely straightforward. You need to be agile and responsive as new evidence comes to light. In this way, you can continually orient your school towards achieving an optimal outcome.
- It's useful to think of data as coming in four overlapping pairs, all of which can be incredibly useful:
  - Primary and secondary.
  - Quantitative and qualitative.
  - Naturally occurring and elicited.
  - Hard and soft.
- There are many different types of data collection tools available, each with associated advantages and disadvantages.

- To triangulate your findings, aim to collect as many different kinds of data as you possibly can, while minimising the impact on workload.

  There are three ways in which we can minimise the impact on workload:

  - Sampling.
  - Spreading the load.
  - Distributing data collection thoughtfully throughout the implementation period.

Making Change Stick

Phase I: Make a start

- ☑ Appoint a slice team
- ☑ Optimise the team
- ☑ Choose your focus
- ☑ Write a one-page research summary
- ☑ Draft a comms plan
- ☑ Build a glass box

Phase II: Make a plan

- ☑ Map the journey
- ☑ Plan backwards
- ☑ Conduct a root cause analysis
- ☑ Build your improvement strategy
- ☑ Plan tight but loose
- ☑ Build steps to success
- ☑ Plan for diffusion
- ☑ Optimise for habit change
- ☑ Plan professional learning
- ☑ Prepare data collection
- ☐ Timeline and streamline
- ☐ Write a logic model
- ☐ Conduct a pre-mortem

Phase III: Make it happen

- ☐ Manage your project
- ☐ Create individual improvement plans
- ☐ Run PDSA cycles
- ☐ Schedule regular ‘pivot or persevere’ meetings
- ☐ Embed and sustain improvements
- ☐ Review, reflect – and plan your next project!

CHAPTER 17
TIMELINE AND STREAMLINE

Simplify, sequence and distribute your actions along a timeline to facilitate a smooth transition to the new norm.

Each chapter heading in *Part 2* of this book begins with a verb, and in a sense the contents page can be seen as a to-do list. But the chapter headings are broad strokes. In the full *Making Change Stick* programme, each chapter includes exercises designed to help you translate your thinking into a series of actions.

For example, from the last chapter, actions relating to data collection could include the following:

- Write a data collection plan, identifying how and when to collect data on each element of our improvement strategy.
- Create or collate data collection instruments.
- Collect baseline data.
- Review baseline data.
- Adapt your complex intervention and comms plan in light of baseline data collection.

Then, once the implementation period has begun:

- Collect the first round of impact data.
- Collect the first round of side-effects data.
- Review the impact and side-effects data.

- Adapt your complex intervention and comms plan in light of data collection relating to impact and side-effects.

By this point in the *Making Change Stick* programme, you may have identified several dozen such actions. And while the chapters in this book necessarily appear in a particular order, in practice these ideas overlap, so you'll likely need to organise the actions from each chapter into a logical timeline.

In this chapter, we're going to get our ducks in a row.[155] It's a short chapter but an important one, because this is where we consolidate our thinking and start to prepare for *Phase III: Make it happen*.

Broadly speaking, this is a two-part process. First, we're going to **streamline** our thinking. The word 'streamline' has several definitions that are relevant to our purposes here:

> Streamline:
>
> 1. A contour designed to minimise resistance to motion.
> 2. To put in order.
> 3. To make simpler or more efficient.[156]

This is where we review all the actions you've planned so far to make sure you aren't replicating your efforts or doing anything unnecessary. The aim here is to reduce friction without compromising impact.

Second, we're going to create a **timeline** along which you can sequence and organise your actions. Doing this will help ensure:

- Everything is done in a logical order.
- You minimise workload by making sure any activity is (more or less) evenly distributed throughout the implementation period.

In the following exercise, we'll break this down into four steps.

155 In case any international readers aren't familiar with this phrase, it means 'to be well prepared or well organised for something that is going to happen.'

156 Adapted from https://www.merriam-webster.com/dictionary/streamline.

Exercise 17.1: Timeline and streamline

1. Create a longlist of all the actions you've identified so far

Look back at any action items you identified so far in phases I and II of the *Making Change Stick* programme. Compile them into a single list. It makes sense to do this digitally, or perhaps using sticky notes, because you're going to need to shuffle them around in the next step.

2. Arrange them in order

Sequence your list of action items into roughly the order in which they need to happen. Some of the actions may need to take place at the same time. If this is the case, you may wish to group or 'chunk' some of the items together.

3. Create a timeline

The length of your timeline will depend on your context. However, as a rule of thumb, for a high-effort, high-impact school improvement initiative it can be helpful to think in terms of a three-year implementation period, as exemplified in Table 32.

Year	Who?	Focus
1	Innovators and early adopters.	Trial new ideas among innovators and early adopters. Establish evidence of impact.
2	Innovators and early adopters. Early and late majority.	Scale up effective practice across the school. Spread best practice to early and late majority.
3	Innovators and early adopters. Early and late majority. Resistors.	Embed and sustain impactful practices. Aim for consistency of routine practice.

Table 32 – Implementation timeline (worked example)

Please note, not all school improvement initiatives lend themselves to spreading innovative practice gradually across the school in this way. Sometimes, it's necessary for everyone to move in unison – as in the Limefield Academy behaviour example that runs through this book.

4. Populate your timeline

Place your actions along your timeline. It's likely that your timeline will be quite front-loaded, because implementation and improvement planning naturally take place at the start of the process. However, as far as you can, try to distribute the activity evenly throughout the implementation period, taking care to avoid any pinch points on the school calendar.

Park your timeline for now – we'll return to it in *Chapter 19: Conduct a pre-mortem* and *Chapter 20: Manage your project*.

CHAPTER SUMMARY

- By this point in the *Making Change Stick* programme, you may have identified several actions that need to be taken. It's now time to consolidate these actions and start to prepare for *Phase III: Make it happen*. To do this:
  1. Create a longlist of all the actions you've identified so far.
  2. Arrange them in order.
  3. Create a timeline.
  4. Populate your timeline.

Making Change Stick

Phase I: Make a start

- ☑ Appoint a slice team
- ☑ Optimise the team
- ☑ Choose your focus
- ☑ Write a one-page research summary
- ☑ Draft a comms plan
- ☑ Build a glass box

Phase II: Make a plan

- ☑ Map the journey
- ☑ Plan backwards
- ☑ Conduct a root cause analysis
- ☑ Build your improvement strategy
- ☑ Plan tight but loose
- ☑ Build steps to success
- ☑ Plan for diffusion
- ☑ Optimise for habit change
- ☑ Plan professional learning
- ☑ Prepare data collection
- ☑ Timeline and streamline
- ☐ Write a logic model
- ☐ Conduct a pre-mortem

Phase III: Make it happen

- ☐ Manage your project
- ☐ Create individual improvement plans
- ☐ Run PDSA cycles
- ☐ Schedule regular 'pivot or persevere' meetings
- ☐ Embed and sustain improvements
- ☐ Review, reflect – and plan your next project!

CHAPTER 18
WRITE A LOGIC MODEL

Capture all the moving parts of your improvement initiative on a single side of A4.

In *Chapter C: Implementation and improvement science – a new synthesis*, we saw how the change management literature can sometimes resemble a jungle of jargon. This is especially true when it comes to the models and frameworks people create to explain why they're doing what they're doing. There are many overlapping ideas and phrases – **theories of action**, **theories of change**, **logic models** and so on – and often, these phrases are used interchangeably, which can muddy the waters somewhat.

In *Chapter 10: Build your improvement strategy*, we saw how a theory of action can help us understand the difference between the status quo and an alternative (desired) state at three levels: beliefs and values, actions and consequences. In this chapter, we're going to write a logic model. This is similar to a theory of change, but we'll use the phrase 'logic model' to avoid any confusion with the earlier use of a theory of action.

A logic model is a one-page summary that captures all the moving parts of your change initiative. The idea is to create a snapshot that tells the story, at a glance, of what you want to achieve and how you plan to achieve it.

Think of the logic model as a distillation of all the thinking you have undertaken so far. It should take the form of a single side of A4, divided into the following areas:

- Impact goals – Starting with the end in mind, what do you want to achieve, for whom and by when?

- Root cause analysis – Returning to the present moment, which problem does your improvement initiative seek to address? What are its root causes?
- Perspectives – How does this problem play out for different people?
- Inputs – What resources do you need to invest in the change effort?
- Implementation – What are you going to do more of, less of or differently in order to achieve your impact goals?
- Outcomes – What short-, medium- and long-term outcomes do teachers and pupils need to achieve in order to achieve your impact goals?
- Monitoring and evaluation – How will you measure progress towards your goals, and how will you know when you've achieved them?

A logic model is useful for two reasons:

1. It enables you to communicate the essence of your improvement initiative to a range of stakeholders (colleagues, parents, carers, pupils, governors, school improvement partners, the wider world) so they can understand it at a glance.
2. It provides a neat visual summary that can be displayed where it can be seen regularly (such as on the staffroom wall, as the desktop background on your computer or on the back of your office door) to serve as a reminder of what you're trying to achieve and how you intend to achieve it.

Continuing the example of improving behaviour at Limefield Academy that runs through this book, we can see an example of a blank logic model in Figure 14 and a completed version in Figure 15. In this example, because the planned changes are happening across the whole school at the same time, it doesn't make sense to think in terms of spreading new practices through different adopter types – early adopters, early and late majority and so on. Instead, in this logic model the three phases of implementation focus on how the intervention will change across time, with different foci from one term to the next.

LOGIC MODEL **IMPROVEMENT FOCUS:** _____

ROOT CAUSE ANALYSIS	PERSPECTIVES	IMPLEMENTATION	OUTCOMES: TEACHERS	IMPACT GOAL(S)
What problem(s) do you need to solve, for whom? • *What are the root causes?* •	*How does this problem play out for different people?* *Pupils:* *Teachers:* *Leaders:*	*What do you need to do to achieve your impact goals?* **PHASE 1** • **PHASE 2** • **PHASE 3** •	*Short-term:* • *Medium-term:* • *Long-term:* • **OUTCOMES: PUPILS** *Short-term:* • *Medium-term:* • *Long-term:* •	*What difference do you want to make, for whom, by when?* •
INPUTS *What resources do you need to invest?* •			**MONITORING & EVALUATION** *Baseline:* • *Impact:* • *Side-effects:* •	

Figure 14 – Example logic model (blank)

Figure 15 – Example logic model (completed)

LOGIC MODEL **IMPROVEMENT FOCUS: Reduce low-level disruption in lessons**

ROOT CAUSE ANALYSIS

What problem(s) do you need to solve, for whom?

There's too much low-level disruption in lessons. This affects all pupils, teachers, leaders.

What are the root causes?

- Too many rules
- School layout
- Recording procedure
- Inconsistency
- Lack of centralised detentions
- Y8 'friendship issues

PERSPECTIVES

How does this problem play out for different people?

Pupils:
Some pupils in detention almost every day. All pupils have too much learning disrupted.

Teachers:
Stress/frustration of dealing with behaviour rather than teaching. Workload

Leaders:
Leaders are responsible for the wellbeing of teachers and the learning of all pupils.

IMPLEMENTATION

What do you need to do to achieve your impact goals?

PHASE 1: Summer

- Appoint slice team
- Design an improvement strategy to tackle the root causes of the problem

PHASE 2: Autumn

Implement 5 strategies:
1. New school rules
2. New duty rota
3. New recording procedure
4. Centralised detentions
5. Peer mentoring programme

PHASE 3: Spring

- Monitor and evaluate each strand
- Pivot or persevere
- Adjust our strategy using data and dialogue
- Embed and sustain improvements

OUTCOMES: TEACHERS

Short-term (Summer term):
- Consistent use of new school rules

Medium-term (by Christmas):
- Consistent use of recording system

Long-term:
- Embed and sustain consistent practice

OUTCOMES: PUPILS

Short-term (September):
- Learn new rules and expectations

Medium-term (Christmas):
- Year 9s complete peer mentoring training

Long-term (Spring term onwards):
- Peer mentors prevent issues escalating

IMPACT GOAL(S)

What difference do you want to make, for whom, by when?

- By September, all pupils will know the new school rules and expectations around behaviour in lessons
- By Christmas, all teachers should report that problems due to low-level disruption have been significantly reduced
- By Easter, we will have reduced the number of detentions set for low-level disruption by 50% (compared with last year)

INPUTS

What resources do you need to invest?

- Work with all teachers, leaders and pupils to shape new school rules and duty rota
- Design new procedure for recording behaviour incidents
- Staff (and teachers attend) centralised detentions
- Appoint coordinator and train Year 9 peer mentors

MONITORING & EVALUATION

Baseline:
- Pupil and teacher surveys, interviews and focus groups

Impact:
- Behaviour logs

Side-effects:
- Pupil and teacher surveys, interviews and focus groups

A caveat

It's important to understand that the logic model is a summary of all the thinking you have undertaken in the programme so far. It should not be used as a shortcut alternative to completing the full *Making Change Stick* programme.

Time is in short supply in schools, and the temptation to cut corners can be strong. But you cannot expect to bring about lasting, positive change if you limit the process of implementation and improvement planning to filling out a single side of A4. So instead of viewing the logic model as a planning tool, think of it simply as a summary of your key thinking to date. It should not be seen as an alternative to completing the full programme. You have been duly warned!

Now that we've made a comprehensive implementation and improvement plan and summarised it on a single page, we're almost ready to move to *Phase III: Make it happen*. All that remains is to stress-test our thinking a little…

CHAPTER SUMMARY

- A logic model is a one-page summary that captures all the moving parts of your change initiative. The idea is to create a snapshot that tells the story, at a glance, of what you want to achieve and how you plan to achieve it.
- The logic model takes the form of a single side of A4, divided into the following areas:
  - Impact goals – Starting with the end in mind, what do you want to achieve, for whom and by when?
  - Root cause analysis – Returning to the present moment, which problem does your improvement initiative seek to address? What are its root causes?
  - Perspectives – How does this problem play out for different people?
  - Inputs – What resources do you need to invest in the change effort?

- Implementation – What are you going to do more of, less of or differently in order to achieve your impact goals?
- Outcomes – What short-, medium- and long-term outcomes do teachers and pupils need to achieve in order to achieve your impact goals?
- Monitoring and evaluation – How will you measure progress towards your goals, and how will you know when you've achieved them?

- A logic model is useful for two reasons:
  1. It enables you to communicate the essence of your improvement initiative to a range of stakeholders, so they can understand it at a glance.
  2. It provides a neat visual summary that can be displayed where it can be seen regularly.
- Rather than viewing the logic model as a planning tool, think of it simply as a summary of your key thinking to date.

Making Change Stick

Phase I: Make a start

- ☑ Appoint a slice team
- ☑ Optimise the team
- ☑ Choose your focus
- ☑ Write a one-page research summary
- ☑ Draft a comms plan
- ☑ Build a glass box

Phase II: Make a plan

- ☑ Map the journey
- ☑ Plan backwards
- ☑ Conduct a root cause analysis
- ☑ Build your improvement strategy
- ☑ Plan tight but loose
- ☑ Build steps to success
- ☑ Plan for diffusion
- ☑ Optimise for habit change
- ☑ Plan professional learning
- ☑ Prepare data collection
- ☑ Timeline and streamline
- ☑ Write a logic model
- ☐ Conduct a pre-mortem

Phase III: Make it happen

- ☐ Manage your project
- ☐ Create individual improvement plans
- ☐ Run PDSA cycles
- ☐ Schedule regular 'pivot or persevere' meetings
- ☐ Embed and sustain improvements
- ☐ Review, reflect – and plan your next project!

CHAPTER 19
CONDUCT A PRE-MORTEM

Anticipate problems and solve or mitigate them before they happen.

This is the final chapter in *Phase II: Make a plan*.

In the first chapter in this section, *Chapter 7: Map the journey*, we undertook a thought experiment where we imagined a utopian vision of the future in which our school improvement initiative has gone as well as it could possibly go.

In this chapter, we're going to do the opposite.

In a seminal article for the *Harvard Business Review*, the cognitive psychologist Gary Klein wrote:

> Projects fail at a spectacular rate. One reason is that too many people are reluctant to speak up about their reservations during the all-important planning phase. By making it safe for dissenters who are knowledgeable about the undertaking and worried about its weaknesses to speak up, you can improve a project's chances of success.[157]

In order to make it safe for people to air their concerns and develop what he describes as 'prospective hindsight', Klein and his colleagues developed an activity called the **pre-mortem**. Klein explains the rationale as follows:

> A post-mortem in a medical setting allows health professionals and the family to learn what caused a patient's death. Everyone benefits except, of course, the patient. A pre-mortem in a business

157 Klein, G. (2007). Performing a Project Premortem. *Harvard Business Review*. 85(9), 18–19.

setting comes at the beginning of a project rather than the end, so that the project can be improved rather than autopsied.[158]

Exercise 19.1: Conduct a pre-mortem

Step 1: Assemble a wider pre-mortem team

For this exercise, you need to solicit feedback from people beyond the slice team. You may wish to go to the whole-school level and ask everyone to contribute to this process. Alternatively, you could be more strategic and choose a representative sample of teachers, leaders and support staff with different roles within the school, for example different year groups or phases in primary, or different departments in secondary.

Step 2: Give people time to read and digest your planning

Share your planning with the pre-mortem team and give them time to read and digest it. It's a good idea to do this at least a week before the pre-mortem activity itself. You may wish to share several key documents, such as those listed in Table 33 (in the full *Making Change Stick* programme, all the paperwork is contained within a single 'playbook').

Document	Chapter no/title
Research summary	*4: Write a one-page research summary*
Comms plan	*5: Draft a comms plan*
Mapping the journey	*7: Map the journey*
Impact goals	*8: Plan backwards*
The problem tree	*9: Conduct a root cause analysis*
Improvement strategy, with a mechanism of action for each element	*10: Build your improvement strategy*
Existing and alternative (desired) theories of action	*10: Build your improvement strategy*
Professional learning and development plan	*15: Plan professional learning*
Data collection plan	*16: Prepare data collection*
Implementation timeline	*17: Timeline and streamline*
Logic model	*18: Write a logic model*

Table 33 – Documentation to inform the pre-mortem

158 Ibid.

Step 3: Run the pre-mortem activity

A. Agree ground rules

Because this activity involves people from beyond the slice team, it's a good idea to agree some ground rules at the outset. You may wish to use the ground rules you agreed on in *Chapter 2: Optimise the team* – or you could create your own.

Here are some suggested ground rules:

1. Everyone is an equal member of the team.
2. All relevant information should be shared – especially inconvenient information.
3. Only use tech when it is essential to the running of the meeting.
4. Everyone should be free to air their honest views.
5. Everyone should be prepared to have their views challenged.
6. Everyone should work towards agreement where possible.
7. Confidentiality should be maintained.

B. Ask clarifying questions

Next, give people the opportunity to ask any clarifying questions they may have about the planning documents they have read. The aim here is not to raise concerns – that will come later – but simply to make sure people have understood the plans as they currently exist.

C. Connect emotionally to an unhappy outcome

Just as we did in the 'mapping the journey' activity, it's important not only to imagine a future state but also to connect emotionally to it. You may find it helpful to use the following script, which you can adapt to meet your needs:

> In the 'mapping the journey' activity, we pictured a utopian future in which our school improvement initiative had gone as well as it could possibly go. In this exercise, we're going to do the opposite. As a thought experiment, let's imagine ourselves three years in the future. Despite showing early signs of promise, our school improvement initiative has sadly not had the impact we

all hoped for. It has now fizzled out; nobody even mentions it anymore. It's just a fading, unhappy memory.

Shortly, we'll consider 'what went wrong'. But first, let's take a moment to imagine what that would feel like. Having worked so hard on this school improvement initiative, how would you feel if it didn't work? What kinds of things might you say, think and feel in this imagined future? How does it make you feel about implementing the next school improvement initiative?

Give people a few minutes to discuss this in pairs, and then ask them to share their thoughts with the wider group. You may find it helpful to collate people's suggestions into a list on a whiteboard or note down any key quotes or phrases.

D. Identify 'what went wrong'

Remaining in this unhappy imagined future, make a list of all the reasons why the school improvement initiative didn't work. To do this:

- Ask everyone to make a list individually.
- Working around the room, each person makes one suggestion – their top reason. (Someone should list the suggestions on a whiteboard.)
- Continue working your way around the room until all suggestions have been made. You may need to work your way around the room several times, with some people listing multiple reasons.

Once you have a complete list, see whether any of the items can be grouped together into themes. Give these themes a name, such as 'workload', 'communications' or 'resourcing'.

E. Solve or mitigate problems in advance

For each problem identified in step D, think creatively about how you could solve or mitigate that problem in advance.

For example, you may identify staff turnover as a significant threat to effective implementation. This is a common problem, and it's a tricky one because it's not possible to prevent it from happening – there will always be some degree of turnover in a school. However, you *can* plan how to minimise the problem of turnover by designing and implementing

a succession planning procedure, with robust protocols in place for onboarding new colleagues and offboarding those who are departing. You may also find it helpful to think about how to create a school culture where turnover is as low as it can possibly be.

F. Add any contingency planning to your implementation timeline

The final step in the pre-mortem activity is to add any mitigations or contingency plans to the implementation timeline you created in *Chapter 17: Timeline and streamline*, making a note of what needs to be done, by whom and when.

This concludes *Phase II: Make a plan*. We're now ready to move to *Phase III: Make it happen!*

CHAPTER SUMMARY

- The pre-mortem activity enables people to share their concerns about why your improvement initiative may not achieve its goals. Anticipating, solving or mitigating problems before they happen will significantly increase your chances of achieving a successful outcome.
- To run the pre-mortem activity, follow these steps:
    1. Assemble a wider pre-mortem team. You may wish to go 'whole school' and get everyone to take part in this process. Alternatively, you could be more strategic and choose a representative sample of teachers, leaders and support staff with different roles within the school.
    2. Give people time to read and digest your planning. It's a good idea to do this at least a week before the pre-mortem activity itself. Give the team time to review several key documents, such as:
        - Research summary.
        - Comms plan.
        - Mapping the journey.
        - Impact goals.
        - The problem tree.

- Improvement strategy, with a mechanism of action for each element.
- Existing and alternative (desired) theories of action.
- Professional learning and development plan.
- Data collection plan.
- Implementation timeline.
- Logic model.

3. Run the pre-mortem activity:
   A. Agree ground rules.
   B. Ask clarifying questions.
   C. Connect emotionally to an unhappy outcome.
   D. Identify 'what went wrong'.
   E. Solve or mitigate problems in advance.
   F. Add any contingency planning to your implementation timeline.

Making Change Stick

Phase I: Make a start

- ☑ Appoint a slice team
- ☑ Optimise the team
- ☑ Choose your focus
- ☑ Write a one-page research summary
- ☑ Draft a comms plan
- ☑ Build a glass box

Phase II: Make a plan

- ☑ Map the journey
- ☑ Plan backwards
- ☑ Conduct a root cause analysis
- ☑ Build your improvement strategy
- ☑ Plan tight but loose
- ☑ Build steps to success
- ☑ Plan for diffusion
- ☑ Optimise for habit change
- ☑ Plan professional learning
- ☑ Prepare data collection
- ☑ Timeline and streamline
- ☑ Write a logic model
- ☑ Conduct a pre-mortem

Phase III: Make it happen

- ☐ Manage your project
- ☐ Create individual improvement plans
- ☐ Run PDSA cycles
- ☐ Schedule regular 'pivot or persevere' meetings
- ☐ Embed and sustain improvements
- ☐ Review, reflect – and plan your next project!

PHASE III:
MAKE IT HAPPEN

CHAPTER 20
MANAGE YOUR PROJECT

Use project management tools to keep track of what needs to be done, by whom, when, for how long and in what order.

In researching and writing this book, it has often struck me as strange that some practices that are fundamental mainstays in fields such as business, politics and manufacturing have somehow not diffused into the world of school-based education. The two most obvious examples of this are **communications planning** and **project management**.

Projects versus operations

Project management is a field of theory and practice that incorporates a wide range of ideas and strategies to help organisations achieve their goals.

It's firstly important to understand the difference between **projects** and **operations**. According to the *Guide to the Project Management Body of Knowledge* (PMBOK, the 'bible' of project management), a project is a 'temporary endeavour undertaken to create a unique product, service or result.'[159] The words 'temporary' and 'unique' are important here. A project is a one-off undertaking. In contrast, an operation can be defined as 'the ongoing, repetitive set of activities that sustain the organisation.'[160]

159 Project Management Institute (2021). *A Guide to the Project Management Body of Knowledge: PMBOK ® Guid*e (7th ed.). Pennsylvania: Project Management Institute, Inc, p3.

160 Horine, G. M. (2017). *Absolute Beginner's Guide to Project Management* (4th ed.). Boston: Que Publishing, p8.

In implementing change to the point that improved outcomes are embedded and sustained, it's useful to look through the lens of operations. But at the outset, it's more useful to think about school improvement as a discrete project.

What is project management?

The scope of project management is huge. Gregory Horine suggests that project management can involve:

- Planning, organising, implementing, leading and controlling the work of a project to meet the goals of the organisation.
- Defining a project, developing a plan, executing the plan, monitoring progress against the plan, overcoming obstacles, managing risks and taking corrective actions.
- Managing the competing demands and trade-offs between the desired results of the project (scope, performance, quality) and the natural constraints of the project (time and cost).
- Leading a team that has never worked together before to accomplish something that has never been done before in a given amount of time with a limited amount of money.[161]

Many of the items in this list will sound familiar, and in a sense, the *Making Change Stick* programme can be seen as a 'project management' approach to leading change in schools.

In this chapter, we use the phrase 'manage your project' to focus on just one aspect of project management: **execution**. In particular, we'll look at two important project management tools: the **Gantt chart** and the **shared calendar**.

What is a Gantt chart?

The Gantt chart is named after Henry Gantt, an engineer and management consultant who invented an ingenious approach to visualising a project schedule in the 1910s.[162] A Gantt chart is a cross between a to-do list

161 Ibid., p9.

162 Gantt, H. L. (1910). Work, Wages and Profit. *Engineering Magazine*. New York. Republished as Gantt, H. L. (1974). *Work, Wages and Profits*. Easton, Pennsylvania: Hive Publishing Company.

and a timeline. It allows you to see at a glance what needs to be done, by whom, when, for how long and in what order.

In a Gantt chart, activities or 'action items' are listed vertically on the left-hand side and time is represented along the horizontal axis. As you move from left to right, activities are represented as horizontal bars that show when each action item needs to start and finish, and how long it will take (with the length of the bar determined by the length of time required). Some Gantt charts also include a vertical 'today' line, which shows where you're up to in the process and what you need to be focusing on at any point in time. And some include a 'percentage complete' bar that increases as you complete each action item.

There are two ways in which the activities can be listed in a Gantt chart:

- Option A – All action items are listed from top to bottom in the order in which they need to happen. This will shuffle up items from different areas of the project, e.g. comms, professional learning, data collection, etc.
- Option B – Action items are listed under different headings – comms, professional learning, data collection, etc. This makes it easier to keep track of what's happening in each area of the project, but it means the bars on the chart no longer appear in a sequential order.

To illustrate, let's return to our example of improving behaviour at Limefield Academy. In *Chapter 16: Prepare data collection*, the slice team at Limefield Academy planned several strands of baseline data collection. First, all members of the slice team agreed to undertake a series of lunchtime observations over a two-week period, to get a sense of what's happening 'on the ground'.

Following this, they decided to administer a survey to pupils and teachers and then follow this up with pupil and teacher focus groups. The surveys are to be administered by MK, and the focus groups are to be run by BG. The 'baseline data collection' section of their Gantt chart can be seen in Figure 16.

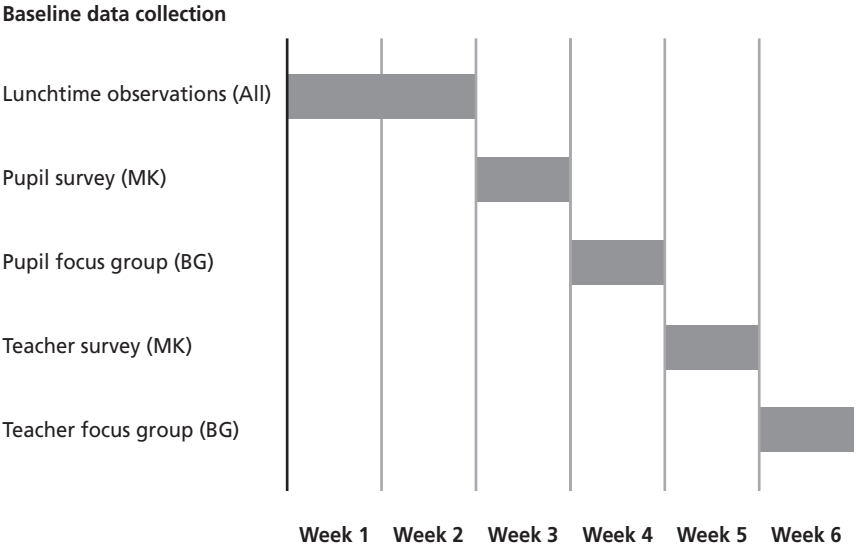


Figure 16 – Gantt chart: baseline data collection (worked example)

Creating and using your Gantt chart

First, return to the timeline you created in *Chapter 17: Timeline and streamline*. For each item, make a note of the following:

- How long is each action item likely to take?
- Who needs to execute each action item?
- When does each action item need to be completed by?
- Who will check each action item has been completed in good time?
- Which action items need to be completed before others can begin?
- Can any action items be carried out at the same time?
- At what points in time do we need to focus on different 'adopter types' (innovators, early adopters, the early and late majorities and those who are resistant to change).
- What different kinds of support do these adopter types require, and how does this support feature in your timeline?

Next, transfer each action item from your timeline onto your Gantt chart. There is no 'right way' to organise your Gantt chart – I encourage

you to play around and see what works for you. There are many different software packages that allow you to create Gantt charts – some paid, some free – but you can make one fairly easily using spreadsheet software. In the full *Making Change Stick* programme there are downloadable templates for both Microsoft Excel and Google Sheets. It's a good idea to use shared versions to allow everyone to access the document remotely. You may wish to set different 'rights' so that some people can edit the Gantt chart while others can only view it.

Creating a Gantt chart is one thing – using it is quite another! It may sound obvious, but the trick is to check and update the Gantt chart regularly. This may not come naturally, so it's a good idea to set an alert to remind you to do this on at least a weekly basis (for whoever is coordinating the project at this stage) and also whenever the slice team meets.

Set reminders on a shared calendar

You may already have a shared calendar at your school or organisation. If not, ask your IT support team to create one for the slice team.

For each action item, set an alert so the relevant people will be reminded in a timely manner about what needs to happen and when. You may wish to only notify the relevant people, i.e. the person responsible for executing a task and the person responsible for checking it's been done. Alternatively, you might choose to alert everyone on the slice team so that everyone has an oversight of what's happening and when. Decide together how you would like to proceed.

Who should manage the project?

The slice team remains responsible for the success of your school improvement initiative throughout *Phase III: Make it happen*. However, it makes sense at this stage for one person within the team to take a lead on coordinating the project. Often, this responsibility falls to the most senior member of the slice team, simply because they have a lighter teaching load to allow for such duties to be undertaken. But remain vigilant to make sure you don't slip back into 'top-down' decision-making. Whenever the slice team meets, decisions relating to project management should be agreed by all team members.

Now that we have a clear plan in place for how to implement school improvement at the level of the organisation, it's time to zoom in and think about change at the level of individuals.

CHAPTER SUMMARY

- In implementing change to the point that improved outcomes are embedded and sustained, it's useful to look through the lens of operations. But at the outset, it's useful to think about school improvement as a discrete project. And projects need to be managed!
- In a sense, the *Making Change Stick* programme can be seen as a 'project management' approach to leading change in schools. To help execute a school improvement initiative effectively, two project management tools are especially useful: the Gantt chart and the shared calendar.
- In a Gantt chart, activities or 'action items' are listed down the vertical axis, and time is represented along the horizontal axis. As you move from left to right, activities are represented as horizontal bars that show when each action item needs to be executed, and how long it will take (with the length of the bar determined by the length of time required).
- To create your Gantt chart, return to the timeline you created in *Chapter 17: Timeline and streamline*. For each item, make a note of the following:
    - How long is each action item likely to take?
    - Who needs to execute each action item?
    - When does each action item need to be completed by?
    - Who will check each action item has been completed in good time?
    - Which action items need to be completed before others can begin?
    - Can any action items be carried out at the same time?

  - At what points in time do we need to focus on different 'adopter types'?
  - What different kinds of support do these adopter types require, and how does this support feature in your timeline?

- Next, transfer each action item from your timeline onto your Gantt chart. For each action item, set an alert on a shared calendar so the relevant people will be reminded in a timely manner about what needs to happen and when.
- During *Phase III: Make it happen*, it makes sense for one person to take a lead on coordinating the project. However, it's important to remain vigilant to make sure that you don't slip back into 'top-down' decision-making.

Making Change Stick

Phase I: Make a start

- ☑ Appoint a slice team
- ☑ Optimise the team
- ☑ Choose your focus
- ☑ Write a one-page research summary
- ☑ Draft a comms plan
- ☑ Build a glass box

Phase II: Make a plan

- ☑ Map the journey
- ☑ Plan backwards
- ☑ Conduct a root cause analysis
- ☑ Build your improvement strategy
- ☑ Plan tight but loose
- ☑ Build steps to success
- ☑ Plan for diffusion
- ☑ Optimise for habit change
- ☑ Plan professional learning
- ☑ Prepare data collection
- ☑ Timeline and streamline
- ☑ Write a logic model
- ☑ Conduct a pre-mortem

Phase III: Make it happen

- ☑ Manage your project
- ☐ Create individual improvement plans
- ☐ Run PDSA cycles
- ☐ Schedule regular 'pivot or persevere' meetings
- ☐ Embed and sustain improvements
- ☐ Review, reflect – and plan your next project!

CHAPTER 21
CREATE INDIVIDUAL IMPROVEMENT PLANS

Apply implementation and improvement strategies at the level of individuals, as well as the organisation.

So far in the *Making Change Stick* programme, most of our thinking has been focused on the organisational level. As we move into *Phase III: Make it happen*, we also need to start thinking about individuals.

The strategies listed below are organised under the same headings as they appear in the full *Making Change Stick* programme. You may not need to apply all these ideas to individuals. Instead, think of this list as a menu of options. Those with an asterisk are recommended; these activities can easily be completed in a single INSET day (see an example day on page 379). However, you may find it helpful to use some of the additional strategies listed below as well.

Make a start

- Choose your focus.
- Review the one-page research summary.*

Make a plan

- Map the journey.*
- Plan backwards.
- Conduct a root cause analysis.*
- Plan your improvement strategy.*

- Plan tight but loose.
- Build steps to success.*
- Plan for habit change.*
- Prepare data collection.
- Timeline and streamline.
- Conduct a pre-mortem.*

Make it happen

- Run PDSA (plan, do, study, act) cycles.*
- Write and share action triggers.

Applying these strategies at the level of departments, year groups, phases or individuals will allow your colleagues to tailor their focus and their actions to their particular context, subject area or pupils. The aim is for each person to write an individual improvement plan comprising strategies to be implemented and evaluated through a series of PDSA cycles (the focus of the next chapter).

Implementing school improvement is a front-loaded process. I wouldn't go so far as say 'it's all in the planning' – you also need to collect data and to reorient your practice towards achieving your impact goals. But planning is a hugely important part of the process.

For this reason, just as the full *Making Change Stick* programme requires a significant time commitment up front, when it comes to creating individual improvement plans it's a good idea to set aside a decent amount of time – early in the process – when this important work can take place.

As mentioned in *Chapter 15: Plan professional learning*, you may wish to consider dedicating a whole INSET day to writing individual improvement plans. The structure of the day might look something like the following:

Make a start

9–9.30am – Review the one-page research summary.

Make a plan

9.30–10am – Map the journey.

10–11am – Conduct a root cause analysis.

11–11.30am – Break.

11.30am–12.15pm – Plan your improvement strategy.

12.15–1pm – Build 'steps to success'.

1–2pm – Lunch.

2–2.30pm – Plan for habit change.

2.30–3pm – Conduct a pre-mortem.

Make it happen

3–3.30pm – Plan your first PDSA improvement cycle.

3.30–4pm – Write and share action triggers.

If your school improvement initiative requires everyone to get on board with new ways of working at the same time, you may find it helpful to apply the ideas in this chapter to all colleagues in a single day, as outlined above.

If, however, your improvement initiative involves trialling new ideas and then spreading new ideas and practices throughout the school, it makes sense to apply these ideas firstly to innovators and early adopters, then to the early and late majorities, and finally to those who are more resistant to change. In this case, it will be harder to organise a one-day session for just a few individuals, so you may find it easier to complete this process as a series of 3x two-hour twilight sessions. These should be held in fairly quick succession to generate momentum for change.

In the next chapter we'll look at how to implement these improvement plans through a series of PDSA cycles – a cornerstone of improvement science.

CHAPTER SUMMARY

- Many of the tools and strategies we've used so far can be used at different levels (e.g. whole-school, departments (secondary), year groups/phases (primary) and individual practitioners).
- You may not need to use all the strategies listed. Instead, think of it as a menu of options.
    - Make a start
        - Choose your focus.
        - Write a one-page research summary.
    - Make a plan
        - Map the journey.
        - Plan backwards.
        - Conduct a root cause analysis.
        - Plan your improvement strategy.
        - Plan tight but loose.
        - Build 'steps to success'.
        - Plan for habit change.
        - Prepare data collection.
        - Timeline and streamline.
        - Conduct a pre-mortem.
    - Make it happen
        - Run PDSA cycles.
        - Write and share action triggers.
- Applying these strategies at the level of departments, year groups, phases or individuals will allow your colleagues to tailor their focus and their actions to their particular context, subject area or pupils. The aim is for each person to write an individual improvement plan comprising several action steps to be implemented and evaluated through a series of PDSA cycles.
- If possible, set aside an INSET day early in the process when this work can take place.

Making Change Stick

Phase I: Make a start

- ☑ Appoint a slice team
- ☑ Optimise the team
- ☑ Choose your focus
- ☑ Write a one-page research summary
- ☑ Draft a comms plan
- ☑ Build a glass box

Phase II: Make a plan

- ☑ Map the journey
- ☑ Plan backwards
- ☑ Conduct a root cause analysis
- ☑ Build your improvement strategy
- ☑ Plan tight but loose
- ☑ Build steps to success
- ☑ Plan for diffusion
- ☑ Optimise for habit change
- ☑ Plan professional learning
- ☑ Prepare data collection
- ☑ Timeline and streamline
- ☑ Write a logic model
- ☑ Conduct a pre-mortem

Phase III: Make it happen

- ☑ Manage your project
- ☑ Create individual improvement plans
- ☐ Run PDSA cycles
- ☐ Schedule regular 'pivot or persevere' meetings
- ☐ Embed and sustain improvements
- ☐ Review, reflect – and plan your next project!

CHAPTER 22
RUN PDSA CYCLES

Implement and evaluate new ideas and practices through a series of PDSA cycles – a cornerstone of improvement science.

As we saw in *Chapter 12: Build steps to success*, school improvement is not simply a case of 'flicking a switch' or activating new ideas and practices as though they are light bulbs. Typically, a school improvement strategy will need to progress through a series of stages. As you move through each stage, each element should be trialled and evaluated, prodded and poked, tweaked and re-evaluated before you can get a sense of whether it's doing what you want it to do.

How to implement a complex intervention

There are two broad ways in which you could implement a complex intervention – everything at once, or one thing at a time. There is no 'right way' – it depends on the context. In the Limefield Academy example, the school has decided to implement five improvement strategies at more or less the same time:

1. New school rules.
2. New duty rota.
3. New recording procedure.
4. Centralised detentions.
5. Peer mentoring programme.

However, within each of these strands, there is a degree of flexibility as to how they could be implemented and there may be several stages of iteration. For example:

1. How should the new rules be phrased? How and where should they be displayed? What language should people use when referring to the rules? Should the rules be used preventively as well as responsively?
2. How well is the duty rota working? How should we respond if new 'hot spots' emerge? How will we know when we've arrived at the optimal version?
3. How well is the new recording procedure working? How many rounds of trial and evaluation will we need to undertake before we can be confident that the system is as good as it can possibly be?
4. How frequently should centralised detentions be held? Who will administer and staff these detentions? How much notice will pupils receive? How will parents and carers be notified? How long should the detentions be? Should the teacher who issued the detention attend so that they can speak with the pupil in question? If so, for how long should they attend?
5. How will the peer mentoring programme run? How many peer mentors should be trained? How will sessions be arranged? Where and when will these sessions take place? How long will each session last? How will peer mentors follow up to see whether an issue has been resolved?

With so many variables that can be adjusted, it's important to make sure each element of your complex intervention is having the desired effect. This requires a systematic approach – iterating and evaluating one thing at a time and carefully assembling each key element of your improvement strategy like bricks in a wall.

Enter the **PDSA (plan, do, study, act) cycle** – a cornerstone of improvement science. In *Chapter A: The mind-blowing question*, we encountered a memorable quote from Professor Anthony Bryk and colleagues that in education, that pattern of change is to 'implement fast, learn slow, and burn goodwill as you go.'[163] PDSA cycles enable us to *start small, learn fast and scale as we go*, minimising risk and decreasing the likelihood that any changes to practice will have undesirable consequences.

163 Bryk, A. S., Gomez, L. M., Grunow, A. & LeMahieu, P. G. (2015). *Learning to Improve: How America's Schools Can Get Better at Getting Better.* Cambridge, MA: Harvard Education Press.

The PDSA cycle

The PDSA cycle is a framework for continuous improvement developed in the 1940s by the statistician and management consultant W. Edwards Deming. This in turn was based on the pre-existing PDCA (plan, do, check, act) cycle, developed in the 1920s by the physicist and engineer Walter Shewhart.

For Deming, 'check' was an insufficient term for the deeper level of analysis that he felt was needed at that stage of the cycle and so he changed the word to 'study'. The PDCA cycle is still widely used in business and industry, but PDSA is more widely used in healthcare and education, so this is the version we use in the *Making Change Stick* programme.

PDSA cycles can be used at a number of levels: individual practitioners, year groups and key stages (in primary schools), departments and faculties (in secondary schools), at the level of the whole school and at the level of groups of schools, such as a local authority or multi-academy trust. The time it takes to proceed through a single PDSA cycle can vary, but the idea is that they're fairly rapid. For each element of your complex intervention, you may need to proceed through several cycles until you find the best way of doing it. You should therefore think in terms of two or three weeks rather than several months.

Let's look at each stage in turn.

Step 1: Plan

There are three questions to answer in this stage.

A. What are you going to do?

This will probably be one of the key elements in your complex intervention, or perhaps a small step towards implementing one of those key elements. For example:

- Create a new set of school rules.
- Implement a new duty rota.
- Write to parents to tell them about the new peer mentoring programme.

B. How are you going to evaluate it?

This will probably include some of the 'impact' or 'side-effect' measures from your data collection plan.

C. What do you predict will happen?

In *Chapter 10: Build your improvement strategy*, for each element of your complex intervention you wrote a mechanism of action, using the sentence frame, 'When we implement X, Y will happen because Z.' For example:

> When we implement new school rules, there will be fewer disruptions in lessons because there will be much greater clarity around what teachers expect in terms of behaviour.
>
> When we implement a new duty rota, there will be fewer behaviour incidents at lunchtime because pupils behave differently when they know they are being supervised.
>
> When we implement a peer mentoring programme, there will be fewer behavioural problems in lessons relating to friendship issues because these will have been resolved or dealt with elsewhere.

These statements are essentially predictions that we can now test through the use of PDSA cycles.

Step 2: Do

This is where you implement the planned change and collect data to evaluate it. Data collection should not be a huge, time-consuming exercise. PDSA cycles are supposed to be rapid, and as always, sampling is your friend. Talk to a few pupils, look at a few books, administer a quick survey… Just do whatever you need to do to get a sense of how well the new practice or strategy is landing.

Step 3: Study

Set aside some time – around 20–30 minutes, ideally – to reflect on what you noticed in Step 2. You may find it easier to do this in dialogue with a colleague, rather than by yourself. Did everything go according to plan? Did the data support your prediction? Were there any surprises along the way?

This stage is where much of the really interesting professional learning happens. And the good news is, it's a win-win situation. If the data you

collected confirms your prediction, great – you just got even better at what you do! If things didn't go according to plan, this may initially be disappointing. But don't be too dispirited – you may be on the verge of a breakthrough…

Take the time to get to the bottom of what's going on. Revisit your 'mechanism of action' prediction statement. What went wrong? Is there a faulty assumption hidden in your prediction statement? Is it to do with how the strategy was implemented? Has there been some form of communication breakdown? Was your data collection unable to capture the full picture? Perhaps you just need to give the strategy more time to take effect. If you could do this PDSA cycle again, what would you do differently and why?

This brings us to the final stage in the cycle.

Step 4: Act

Depending on the conclusions you reached in Step 3, the final step in the cycle is to decide what you're going to do next. You essentially have three options here: **adopt**, **adapt** or **abandon**.

If you're confident that the new practice is working as well as it possibly can, you should adopt that practice. Incorporate it into your repertoire so that it becomes part of 'the way things are done around here'. 'Bake it in' and adopt a new focus for your next PDSA cycle, where you will trial and evaluate a different key element from your complex intervention.

If you feel that the implementation of your new strategy or practice could be improved upon, or you feel you could capture it better using some different method of data collection and analysis, you should adapt that aspect of your practice and repeat the cycle.

Finally, if you find that the new strategy or practice just isn't working, or it may even be making things worse – and if you feel it cannot be improved through adaptation and re-evaluation – then you should probably abandon it and try something else altogether.

In PDSA cycles, we carefully evaluate each micro step along the way. In the next chapter, we'll zoom out to the whole-school level and apply this thinking – adopt, adapt or abandon – to the school improvement initiative more widely.

CHAPTER SUMMARY

- School improvement is not a case of 'flicking a switch'. Typically, each element of your complex intervention will need to move through a series of stages. As you progress through each stage, each element should be trialled and evaluated, tweaked and re-evaluated.
- With many variables in play at any one time, it's important to make sure each element of your complex intervention is having the desired effect. Enter the PDSA cycle – a cornerstone of improvement science.
- The time it takes to proceed through a single PDSA cycle can vary, but the idea is that they're fairly rapid. For each element of your complex intervention, you may need to proceed through several cycles until you find the best way of doing it. You should therefore think in terms of two or three weeks rather than several months.
- In 'Step 1: Plan', answer the following three questions:
  - What are you going to do?
  - How are you going to evaluate it?
  - What do you predict will happen?
- In 'Step 2: Do', implement the planned change and collect data to evaluate it. Data collection should not be a time-consuming exercise. Use sampling to get a sense of how well the new practice or strategy is landing.
- In 'Step 3: Study', set aside some time – around 20–30 minutes, ideally – to reflect on what you noticed in 'Step 2: Do'. You may find it helpful to do this in conversation with a colleague, rather than by yourself. Did everything go according to plan? Did the data support your prediction? Were there any surprises along the way? This is where much of the really interesting professional learning happens.
- In 'Step 4: Act', decide what you're going to do next. You essentially have three options here: adopt, adapt or abandon. Identify the focus of your next PDSA cycle, and repeat the process.

Making Change Stick

Phase I: Make a start

- ☑ Appoint a slice team
- ☑ Optimise the team
- ☑ Choose your focus
- ☑ Write a one-page research summary
- ☑ Draft a comms plan
- ☑ Build a glass box

Phase II: Make a plan

- ☑ Map the journey
- ☑ Plan backwards
- ☑ Conduct a root cause analysis
- ☑ Build your improvement strategy
- ☑ Plan tight but loose
- ☑ Build steps to success
- ☑ Plan for diffusion
- ☑ Optimise for habit change
- ☑ Plan professional learning
- ☑ Prepare data collection
- ☑ Timeline and streamline
- ☑ Write a logic model
- ☑ Conduct a pre-mortem

Phase III: Make it happen

- ☑ Manage your project
- ☑ Create individual improvement plans
- ☑ Run PDSA cycles
- ☐ Schedule regular 'pivot or persevere' meetings
- ☐ Embed and sustain improvements
- ☐ Review, reflect – and plan your next project!

CHAPTER 23
SCHEDULE REGULAR 'PIVOT OR PERSEVERE' MEETINGS

Use a combination of data and dialogue to continually reorient your school towards achieving optimal outcomes.

Making Change Stick is a front-loaded approach to school improvement. When you're planning a whole-school improvement initiative, it's important to invest time at the outset to consider the planned change from every conceivable angle because this will give you the best chance of achieving the lasting improvements you want to see.

But it would be going too far to say, 'It's all in the planning.' There's an apocryphal saying, often misattributed to Abraham Lincoln, that if you have six hours to chop down a tree, you should spend the first four hours sharpening your axe. But this is terrible advice! Apart from anything, it doesn't take four hours to sharpen an axe. Assuming that the axe is blunt to begin with, it's probably a good idea to sharpen it at the outset. But then you should chop the tree for a bit, then sharpen your axe again, then do some more chopping and so on.

The axe metaphor frames this chapter nicely. The ideas and strategies we worked through in *Phase II: Make a plan* set the initial course. This is the sharpening of the axe. But it's also important to remember that school improvement is a dynamic process. Things change over time, new information comes to light and you need to adapt accordingly. If you encounter a knot in the wood, you could sharpen the axe again. Alternatively, you could approach the tree from a different angle.

'Pivot or persevere' meetings

Changing course can be challenging – emotive, even. Sometimes, leaders worry that if they go back on a decision they've made publicly, they'll look weak. This is why politicians often double down rather than changing course – to avoid headlines about the dreaded 'u-turn'. But when new information comes to light, changing direction is often the smart move. The question is, how should we decide when to change direction and when to stay the course?

The phrase 'pivot or persevere' comes from an influential book, *The Lean Startup*, by the entrepreneur Eric Reis.[164] Reis advises business leaders to hold regular '**pivot or persevere' meetings**, where they look at different aspects of their organisation and try to figure out ways of optimising and improving their operations.

Translating this idea to school improvement, this means scheduling regular meetings where the slice team reviews the data as it comes in, looking at each element of your improvement strategy and asking:

- How well is this working?
- Do we need to pivot (i.e. tweak what we're doing in some way)?
- Or should we persevere (i.e. stick with the current plan)?

Two dangers

'Pivot or persevere' meetings help you walk the line between two opposing dangers.

Danger 1: The weathervane trap

When you implement an improvement strategy, often things get worse before they get better. This is known as the **implementation dip**.

When you implement change in a school – introducing a new set of school rules, say – you may experience some downsides at first. You need to spend time coming up with the new rules. You need to change your habits and behaviours as they relate to the old rules. You need to learn how to refer to the new rules in a way that feels intuitive and helps improve behaviour. You need to monitor and evaluate the ways in which

164 Reis, E. (2011). *The Lean Startup: How constant innovation creates radically successful businesses.* UK: Penguin Random House.

the new rules are being used and work towards achieving consistency of practice. These things take time and effort, and you're unlikely to reap the rewards straight away.

When there are more downsides than upsides, the temptation to change course can be overwhelming – especially when people are being critical and questioning your decisions. But it's important not to be a weathervane that changes direction with every passing breeze. Sometimes, leadership requires patience and perseverance – holding the line and keeping the faith that a strategy will come good in the end.

Should you find yourself in an implementation dip, naturally you want to come out the other side of it as soon as possible. You want the dip to be as brief – and as shallow – as possible. The best way to exit the dip may simply be to hold the line, focus on consistency of practice and keep the faith that your improvement strategy will soon bear fruit.

This said, there's another danger that lies in the opposite direction that you also need to be mindful of…

Danger 2: The sunk cost fallacy

The sunk cost fallacy is the problem that arises when you persevere too much. It's when people think, 'Hmm. This strategy doesn't appear to be working. But we've invested so much in it – time, energy, reputation – we can't *possibly* quit now. Let's hold the line a little longer…' This can be a significant problem. As Reis puts it: 'There is no bigger destroyer of creative potential than the misguided decision to persevere.'[165]

Imagine a motorist is told that their car needs a new exhaust system, costing £1500. The car only cost £2500. At first, the motorist wonders whether it's worth spending the money, or whether they should just write it off and get a new car. Then they think, 'Could I buy the same model of car for £1500? No. Then it's worth spending the money.' Three months later, the engine cylinders need replacing, costing a further £1200. The motorist thinks 'Could I buy the same model of car for £1200? No. Besides, if I sell it now, I won't get the benefit of that new £1500 exhaust system. It's worth spending the money.' And so they reach for their credit card. But by now they've spent more in a three-month period than the car is worth.

165 Ibid., p149.

Clearly, there comes a point at which it no longer makes sense to keep throwing good money after bad. But where's the cut-off point? How can we know when to make the call? There's no easy answer to this question, because you may not be aware of all the facts. In the motorist example, the car may not require any further significant repairs for another five years. Alternatively, the clutch could break tomorrow. All you can do is to make the decision-making process as well informed as possible.

Two solutions

Having sketched out these two opposing dangers, several questions arise:

- How should we decide whether to persevere in the face of difficulty or call it quits?
- For how long should we persevere in the face of such difficulty?
- If we change course, on what basis should we make the decision?
- How can we tell when we're in an implementation dip, and when we're on the slippery slope to somewhere even worse?

As is so often the case, the answer to these questions depends on the context. However, we can be certain that the way to answer these questions combines two factors: **data** and **dialogue**.

The evidence you collect as part of your **data collection plan** will go a long way to telling you whether you're on the right path. But data is just information – you also need dialogue to make sense of the evidence. As new evidence emerges, you need to look at it from multiple perspectives – leaders, teachers, support staff and so on – and decide together what it's telling you.

We can think of this as a simple equation:

Data x dialogue = informed decision-making

As with the implementation equation we encountered in *Chapter D: The role of school leaders in making change stick*, the multiplication sign is important here. If either the data or the dialogue is at fault, the decision-making will be faulty also. So, the higher quality the data – and the higher quality the dialogue – the better the decision-making will be. This is the opposite of the common expression sometimes abbreviated as GIGO: garbage in, garbage out.

Worked example: Limefield Academy

The Limefield Academy slice team implements their five behaviour reforms – new school rules, a new duty rota, a new recording procedure, centralised detentions and a peer mentoring programme – at the start of the school year. They then start monitoring the impact, collecting and analysing data according to their data collection plan.

By the end of the first half term (after seven weeks), there's no compelling evidence that their improvement effort is working. In fact, they've hit a few stumbling blocks:

- The new school rules – ready, respectful, responsible – seem to be working better than the previous rules. They're certainly a lot easier to remember. However, some of the rules are working better than others. 'Ready' can easily be applied when a pupil turns up to a lesson without a pen, or when they're late to a lesson. It clearly translates into behaviours that the teacher can make a judgement call on. Likewise, 'respectful' can be used to reinforce the use of manners and to resolve conflict. However, 'responsible' is a lot more subjective and teachers are unsure about how to use this in practice. Who is responsible for doing what?
- Aspects of the new duty rota are working well. There are more staff on the field and playgrounds, where most of the behaviour problems were happening. However, this means there are fewer staff in other areas of the school, in particular the canteen and in the corridors.
- Some teachers are using the new recording procedure to good effect. However, consistency is becoming an issue. While some teachers issue hundreds of reward points each week, others are in single figures.
- The centralised detention system is working well for the most part. However, it's only running on two days a week, and some teachers are unable to attend the detention to resolve the problem with the pupil because of other after-school commitments.
- The peer mentoring programme hasn't really taken off yet. In focus groups, pupils have expressed reluctance to use it because they don't really understand what is involved.

Perhaps because of these teething difficulties, there has not yet been a noticeable improvement in terms of low-level disruption in lessons. Should the slice team abandon this improvement effort and revert to what the school was doing before? Should they hold the line and hope that the new strategies will pay dividends soon? Or should they 'pivot' – tweak what they're doing to make marginal improvements until they've addressed these teething difficulties, to see whether things improve once the new systems have become established?

Clearly, given the information provided above, there is reason to believe that one or two judicious tweaks may be required. But what does a 'pivot or persevere' meeting look like?

An eight-step protocol

The following eight-step '**pivot or persevere' protocol** will help you establish a robust approach to refining your improvement strategy over time.

Step 1: Schedule regular meetings

It's important to schedule 'pivot or persevere' meetings and to add them to the shared team calendar. The whole slice team should attend each of these meetings.

As a rule of thumb, they should be fairly short – no longer than an hour – and held regularly, perhaps once every six weeks or so. As you progress through the implementation period and things start to bed in a little, you may find that you can hold them less frequently – three times a year, say.

Try to align the timing of the meetings with your data collection plan, so that every time you meet you have fresh data to consider.

Step 2: Refresh the ground rules

At the start of each meeting, briefly revisit the ground rules you agreed in *Chapter 2: Optimise the team*. In 'pivot or persevere' meetings, it's really important that people feel free to air their honest views without fear of repercussion, and that each team member is prepared to have their own views challenged where appropriate.

The danger of groupthink is strong at this stage. Don't assume that any decisions you've previously made are still the right ones – the aim of these meetings is to stress test your previous decisions to see whether they still hold water.

Step 3: Collate 'soft' data

Ask people for their thoughts on how things are going. This is that 'soft', anecdotal data that we should not disregard too easily. How do people feel it's going? Do they think anything is going wrong, or could be improved?

Step 4: Share any new 'hard' data

Which aspects of your complex intervention do you have new data on? Assuming that you've already collected baseline data at the outset, this data should take one of two forms: impact data and side-effects data.

This should not be raw data. Whoever was responsible for collecting the latest round of data (surveys, interviews, focus groups) should have prepared a short summary, pulling out any key figures, quotes or trends.

At this stage, ask yourselves, 'What does this new data tell us?' Interrogate the data to make sure everyone in the slice team understands it and consider carefully whether there may be alternative ways of interpreting it.

Step 5: Examine each element of your improvement strategy in turn

For each element of your complex intervention, consider what's going well and whether there's anything you could improve. You may find it helpful to create two lists, using the headings 'Working well' and 'Room for improvement'.

Step 6: Decide whether (and how) to pivot or persevere

For each key element, bearing in mind the latest round of data collection, ask yourselves, 'Do we need to we adopt, adapt or abandon this aspect of our improvement initiative? Should we pivot, or should we persevere?'

When it comes to pivoting (i.e. adapting your improvement strategy), this doesn't necessarily mean 'pivot away and do something completely different'. There are many different types of 'pivot', including scaling up (see Table 34 on page 398).

Pivot type	Description
Zoom in	A single element within a complex intervention becomes the whole intervention.
Zoom out	What started as the whole intervention becomes a single element in a larger initiative.
Pupil group	The focus changes in terms of demographics (e.g. an initiative aimed initially at Year 7 shifts to Year 10).
Pupil need	The problem is not as bad as we thought, so we pivot to another focus.
Platform	The communications channel moves from a platform to an app, or vice versa (e.g. a parent portal to texting).
Channel	It becomes apparent that the same solution could be delivered through a different channel more effectively (e.g. tutor time vs subject teaching).
Scale up	An idea or practice that has proven effective is implemented and evaluated more widely across the school.

Table 34 – Examples of pivot types[166]

Later in this chapter, we'll look at four exercises designed to help you decide whether – and how – to pivot.

Step 7: Keep a running record

As we saw in *Chapter 10: Build your improvement strategy*, it's helpful to think of a school improvement initiative as a complex intervention with many moving parts. However, when you have several moving parts, each at different stages of implementation, it can be difficult to keep track of what's going on. As you enter the implementation period, you may find yourself asking:

- Which elements of our improvement strategy have we implemented so far?
- To what extent are they achieving what we want them to achieve?
- Which elements are working well?
- Which do we need to tweak and re-evaluate?
- Which elements have we yet to implement?

166 Adapted from Reis, E. (2011). *The Lean Startup: How constant innovation creates radically successful businesses.* UK: Penguin Random House.

- How can we keep track of where we're up to and make sure everyone's on the same page?

As a consequence, as you move into *Phase III: Make it happen*, it's important to proceed in a methodical manner, looking at each element of your improvement strategy in turn. It's also important to keep a clear running record of what you've implemented so far, what you've evaluated and what remains to be done.

It's helpful keep a running record at two levels: at the level of each key element within your complex intervention and the level of the complex intervention as a whole.

Key element level

Whether you're implementing change at the whole-school level or at the level of the individual practitioner, each key element in your improvement strategy should be implemented and evaluated through a series of PDSA cycles. As a consequence, the best way to keep track of what's going on at the level of key elements is through a **PDSA log**. An example can be seen in Table 35 below.

PDSA cycle/time period	Plan/Do		Study (what we found)	Act (next steps)
	Action	Evaluation		
Cycle 1: 25/02–15/03	Implement first peer mentoring sessions.	• Observation. • Follow-up interviews with pupils and peer mentors.	• Takes too long to arrange sessions. • Mentors requested more support from staff. • Some pupils reluctant to engage. • Observed sessions not representative.	• Streamline appointments process. • Provide regular supervision sessions for mentors. • Reassure pupils about confidentiality. • Repeat PDSA cycle with a wider sample.

Table 35 – PDSA log (worked example)

Improvement strategy level

At the level of the complex intervention as a whole, the best way to keep a running record is to have an **improvement strategy tracker**. The simplest way to do this is to create a spreadsheet where you add a new column whenever your complex intervention changes. In this way, you can not only maintain a shared document that captures your latest thinking, but you can also look back at how your school improvement strategy has developed throughout the implementation period. An example can be seen in Table 36 below.

	Version 1	Version 2	Version 3
Date	**Apr 2025**	**Dec 2025**	**Jul 2026**
Summary	1. New school rules. 2. New duty rota. 3. New recording procedure. 4. Centralised detentions. 5. Peer mentoring programme.	1. New school rules. 2. New duty rota. 3. New recording procedure. 4. Centralised detentions. 5. Peer mentoring programme. 6. Write a behaviour curriculum.	1. New school rules. 2. New duty rota. 3. New recording procedure. 4. Centralised detentions. 5. Peer mentoring programme. 6. Write a behaviour curriculum. 7. Provide training for all staff.

Table 36 – Improvement strategy tracker (worked example)

Step 8: Update related documents

As well as keeping a running record using a PDSA log and an improvement strategy tracker, be aware that following any 'pivots' or key decisions you may need to reflect changes in your thinking by updating other documents, such as:

- Research summary.
- Comms plan.
- Individual improvement plans.
- Data collection plan.
- Gantt chart.
- Logic model.

Four decision-making exercises

When deciding whether and how to pivot (see Step 6 on page 397), there are three decision-making exercises that you may find helpful:

- The walk versus the talk.
- Unfreeze-change-refreeze.
- Clone bright spots.
- The focused conversation method.

Let's look at each in turn.

Exercise 23.1: The walk versus the talk

This exercise examines the difference between what you say and what you do – comparing the walk with the talk, if you like. The rationale for doing this was expressed powerfully by the business theorist Chris Argyris, who writes:

> Put simply, people consistently act inconsistently, unaware of the contradiction between their espoused theory and their theory-in-use, between the way they think they are acting and the way they really act.[167]

Here, Argyris describes the walk and the talk as two competing theories: the **espoused theory** (what people report to be the basis of their actions) and the **theory-in-use** (which is inferred not from what people say but from what they do).

In this case, the espoused theory is the 'mechanism of action' statement you wrote for each key element in your improvement strategy, using the format 'When we implement X, Y will happen because Z.' And the theory-in-use is revealed through collecting and analysing data at three levels: baseline, impact and side-effects.

Let's look at a worked example relating to the use of retrieval practice (Table 37 on page 402). Working across the table from left to right, firstly we look at the espoused theory. Then we summarise the findings from the data we've collected and translate this into a 'theory-in-use' statement. Comparing the two alongside one another enables us to identify faulty assumptions in the espoused theory. Finally, we decide on a response: what do we need to do to close the gap between our espoused theory and our theory-in-use?

167 Argyris, C. (1991). Teaching Smart People How to Learn. *Harvard Business Review.* May/June. Retrieved from: https://hbr.org/1991/05/teaching-smart-people-how-to-learn.

Espoused theory	Data collection	Theory-in-use	Faulty assumptions	Response
When we implement retrieval practice, pupils will improve their knowledge and understanding of the curriculum because retrieval helps correct misconceptions and enables pupils to build schema in the long-term memory.	• **Lesson observations –** Teachers use retrieval practice inconsistently, within and across classrooms. • **Teacher interviews –** Teachers often use off-the-shelf quizzes that are not tailored to the needs of particular classes. Where quizzes are targeted, teachers believe they work well. • **Pupil surveys –** Pupils have different preferences – some prefer written quizzes, others verbal, other prefer to self-quiz. Quizzes are sometimes not marked, so pupils don't receive feedback or have time to reflect on the experience. • **Lesson observations –** Only a fraction of the curriculum can be covered through retrieval practice at the start of lessons. Quizzes are often short and are not marked or discussed before the teacher introduces the main lesson. • **Pupil focus groups –** Pupils are often excitable at the start of a lesson, especially after break and lunch. They are not always 'in the zone', where they can focus or recall knowledge and understanding easily.	Most teachers use retrieval quizzes at the start of lessons. Although there are pockets of effective practice, many teachers use off-the-shelf quizzes that are not targeted at areas of the curriculum where pupils need additional support or consolidation. Retrieval quizzes are often used as a settling activity, rather than as an opportunity to consolidate learning and to correct misconceptions.	Retrieval is done consistently and is consistently effective. Off-the-shelf retrieval quizzes help all pupils correct misconceptions and consolidate knowledge in their long-term memory. Pupils are able to give retrieval exercises their full attention in the first few minutes of a lesson. Pupils deepen their understanding of the curriculum through retrieving factual information.	Use instructional coaching to improve consistency of practice across the school. Offer a choice of retrieval activities to suit the needs of different classes and pupils. Teach pupils self-regulation techniques to help get them 'in the zone' at the start of each lesson. Focus retrieval practice on key curriculum areas and common misconceptions.

Table 37 – 'The walk versus the talk' (worked example)

Exercise 23.2: Unfreeze-change-refreeze

The second exercise that you might find useful in 'pivot or persevere' meetings – a model that works well in combination with 'the walk versus the talk' – is the 'unfreeze-change-refreeze' model of change developed by the psychologist Kurt Lewin.[168]

When you identify a conflict between your espoused theory and your theory-in-use, you need to change your practice. We can think of this as a three-step process, using water and ice as a metaphor for change. To change a block of ice into a different shape, you would:

1. Melt the ice block.
2. Pour the melted water into a new container.
3. Refreeze the water into the new shape.

To return to the retrieval practice example, Table 38 illustrates how you might break down the response using the 'unfreeze-change-refreeze' model.

Unfreeze	Change	Refreeze
Start with why: • Explain the need to change. • Share any data or faulty assumptions. • Discuss espoused theory vs theory-in-use. 'The way we're doing retrieval practice isn't going to lead to the outcomes we want to achieve.' 'We need to pause what we're doing until we can find a better way.' Identify what colleagues can do less of to minimise impact on workload during the transition.	Share resources and examples of effective retrieval practice. Identify innovators and early adopters. Use PDSA (plan, do, study, act) cycles to trial ideas and test predictions. Devise a weekly retrieval menu with a range of tasks in rotation. Scale up to early majority, late majority and resistors. Train all staff in self-regulation techniques to help pupils 'get in the learning zone' at the start of lessons, especially after lunch.	Start using the new approach to retrieval practice. Use self-regulation techniques after key transitions. Combine generic retrieval with targeted questioning. Ensure retrieval quizzes are always self marked in the lesson. Adjust your monitoring and evaluation plan. How will you evaluate the new approach? When? Over what time period? Who will coordinate?

Table 38 – Unfreeze-change-refreeze (worked example)

168 Lewin, K. (1947). Frontiers in Group Dynamics: Concept, Method and Reality in Social Science; Social Equilibria and Social Change. *Human Relations*, 1(1), 5–41.

Exercise 23.3: Clone bright spots

The fundamental goal of implementation science is to scale up effective practice so it becomes routine, while an important principle is to increase consistency by reducing variation in performance.

When reviewing data, it's therefore important to identify problem areas (things that need improving), identify any areas of excellent practice (so-called 'bright spots') and figure out how what tweaks or 'pivots' you need to make. These 'pivots' can then be used to scale up that effective practice around the school so it becomes routine. As Chip and Dan Heath write in their book, *Switch: How to change when change is hard*, 'Any time you find a bright spot, your mission is to clone it.'[169]

Exercise 23.4: The focused conversation method

The focused conversation method is a powerful approach to deliberative decision-making.[170] The method proceeds through four successive stages: objective, reflective, interpretive and decisional. Let's briefly examine each in turn, using the example of an initiative to improve literacy across the school.

1. **Objective:** Participants begin by sharing objective facts. We might ask:
    - What did the data previously tell us about literacy across the school?
    - What new data do we have?
    - What data do we not have?
2. **Reflective:** Participants discuss their feelings and emotional responses to the data. We might ask:
    - How important do we feel it is to improve whole-school literacy?
    - How do we feel about the progress made so far?
    - What have we found surprising or concerning?

169 Heath, C. & Heath, D. (2010). *Switch: How to change things when change is hard.* New York, Broadway Books.

170 First developed as a business strategy by Laura J. Spencer in the 1980s, this approach was also used to reform Taiwanese politics following the 'Occupy' protests in 2014. And it holds huge potential for improving decision-making in schools.

3. **Interpretive:** Participants interpret the data and their reflections to understand the root causes and deeper meanings behind the figures or trends. We might ask:
    - What do we think is contributing to the progress (or lack of progress)?
    - How might we explain the variation across different year groups?
    - Do we have all the information we need to understand this problem fully?
4. **Decisional:** Participants move to decision-making, identifying next steps and actions based on the insights gained. We might ask:
    - What actions should we take to address the gaps identified?
    - Should we adopt, adapt or abandon this aspect of our whole-school literacy strategy?
    - Do we need to collect more data before we make any further decisions?

The focused conversation method provides a powerful framework to ensure that all aspects of your school improvement initiative are examined carefully, and that any decisions are grounded in a combination of data and rich dialogue.[171]

Using these decision-making exercises as part of the eight-step 'pivot or persevere' protocol will enable you to continually reorient your improvement strategy towards achieving (and sustaining – the focus of the next chapter) your impact goals.

Here, we can see the way in which – in theory, at least – the *Making Change Stick* approach to school improvement can't go wrong. A year or two into the implementation period, following a series of pivots, you may find that your improvement strategy bears little resemblance to the strategy you implemented on day one. But you will have followed the data at each step along the way, keeping everything under review until

171 Spencer, L. J. (1989). *Winning Through Participation: Meeting the challenge of corporate change with the technology of participation.* Kendall/Hunt Publishing.

you have a complex intervention in which every key element is 'pulling its weight' and contributing to the whole.

How to deal with disagreements

There are many people in a slice team with a range of different views, and you may find that during 'pivot or persevere' meetings disagreements will arise about whether, when and how to pivot.

There's no simple formula for dealing with disagreements. However, here are a few strategies that you may find useful.

1. Revisit your ground rules

Display the ground rules that you came up with in *Chapter 2: Optimise the team*. Remind yourselves that you're trying to achieve something really difficult – sustained improvements to pupil outcomes – and it's inevitable that a diverse slice team will have points of disagreement along the way. It's therefore a good idea to acknowledge that disagreement should not be considered a problem – in fact, it's evidence that you're treating the challenge of implementation with the respect it deserves!

2. 'Steel man' your opponent's argument

When two or more people disagree, ask each of them to argue their opponent's position in good faith (a 'steel man' argument, as opposed to a 'straw man' argument). Then ask the opponent to say whether they agree with this version of their position, or whether they would like to clarify any key points. This is a really powerful activity that encourages people to understand opposing views and helps establish common ground.

3. Seek consensus

If possible, try to arrive at a consensus view. This may involve a degree of compromise. For example, you could say, 'Let's try approach X for now, and then keep an eye on it over the next term. Next time we meet, we'll review the data and decide whether to pivot to approach Y. Does everyone agree?'

4. If necessary, vote

If consensus is not forthcoming, you may need to take a vote. It's often a good idea to hold a secret ballot, where people write their preference

on a slip of paper (or an anonymous online survey, which has the advantage of disguising people's handwriting!) to make it safe for people to vote honestly.

Voting can be useful as a way to break a deadlock. However, voting doesn't address the concerns of the minority and can lead to a 'tyranny of the majority'. So, as a rule of thumb, vote only when all other routes have been explored.

CHAPTER SUMMARY

- The ideas and strategies we worked through in *Phase II: Make a plan* help you set the initial course. But when new information comes to light, changing direction is often the smart move. The question is, how should you decide when to change direction and when to stay the course?
- To navigate your way to optimal outcomes, schedule regular 'pivot or persevere' meetings where the slice team reviews the data as it comes in, looking at each element of your improvement strategy and asking:
  - How well is this working?
  - Do we need to pivot (i.e. tweak what we're doing in some way)?
  - Or should we persevere (i.e. stick with the current plan)?
- 'Pivot or persevere' meetings help you walk the line between two opposing dangers:
  - The weathervane trap – changing direction too easily.
  - The sunk cost fallacy – persevering with a strategy for too long.
- The solution to this problem comprises two factors: data and dialogue.
  - The data comes from your data collection plan
  - The dialogue takes place in 'pivot or persevere' meetings (and elsewhere).
- To hold 'pivot or persevere' meetings, follow these eight steps:
  1. Schedule regular meetings.

2. Refresh the ground rules.
3. Collate 'soft' data.
4. Share any new 'hard' data.
5. Examine each element of your improvement strategy in turn.
6. Decide whether (and how) to pivot or persevere.
7. Keep a running record.
8. Update related documents.

- When deciding whether and how to pivot or persevere, use these four exercises:
  - The walk versus the talk – comparing your espoused theory with the theory-in-use.
  - Unfreeze-change-refreeze.
  - Clone bright spots.
  - The focused conversation method.
- If there is disagreement about the best way forward:
  - Revisit your ground rules.
  - 'Steel man' your opponent's argument.
  - Seek consensus.
  - Vote – but only as a last resort.

Making Change Stick

Phase I: Make a start

- ☑ Appoint a slice team
- ☑ Optimise the team
- ☑ Choose your focus
- ☑ Write a one-page research summary
- ☑ Draft a comms plan
- ☑ Build a glass box

Phase II: Make a plan

- ☑ Map the journey
- ☑ Plan backwards
- ☑ Conduct a root cause analysis
- ☑ Build your improvement strategy
- ☑ Plan tight but loose
- ☑ Build steps to success
- ☑ Plan for diffusion
- ☑ Optimise for habit change
- ☑ Plan professional learning
- ☑ Prepare data collection
- ☑ Timeline and streamline
- ☑ Write a logic model
- ☑ Conduct a pre-mortem

Phase III: Make it happen

- ☑ Manage your project
- ☑ Create individual improvement plans
- ☑ Run PDSA cycles
- ☑ Schedule regular 'pivot or persevere' meetings
- ☐ Embed and sustain improvements
- ☐ Review, reflect – and plan your next project!

CHAPTER 24
EMBED AND SUSTAIN IMPROVEMENTS

Transition from 'improvement strategy' to 'the way we do things around here'.

Tend the garden

So far, we've mainly focused on how to make school improvement *happen*. In this chapter, we'll turn our attention to making it *stick*.

As we saw in the last chapter, your improvement strategy may change a fair amount throughout the implementation period. This is to be embraced, as it suggests that you are approaching the task in an agile way, responding and adapting your thinking as new information comes to light.

Over time, however, your strategy should start to stabilise, with each element pulling its weight and contributing to the whole. When you get to this point, your change initiative needs to transition from 'improvement strategy' to 'the way we do things around here'. This is where the focus shifts from 'improvement project' to 'operations'.

Once your improvement strategy has proven to be effective, you may be tempted to think, 'Our work here is done.' But at this point a new danger emerges: the tendency for people to become complacent and to slip back into old habits. In short, it's really important to follow through on what you've achieved to make sure your hard-won gains are sustained for the long term.

In this chapter we'll look at several strategies to help ensure things don't backslide, but the short version is that you need to keep it on the agenda. Keep an eye on it, keep talking about it, keep your finger on the pulse – and be prepared to make further changes and pivots as new information comes to light.

When seeking to embed and sustain improvements, it's helpful to bear in mind the famous maxim of the Italian writer Giuseppe Tomasi, often paraphrased as: 'If we want everything to stay the same, things will need to change.'[172] The reason this apparent paradox holds true is that the world does not stay still. Governments change. Inspection frameworks change. Exam specifications change. School admissions boundaries and policies change. Staff turnover happens. Pupil demographics change from one cohort to the next. And so, if you want to maintain your progress, you need to adopt an agile stance and be prepared to respond to shifting circumstances.

If the initial work of change management is like landscape gardening – think diggers and the laying of water pipes, drains and foundations – we can think of the **embed and sustain** phase as tending the garden – cutting the grass, pruning the bushes and so on – keeping everything in order and preventing things from becoming unruly and overgrown. In many ways, this maintenance phase is the easiest part of the process. But make no mistake – if you want to guard your improvements against the winds of change, this work is vital.

Strategies for embedding and sustaining improvements

The remainder of this chapter details nine strategies for how to embed and sustain the improvements you've achieved, in terms of changes to either practice or outcomes. As a slice team, review these strategies and make a note of any you think will be helpful in your context, adding any action items to your Gantt chart.

172 Tomasi di Lampedusa, G. (1958). *The Leopard* (Translated by Archibald Colquhoun). New York: Pantheon Books.

1. Appoint a link governor

To make sure your school improvement initiative remains in focus for the long term, it's a really good idea to recruit a school governor to your cause. If your school has a governing body, appoint one of the team to be a link governor who will be responsible for your area of focus. If school leaders know they'll be asked to provide regular updates at governors' meetings, it will help make sure it doesn't fall off the agenda. It's also good practice to invite your link governor to attend slice team meetings and to visit the school from time to time to see how things are going for themselves.

2. Carry out 'gemba walks'

In *Chapter 16: Prepare data collection*, we encountered one of the key principles of the Toyota Production System (TPS) – *genchi genbutsu* – which translates roughly as 'actual place and actual thing'. In other words, if you really want to understand a problem, go and see it for yourself!

Depending on the focus of your school improvement initiative, you may find it helpful to carry out regular learning walks, known as 'gemba walks' in the TPS.

Jeremy Griffiths, a university lecturer and former headteacher, spent many years applying 'lean' insights from the TPS in schools. In the following account, Jeremy provides a brief description of the role 'gemba walks' played in fostering a culture of continuous improvement at his school.

> At Ysgol Gwynedd in Flintshire, regular learning walks were a cornerstone of our approach to continuous improvement. In some schools, learning walks can be misconstrued as leaders checking up on staff and highlighting problems. At Ysgol Gwynedd, they were integral to the school's culture. These walks were seen as a supportive tool, fostering an environment of trust and collaboration. Instead of focusing on faults, leaders used these opportunities to understand daily practices, celebrate successes and identify areas for growth. This proactive and inclusive approach helped ensure the learning walks were a vital and positive aspect of the school's commitment to excellence.

A learning walk is a pivotal tool in improving standards and ensuring lasting change within an organisation. Originating from the Japanese term 'gemba', meaning 'the actual place', a learning walk involves small slice teams (three or four staff) visiting the actual locations where work is performed. The approach is fundamentally supportive rather than punitive and is aimed at understanding and enhancing processes by engaging directly with employees. Senior leaders should always be involved and seen by employees as supportive rather than judgemental.

The keys to a successful learning walk are active listening and open questioning. Learning walk slice teams should spend at least 80% of their time listening to others, fostering trust and collaboration. By asking open-ended questions, they encourage colleagues to share their insights, challenges and suggestions. This not only empowers people but also provides invaluable first-hand knowledge about the realities of the school.

Through this hands-on engagement, teams and leaders can directly identify inefficiencies, areas for improvement and innovative ideas from those involved in the work. This direct involvement ensures any changes implemented are practical, well-informed and more likely to be embraced by the wider team.

Ultimately, a 'gemba walk' reinforces a continuous improvement mindset and makes change more sustainable and ingrained within the school's culture, where employees feel valued and motivated to contribute to the organisation's success. These daily or weekly checks prevent employees from reverting back to old habits once a change has been agreed upon and implemented, which is often human nature.[173]

3. Conduct exit interviews

Exit interviews provide a unique opportunity to find out what people really think that may not show up in other forms of data collection. It's a good idea to set aside a decent amount of time with anyone who's leaving your organisation – not only to ask them, 'Why are you leaving?', but also

173 From personal correspondence with Jeremy Griffiths, university lecturer and former headteacher.

to find out their honest views about your school improvement initiative, which they can now share without fear of repercussion.

4. Continue to collect data

Once you're confident that you've achieved your impact goals, you may be tempted to think that data collection can stop. It can certainly be scaled back – but it would be a mistake to stop it altogether (see 'Expect (and respond to) dips in performance' on page 416). The frequency with which you collect data as time goes on will naturally reduce – from half-termly to termly, or from termly to annually – but it should not stop altogether.

5. Create onboarding and offboarding protocols

This book began with the insight that 'the practitioner *is* the intervention.' As a consequence, whenever people leave your organisation – as they inevitably do at some point – your intervention is potentially weakened. However, staff turnover is also potentially a source of strength – an opportunity to learn from departing colleagues and to bring fresh energy and enthusiasm into the change process (and possibly into the slice team).

With this in mind, it's really important to have effective onboarding and offboarding protocols to make the transition as smooth as possible.

Depending on the roles and responsibilities of your new colleagues, an onboarding protocol might include some or all of the following items:

- An induction session on your improvement initiative.
- Share key documents:
  - The one-page research summary.
  - The logic model.
- Invite them to complete key activities from the *Making Change Stick* programme, such as:
  - Map the journey.
  - Build steps to success.
  - Create an individual action plan.

If a new colleague is going to join the slice team, you may need to bring them up to speed by sharing more in-depth documents, such as:

- The comms plan.
- The data collection plan.
- The Gantt chart.

If a departing colleague is a member of the slice team, work with them to cocreate an offboarding protocol. This could involve:

- Sharing any documents they have with the wider team and their replacement.
- Training up their replacement on any key activities they undertake within the slice team.
- Creating an onboarding protocol tailored to their role within the slice team.

Staff turnover is perhaps the biggest threat to sustaining and embedding new ways of working. If there's 10% turnover a year, within five years up to 50% of the staff will not have been at the school when the change process began.

As a thought experiment, let's accelerate that rate of turnover. Imagine that this year, 50% of your colleagues leave the school. The following year, the other 50% of your colleagues leave the school. Two years from now, nobody at the school currently will still be in post – including yourselves. Are your onboarding and offboarding processes sufficiently robust that three years from now, your school will still be on track to embed and sustain its impact goals?

6. Expect (and respond to) dips in performance

In *Chapter D: The role of school leaders in making change stick* and *Chapter 23: Schedule regular 'pivot or persevere' meetings*, we encountered the **implementation dip** – the fact that when you implement change, things sometimes get worse before they get better. It is also true that throughout the implementation period and beyond, things rarely remain stable for long. There will always be variation in performance – this is inevitable – and performance can go down as well as up.

This is why it's so important to continue to collect data and to schedule regular 'pivot or persevere' meetings, so that as a slice team you can decide whether and how to respond as new information comes to light.

Building on the key insights from *Chapter 13: Plan for diffusion* and *Chapter 14: Optimise for habit change*, the key to creating consistency of practice throughout the organisation is to engineer ways for people to talk together about your area of focus. For this reason, it's likely that any responses to dips in performance will involve either amending your comms plan, to make sure your school improvement initiative remains on people's 'mental dashboards', or planning professional learning activities such as:

- Providing top-up training, coaching or mentoring.
- Revisiting the levers of habit change, action triggers and habit stacking.
- Asking colleagues to revisit and refresh their steps to success.
- A group of key colleagues undertaking a cycle of practitioner inquiry or lesson study.

Recall from *Chapter 13: Plan for diffusion* that different colleagues respond to different methods of persuasion. Some may ask to see rigorous external evidence; others may benefit from case studies of how a particular idea or strategy has worked at your school. Others may require a deeper level of engagement, exploring existing and alternative theories of action to examine the beliefs and values that underpin their actions and behaviours, and taking steps to expand their repertoire of beliefs and values to lay the foundations for new ways of working.

7. Maintain the visible support of senior colleagues

As we discussed in *Chapter D: The role of school leaders in making change stick*, one of the potential pitfalls of devolving responsibility to a slice team is that the senior team may not view the change initiative as a central part of their role. It's really important to make clear to the whole school community that this is absolutely not the case. Even if they aren't directly involved with the change initiative on a day-to-day basis, throughout the implementation period and indefinitely into the future, it's really important that the senior team regularly and visibly demonstrate their support for the change effort to the wider school community.

8. Maintain and update key documentation

Throughout *Phase III: Make it happen*, your thinking and your practice are likely to continue to adapt and respond to changing circumstances. It's therefore essential to regularly update key slice team documents such as the comms plan, the Gantt chart and the running record. It's also vital to update public-facing documents – especially the logic model – to make sure you keep everyone on the same page. Literally!

9. Remain vigilant to threats

By the time you reach the 'embed and sustain' phase, the vast majority of your colleagues should be on board with new ways of working. You may even have converted any resistors and achieved uniform implementation of impactful practice working throughout your organisation. Even if you reach this happy milestone, however, it's important not to become complacent. Pockets of resistance (or perhaps mere indifference) may rise again. Other threats to the integrity of 'the way we do things around here' may come from other sources, such as from changes to pupil demographics, inspection frameworks, exam specifications or staff turnover.

It is therefore of critical importance that you regularly scan the horizon for threats to your hard-won progress. One way to achieve this is for the slice team to conduct an annual pre-mortem. Instead of asking, 'Why might this change initiative not work?', you could ask, 'How did we allow our hard-won gains to backslide, after all that effort?' As with the initial pre-mortem, anticipate as many problems as you can and take steps to solve or mitigate them in advance.

CHAPTER SUMMARY

- Your improvement strategy is likely to change throughout the implementation period. This is to be embraced, as it demonstrates that you are approaching the task in an agile way, responding and adapting your thinking as new information comes to light.
- Over time, your strategy should start to stabilise, with each element pulling its weight and contributing to the whole. When you get to this point, your change initiative needs to transition from 'improvement strategy' to 'the way we do things around here'.

- At this point, a new danger emerges – the tendency for people to become complacent and slip back into old habits. In short, it's really important to follow through on what you've achieved to make sure your hard-won gains are sustained for the long term.
- To make sure things don't backslide, you need to plan proactively for how to maintain the progress you've made. This plan will combine several strategies, such as:

    1. Appoint a link governor.
    2. Carry out 'gemba walks'.
    3. Conduct exit interviews.
    4. Continue to collect data.
    5. Create onboarding and offboarding protocols.
    6. Expect (and respond to) dips in performance.
    7. Maintain the visible support of senior colleagues.
    8. Maintain and update key documentation.
    9. Remain vigilant to threats.

Making Change Stick

Phase I: Make a start

- ☑ Appoint a slice team
- ☑ Optimise the team
- ☑ Choose your focus
- ☑ Write a one-page research summary
- ☑ Draft a comms plan
- ☑ Build a glass box

Phase II: Make a plan

- ☑ Map the journey
- ☑ Plan backwards
- ☑ Conduct a root cause analysis
- ☑ Build your improvement strategy
- ☑ Plan tight but loose
- ☑ Build steps to success
- ☑ Plan for diffusion
- ☑ Optimise for habit change
- ☑ Plan professional learning
- ☑ Prepare data collection
- ☑ Timeline and streamline
- ☑ Write a logic model
- ☑ Conduct a pre-mortem

Phase III: Make it happen

- ☑ Manage your project
- ☑ Create individual improvement plans
- ☑ Run PDSA cycles
- ☑ Schedule regular 'pivot or persevere' meetings
- ☑ Embed and sustain improvements
- ☐ Review, reflect – and plan your next project!

CHAPTER 25
REVIEW, REFLECT – AND PLAN YOUR NEXT PROJECT!

Look back, look ahead.

Channel Janus

Congratulations on making it to the end of the *Making Change Stick* programme! I hope you find these ideas useful in improving outcomes for the children and young people in your setting.

In any learning process, it's important to look to the past as well as to the future, like the two-faced Roman god Janus. In *Chapter D: The role of school leaders in making change stick*, we introduced the implementation equation.

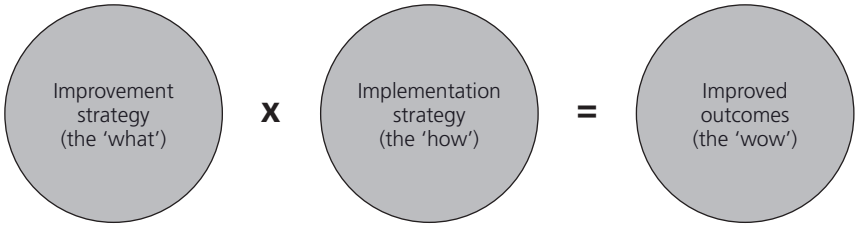


Figure 17 – The implementation equation

This is a simple way of illustrating that both your improvement strategy (the 'what') and your implementation strategy (the 'how') need to be effective in order to secure improved outcomes. If either of them amounts to zero, the outcome will be zero also.

Exercise 25.1: Missing elements

Here's another example of an implementation equation, known as the Knoster model for managing complex change:[174]

Vision x Skills x Incentives x Resources x Clear plan = Improvement

According to this model, if any of the elements on the left are missing you'll get something else instead of improvement.

As an exercise, see whether you can match up the missing elements with the unhappy outcomes. In other words, what might be the outcome if vision, skills, incentives, resources or a clear plan are missing? The unhappy outcomes to choose from are:

Treadmill Anxiety Confusion Frustration Resistance

1. If vision is missing, the outcome will be: _____
2. If skills are missing, the outcome will be: _____
3. If incentives are missing, the outcome will be: _____
4. If resources are missing, the outcome will be: _____
5. If there is no clear plan, the outcome will be: _____

(See footnote 175 for suggested answers)

The Knoster model illustrates how if just one key element is missing – even if everything else is in place – we can seriously undermine what we're trying to achieve. This is why the *Making Change Stick* programme is so substantial. If you really want to bring about lasting, positive change in a large, complex, dynamic environment such as a school, you need to make sure you've covered all the angles.

174 Knoster, T., Villa, R. A. & Thousand, J. S. (2000). 'A framework for thinking about systems change' in R. A. Villa & J. S. Thousand (eds.), *Restructuring for Caring and Effective Education: Piecing the puzzle together* (2nd ed., pp93–128). Baltimore, MD: Paul H. Brookes Publishing Co.

175 Suggested answers to the missing elements exercise: vision = confusion; skills = anxiety; incentives = resistance; resources = frustration; clear plan = treadmill.

Exercise 25.2: Chapter review

People reading this chapter will be at different stages of the journey. Some readers may have only read the book so far, and haven't yet had the opportunity to put any of these ideas into practice. Some readers may have implemented some of the ideas in the book but haven't run the full *Making Change Stick* programme. And others may have already run the full programme, working as part of a slice team to apply all of these ideas to a real-world change initiative.

Whichever of these categories best describes you, it will be useful to look back at the journey so far and reflect on the ideas in this book you found the most helpful and why.

You can complete this exercise using Table 39 on page 426 (a downloadable version is available at makingchangestick.co/chap). Rate each chapter out of five, where 1 is not at all useful and 5 is incredibly useful, and add a comment explaining why you gave it this rating.

Chapter		How useful? (Score /5)	Comment
Phase I: Make a start	1. Appoint a slice team		
	2. Optimise the team		
	3. Choose your focus		
	4. Write a one-page research summary		
	5. Draft a comms plan		
	6. Build a glass box		
Phase II: Make a plan	7. Map the journey		
	8. Plan backwards		
	9. Conduct a root cause analysis		
	10. Build your improvement strategy		
	11. Plan tight but loose		
	12. Build steps to success		
	13. Plan for diffusion		
	14. Optimise for habit change		
	15. Plan professional learning		
	16. Prepare data collection		
	17. Timeline and streamline		
	18. Write a logic model		
	19. Conduct a pre-mortem		
Phase III: Make it happen	20. Manage your project		
	21. Create individual improvement plans		
	22. Run PDSA cycles		
	23. Schedule regular 'pivot or persevere' meetings		
	24. Embed and sustain improvements		

Table 39 – Chapter review

Exercise 25.3: Questions for reflection

If you haven't yet used any of the ideas and strategies in this book, take a few minutes to reflect on the following questions. You may find it helpful to jot down your responses in a notebook:

1. Which ideas and strategies do you think will be the most impactful? Why do you think this?
2. Are there any ideas or strategies you feel may be less impactful in your setting? Why do you think this?
3. What opportunities could there be to try out these ideas and strategies in the near future?

If you've used some (but not all) of the strategies, take a few minutes to reflect on the following questions:

1. Which strategies did you find most impactful?
2. Did you overlook any additional strategies that may have been helpful?
3. How effective do you feel your chosen strategies have been in improving outcomes?

And if you've completed the full *Making Change Stick* programme as part of a slice team, you may find the following questions for reflection helpful to discuss as a team. To discuss all of these questions would take a long time, so firstly scan the list and agree as a team which questions you would find it most helpful to discuss.

1. To what extent have we been successful in achieving our impact goals?
2. Did we have the right people in the slice team?
3. How well did the team jell together?
4. Were we able to stick to the ground rules?
5. Did we choose the right area of focus?
6. Did we choose our area of focus in the most robust way possible?
7. To what extent was the one-page research summary helpful?
8. How helpful was the comms plan?
9. How well did we stick to our comms plan?

10. Are there any aspects of comms that could have been better?
11. To what extent were we successful in building a glass box?
12. How helpful were the five-minute interviews?
13. To what extent has there been buy-in across the school?
14. How helpful was backward design?
15. Did we write effective impact goals?
16. Did we identify the correct assessment evidence?
17. How helpful was the root cause analysis?
18. Were we able to accurately identify the root causes of the problems we were trying to solve?
19. Were we able to adequately address the root causes of the problems we were trying to solve?
20. To what extent was our initial draft of an improvement strategy the right one?
21. Was our improvement strategy too complex, too narrow, or just right?
22. To what extent were we able to implement change in a tight but loose way?
23. How useful was the 'steps to success' framework?
24. How well did we diffuse new practices throughout the school?
25. To what extent were we able to recruit early adopters to multiply our early efforts?
26. How well have we been able to deal with any pockets of resistance?
27. To what extent were we successful in engineering ways for people to talk to people about our school improvement initiative?
28. As a school, how well have we been able to optimise for habit change?
29. How impactful has our professional learning been?
30. How helpful was Guskey's pyramid in planning our professional learning programme?
31. Did we provide the right organisational support for change?
32. To what extent were we successful in designing professional learning with a balance of mechanisms?

33. How effective was our data collection plan overall?
34. How effective was our baseline data collection?
35. How effective was our data collection on impact measures?
36. To what extent were we able to capture evidence relating to any unintended consequences or side-effects of our improvement strategy?
37. To what extent was our timeline well suited to our improvement strategy?
38. How useful was it to have a logic model?
39. Did we anticipate all the barriers in the pre-mortem?
40. How well did we manage the project?
41. How effective were the individual improvement plans?
42. To what extent did people find PDSA cycles useful as a framework for iterating and improving practice?
43. How effective were our 'pivot or persevere' meetings?
44. Were we able to adapt appropriately as new information came to light?
45. How well have we been able to embed and sustain improvements?
46. Overall, which strategies have we found the most impactful? Why do we think this?
47. Overall, which strategies have we found the least impactful? Why do we think this?
48. What aspects of the *Making Change Stick* programme have we found the most challenging?
49. What aspects of the *Making Change Stick* programme have we found the most surprising?
50. If we could go back in time, what could we do differently and why?

Exercise 25.4: Scan the horizon

If you are at the stage of having read this book and completed the full *Making Change Stick* programme, a number of further questions arise:

1. Which of the strategies in this book could you incorporate into your routine practice?

2. What opportunities are there on the horizon for large-scale, high-effort, high-impact improvement efforts?
3. What opportunities could there be to implement some of these ideas on a smaller scale?
4. Are there any existing school improvement initiatives that would benefit from having some of the strategies in this programme retrofitted?
5. What outcomes would you most like to improve for the children and young people in your setting?

Exercise 25.5: Share your thoughts…

By way of a final activity, dear reader, I would be hugely grateful if you would complete a short evaluation survey. It will take around two minutes, and your feedback will be invaluable in helping me bring about lasting, positive change to the *Making Change Stick* programme itself. So, if you find the ideas in this book helpful – or if you have any suggestions for how the *Making Change Stick* programme could be improved – I'd love to hear from you: bit.ly/mcs-reader.

CHAPTER SUMMARY

- In any learning process, it's important to look to the past as well as to the future. This chapter contains five exercises to help you look back at where you've been, and look to the future to think about where you can apply these ideas to improve outcomes for the children and young people in your setting:
    1. Missing elements.
    2. Do look back.
    3. Questions for reflection.
    4. Scan the horizon.
    5. Share your thoughts…

Making Change Stick

Phase I: Make a start

- ☑ Appoint a slice team
- ☑ Optimise the team
- ☑ Choose your focus
- ☑ Write a one-page research summary
- ☑ Draft a comms plan
- ☑ Build a glass box

Phase II: Make a plan

- ☑ Map the journey
- ☑ Plan backwards
- ☑ Conduct a root cause analysis
- ☑ Build your improvement strategy
- ☑ Plan tight but loose
- ☑ Build steps to success
- ☑ Plan for diffusion
- ☑ Optimise for habit change
- ☑ Plan professional learning
- ☑ Prepare data collection
- ☑ Timeline and streamline
- ☑ Write a logic model
- ☑ Conduct a pre-mortem

Phase III: Make it happen

- ☑ Manage your project
- ☑ Create individual improvement plans
- ☑ Run PDSA cycles
- ☑ Schedule regular 'pivot or persevere' meetings
- ☑ Embed and sustain improvements
- ☑ Review, reflect – and plan your next project!

AFTERWORD
THE FUTURE OF SCHOOL IMPROVEMENT…

We can improve educational outcomes on a scale never before imagined.

As I mentioned in *Chapter 6: Build a glass box*, the *Making Change Stick* programme was initially designed as a toolkit to help schools implement improvement initiatives in the most effective way possible. However, as I've shared these ideas with teachers and school leaders around the world, I've been fascinated and greatly encouraged to discover that people are starting to see this as a new way of thinking about leadership.

In particular, several school leaders who have completed the full *Making Change Stick* programme have described it as a framework for ethical, relational school leadership. To illustrate, here are two excerpts from an interview with the two school leaders who took part in the initial pilot study of the programme:

> What I love about implementation science is that it really champions ethical leadership. Not only is it highly effective – it's the best way to lead change because we know that you lead through people – but it's also very ethical and empowering. If we look at John Hattie's analysis of schools, he cites collective efficacy as the number one influence. Implementation science helps you achieve that because you get a body of people around you who really believe that they can make a difference, and they're involved in the change. So, it does all of those things at once. It encourages us as leaders to be anti-fragile and to improve ourselves and be

> humble, and I think those are the core aspects of leadership. I think it also improves relational trust, because if you're a leader in a school and you're out of touch with what people are thinking you're going to lose trust automatically. So, for me it's really rich and I've been so grateful for my involvement in it because it's done so much for the policy and for me personally.
>
> **Elaine Long**
> **Assistant principal, UCL Academy**

> I completely agree [with Elaine's comments]. It's something that really resonated with my style of leadership. I think it's a process that makes staff feel heard and valued and empowered. We know that the change in school is going to be the behaviour of people, so it has to be done *with* people and not something that's done *to* them. I also think it utilises all the knowledge and expertise that's in your institution. It's not relying on a small number of people sat around a board table. We know that change in schools is so context specific. You've got all these stakeholders who know your school so well, and [the *Making Change Stick* programme] ensures you use the experience and knowledge that you possess to make it successful.
>
> **Kate Barry**
> **Assistant principal, UCL Academy**

In these two appraisals, we can see that the *Making Change Stick* programme was not only successful in terms of implementing a particular policy; it also changed the way Kate and Elaine think about school leadership more widely. Shortly after completing the programme, they trained all their middle leaders in implementation science and set up slice teams to look at other areas of school improvement.[176]

Feedback such as this makes me hopeful the ideas in this book will spread far and wide and will be around for many years to come. If this

176 If you'd like to hear more of Kate and Elaine's thoughts, there's a 40-minute video in which I interview them about their experience of the *Making Change Stick* programme: bit.ly/mcs-ke-vid. Kate and Elaine also share their thoughts on the programme in greater depth in an episode of the Rethinking Education podcast, available at: bit.ly/mcs-ke-pod.

happens, the potential for these ideas to improve the educational and life outcomes of children and young people around the world is *huge*.

A back-of-the-envelope calculation

Consider the following thought experiment.

Let's say the average school improvement initiative involves 10 hours of activity from each staff member across a school year – to attend some training, to do something different and to record their activity in some way.

To keep the maths simple, let's say there's an average of 100 practitioners in a school – teachers, leaders and support staff. (This is probably a bit high, but don't worry – we'll adjust the numbers again later on.) This gives us a figure of 1,000 hours spent on the change initiative each year.

There are around 32,000 schools in the UK. Using these estimates, this means that as a nation, each year we spend around 32 million hours implementing change initiatives, assuming a rate of one change initiative per school. If we assume a 20% success rate – which is probably generous – this means that every year, as a nation, we spend over 25 million hours implementing school improvement initiatives that don't actually improve anything.

To take this to a global level, it's estimated that there are around five million schools on the planet in total.[177] This gives us a ball-park figure of five billion hours spent implementing change initiatives each year. Again, if we assume a 20% success rate, this means that every year on this planet, we spend around four billion hours implementing school improvement initiatives that don't actually improve anything.

Perhaps you're thinking, 'Well, your back-of-the-envelope calculation is overly generous because many schools have fewer than 100 practitioners.' So, let's halve it. Quarter it if you like – that still leaves us with a figure of a billion hours of wasted effort every year.

In fact, it's likely that the four billion figure is a conservative estimate, because it assumes there's only one change initiative happening in any

177 For example, see https://www.quora.com/How-many-schools-are-there-in-the-world, or https://broadbandeverywhere.org/2020/03/20/how-many-schools-in-the-world-lack-internet.

school at any one time, and usually there are several things going on at once – and many of them take up many more than 10 hours across an entire school year.

If it's true that, as a planet, we spend around 4 billion hours a year implementing school improvement initiatives that don't actually improve anything, that is an unbelievable waste of time and resources. If you were to lay out 4 billion hours end to end, it would add up to more than 450,000 years. To put this in context, 450,000 years ago, the UK was still attached to the European landmass. It's a geological amount of time.

In short, the scale of ineffective change management happening in schools across the planet every year is *absolutely staggering*.

The vast majority of school improvement initiatives are good ideas – otherwise, people wouldn't be trying to implement them – and they usually have a worthy goal in mind. Perhaps they're trying to improve literacy. Perhaps they're trying to close the attainment gap between under-resourced pupils and their peers. Perhaps they're trying to improve mental health and wellbeing. The intentions are pure, it's just that the vast majority of those change initiatives are poorly implemented and fail to bring about the improved outcomes that we want to see.

This doesn't mean that teachers don't make a positive difference. Teachers, school leaders and support staff make a positive difference every single day of their professional lives, just by turning up and doing what they do. But we're talking here about making a positive difference at an organisational or system level, in a way that significantly and consistently improves outcomes for current and future cohorts compared with what happens currently. And as we've seen, that's a really hard thing to do. But it's not impossible. Far from it.

Just imagine if people in every school on the planet knew how to implement school improvement effectively, in such a way that the vast majority of change initiatives *do* bring about lasting, positive change. Imagine if we could get that success rate up to 80%. Or 50%. Or even just to 30%. Think of the gains we might see in terms of improving literacy, or closing that attainment gap, or improving mental health and wellbeing, or improving teacher retention, or increasing attendance… the list goes on.

This back-of-the-envelope calculation is a crude estimate. But it provides us with a sense of the scale of the problem before us – and also of the potential impact we could have on people's lives all over the world if we can learn how to implement change effectively at scale.

Here, we can see a powerful rationale for learning about 'making change stick'. Individually, the ideas in this book can help you become a more impactful practitioner and a more effective human being. And collectively – if we can all learn how to do this together – we could improve educational and life outcomes for children and young people on a scale never before imagined.

This is a vision of the future I feel strongly compelled to work towards. This book is a collection of the best ideas I've come across in 10 years of investigating how to implement change effectively. But I would be very surprised if the *Making Change Stick* programme does not continue to evolve in the years ahead. I do hope you'll join me in contributing to this effort. Speaking of which…

Don't be a stranger!

If you've found the ideas in this book useful, please keep in touch by subscribing to the *Making Change Stick* mailing list at makingchangestick.co. You can also access the full *Making Change Stick* programme at this site, as well as a free taster course and some free resources.

If you have any thoughts on how the *Making Change Stick* programme might be improved, I'd love to hear from you! Please share your thoughts here: bit.ly/mcs-reader.

If you'd like to submit a short case study outlining the impact the *Making Change Stick* programme has had at your school, you can do so here: bit.ly/mcs-case. It may even appear in a future version of this book!

Good luck with your adventures in implementing school improvement. I look forward to hearing your thoughts…

Acknowledgements

This book has been a long time in the making, and although I ultimately wrote it, creating the *Making Change Stick* programme has been a collaborative endeavour. Countless people have influenced and shaped my thinking along the way, and for that, I am deeply grateful. I've tried my best to acknowledge everyone; if I've overlooked anyone, I hope you will forgive me.

Dr Barbara Kelly – for providing the spark.

Professor Neil Mercer – for his insightful and incredibly helpful supervision of my PhD, where these ideas first took root, and for encouraging my work around implementing oracy.

My former colleagues at the UCL Centre for Educational Leadership, where the *Making Change Stick* programme first started to take shape – especially Sue Hellman, Andy Hodgkinson, Mark Quinn, Greg Ross, Karen Spence-Thomas, and Professor Louise Stoll – I learned so much from all of you.

Everyone who has provided feedback and/or encouragement over the years – I owe special thanks to Kirstie Andrew-Power, Kulvarn Atwal, Kate Barry, Helena Benzinski, Ruth Beresford, Tom Berrill, Dave Boden, Sir Tim Brighouse, Cat Brooksbank, Amy Cooper, Joe Cudd, Valentina Devid, Hilly Drok, Zoe Elder, Kirsty Evans, Dean Fixsen, Laurence Fox, Luke Freedman, Ollie Frith, Amanda Furtado, Peter Gartside, Jeremy Griffiths, Neil Groves, Sophie Hadaway, Andy Hancock, Emily Hehir, Clare Huxley, Ann James, Claire Jones, Alasdair Kennedy, Debra Kidd, René Kneyber, Nicola Lambros, Tim Logan, Elaine Long, Sacha van Looveren, Ollie Lovell, Rachel Macfarlane, Naheeda Maharasingam, Roxanne Matthews, Peps Mccrea, Mary-Catherine McElroy, Stuart McLaughlin, Paul Meredith, Paul Moriarty, Mark Mosdell, Steve Munby, Rose Nelson, Nicola Oldhams, Alex O'Neill, Kath Pratt, Emma Pytel, Sir Anthony Seldon, Dr Matthew Shorrock, Craig Simpson, Alexandra Slee, Andy Threadgould, Karen Townes, Nick Turner, Paul Tyack, Sara Ward and Mick Waters.

Everyone involved in the Welsh pilot study – Richard Edwards and Mark Isherwood at the National Academy for Educational Leadership, as well as Katie Crockford-Morris, Julian Dessent, Ty Golding, Katie Jones, Julian Kennedy, Fiona Kite, Sarah O'Kelly, Cat Place, Leanne Prevel, Andrea Reynolds, Siân Rowles, Sarah Smith, Margot Thomas, Sean Thomas and Dave Williams. Your feedback and support have been invaluable in shaping this programme.

The team at Hodder Education – especially Alastair Coe, Kay Coleman, Anders Ingram, Debbie Noble and Alex Sharratt – thank you for believing in this project and for all your support in guiding it into existence.

The Rethinking Ed team – Kate McAllister, Sophie Dean and Natasha Gates. I feel incredibly fortunate that I get to work with such brilliant, lovely people.

Steve Fantauzzi – for designing the amazing website that accompanies this book.

Ruth and Harry – for tolerating my endless monologues about slice teams.

Mr Pickles – for being a complete legend and for walking me regularly throughout the writing process.

Finally, to **everyone whose work appears in the footnotes** – and to all those who dedicate their lives to improving the lives of others. It is a beautiful thing indeed.

From the bottom of my heart, thank you. Any credit is yours to share, and any mistakes are mine alone.

Glossary of terms

Action step – A specific task or activity designed to be evaluated through a PDSA (Plan, Do, Study, Act) cycle. Action steps break down larger goals into manageable actions that can be tested through a process of disciplined inquiry.

Action trigger – A predetermined event or signal that initiates a specific action, often used in behavioural change strategies. Also known as an implementation intention, it specifies what actions will be taken, where and when.

Adopter types – Categories of individuals who adopt new ideas at different rates, such as innovators, early adopters, early majority, late majority, and resistors (from 'Diffusion of innovations' theory).

Agile leadership – A flexible leadership style that responds quickly to changes in the environment, often incorporating iterative planning and feedback loops.

Agreement bias – The phenomenon whereby someone is more likely to agree with any statement presented to them, regardless of its content (e.g. agreeing with both 'recycling is important' and 'recycling is a waste of time'). Also known as acquiescence bias.

Autonomy – The degree to which individuals or teams have the freedom to make decisions and act independently, such as when adapting an improvement initiative or teaching strategy to their context.

Backward design – A three-step approach to school improvement that starts with the end in mind. First, set impact goals (what difference, for whom, by when). Next, decide on the evidence needed to determine success. Finally, design an improvement strategy to meet your impact goals.

Baseline data – Data collected before any changes to practice have been implemented. Baseline data helps you understand the status quo and provides a point of comparison for future measurements, enabling the assessment of change over time.

Behavioural science – The study of human behaviour, often incorporating psychology, sociology and cognitive science to understand decision-making and actions.

Black box leadership – A leadership style where decision-making processes are opaque or unclear to the wider school community, limiting transparency and buy-in.

Bright spot cloning – Replicating successful strategies or behaviours ('bright spots') across an organisation to improve performance.

Causal mechanisms – The processes or events that explain how different approaches to professional learning impact on pupil outcomes. The IMTP model identifies 14 causal mechanisms.

Choice architecture – The design of environments in which people make decisions, aimed at influencing the choices people make without restricting options (related to nudge theory).

Cohesiveness – The degree to which a group works well together, shares goals, and support one other in achieving group goals.

Collective teacher efficacy – The shared belief among teachers that, together, they can positively impact student achievement. According to John Hattie, it is one of the most powerful influences on student success.

Comms plan – A communication plan designed to keep the entire school community informed and engaged in school improvement efforts.

Communication breakdown – A failure in communication where information is not conveyed or understood properly, leading to misunderstandings and poor or inconsistent implementation.

Complex intervention – An improvement initiative involving multiple components, actions and strategies. In a well-designed complex intervention, the effects of each key element accumulate and interact, leading to a larger overall impact.

Connected autonomy – A concept developed by Michael Fullan to describe the state where individuals or teams have the freedom to make decisions and act independently, while staying connected to the overall goals and values of the organisation. This balance allows for both

autonomy and alignment, ensuring individual actions contribute to collective success.

Consensus – A decision-making process where all members of a slice team agree on a specific course of action.

Content knowledge – The understanding of the subject matter that educators teach to students, including facts, concepts, and theories.

Continuous improvement – A systematic approach to improving practice through regular evaluation and refinement.

Data collection plan – A structured approach for gathering data to monitor and evaluate each key element within an improvement strategy. It specifies when and how data relating to baseline, impact and side-effects needs to be collected, and by whom.

De-implementation – The process of reducing or eliminating practices or policies that are ineffective or harmful to an organisation.

Decision matrix – A tool used to evaluate and compare different options based on specific criteria.

Dependability – In dependable teams, members can rely on one another. They attend meetings on time, meet deadlines, and deliver work to a high standard. Team members also understand each other's strengths and weaknesses, providing appropriate support.

Diffusion of innovations – A theory that explains how new ideas, technologies, or practices spread within a community or organisation over time.

Early adopters – Individuals who embrace new ideas or practices early in the change process, often influencing others within the organisation.

Exit interviews – Interviews conducted with employees who are leaving an organisation, used to gather valuable feedback about their experiences and about a particular improvement strategy.

Fidelity – In the context of implementation, fidelity refers to faithfully replicating an educational strategy or practice as originally designed.

Five-minute interviews – A quick, focused conversation used to gather insights or feedback from a representative sample of stakeholders from throughout the school community.

Five whys – A root cause analysis tool where the question 'Why?' is asked repeatedly (typically five times) to uncover the ultimate cause of a problem.

Focused conversation method – A structured dialogue approach used to facilitate reflection and discussion, guiding participants through four stages (objective, reflective, interpretive, and decisional).

Gantt chart – A visual project management tool that displays tasks or activities against time, showing the progress of a project and its timeline.

Gap analysis – A method of assessing the difference between current performance and desired outcomes, often used to identify areas for improvement.

Gemba walk – A term from the Toyota Production System, referring to a process where leaders go to the 'actual place' to observe real-time practices to identify areas for improvement.

Genchi genbutsu – A Japanese term meaning 'go and see for yourself', used to emphasise the importance of first-hand observation in understanding problems.

General pedagogical knowledge – Broad understanding of teaching strategies, techniques, and methods that are applicable across different subjects and contexts.

Glass box – A metaphor for transparent change implementation, where the wider school community can observe and participate in the decision-making process.

Ground rules – Agreed-upon guidelines that define expected behaviours and norms for how individuals interact and collaborate within a group.

Group goals – Shared objectives that a group agrees to work toward together.

Group norms – The unwritten rules or expectations about behaviour within a group that guide how members interact with each other.

Groupthink – A psychological phenomenon where the desire for harmony or conformity in a group leads to poor decision-making, as dissenting views are suppressed.

Guskey's pyramid – A framework for evaluating and implementing professional development, with five levels: initial reactions, participant learning, organisational support for change, effective use of new knowledge and skills, and pupil outcomes.

Habit change – The process of altering and reinforcing behaviours within a school environment to support long-term improvement efforts.

Habit change levers – Specific strategies or actions that can be used to increase desirable behaviours and decrease undesirable ones.

Habit cycle – A four-stage sequence (cue, craving, reward and response) that underlies habitual behaviour.

Habit stacking – A technique where new habits are linked to existing ones to make them easier to adopt.

Habit systems – The processes, routines and prompts that drive continuous progress toward a goal. While goals focus on the desired outcomes, systems emphasise the consistent actions that lead to those outcomes.

Hansei – A Japanese concept meaning self-reflection, often used in continuous improvement to identify areas for personal or organisational growth.

Horizon scanning – The practice of identifying future trends, risks, or opportunities by regularly examining current and emerging developments, such as through an annual pre-mortem.

Impact data – Information collected to measure the outcomes or effects of an intervention or programme, used to assess its effectiveness.

Impact goal – A target that specifies precisely what improvements you want to make, for whom, by when. Impact goals can be disciplinary or transdisciplinary.

Implementation dip – A temporary decline in performance that often occurs when new practices are introduced before they are fully

understood or effectively implemented. The aim is to make the dip as brief and shallow as possible.

Implementation equation – A formula representing the idea that the effectiveness of a school improvement strategy depends on both the improvement strategy and the implementation strategy.

Implementation gap – The difference between what is known – such as best practices or expected outcomes – and what actually happens in the real world. This gap often arises when there is a breakdown in the application of knowledge during the implementation of initiatives or strategies.

Implementation science – The scientific study of methods and strategies that facilitate the uptake of evidence-based practice and research into regular use by practitioners and policymakers.

Implementation strategy – The approach taken to carry out and embed planned changes effectively.

Improvement science – A systematic, research-informed approach to testing, refining, and scaling changes that lead to better outcomes. Improvement science uses real-time data and iterative cycles to make continuous, impactful improvements.

Improvement strategy – A structured plan for enhancing specific aspects of school performance or pupil outcomes.

IMTP model – An acronym for Instil Insight (I), Motivate Change (M), Develop Techniques (T), and Embed Practice (P) – a framework outlining four mechanisms by which professional learning activities can lead to improved pupil outcomes.

Initiative-itis – A condition where an organisation is overwhelmed with too many initiatives, leading to scepticism that lasting, positive change is achievable.

Innovators – Individuals who are the first to adopt new ideas or technologies, often taking risks to explore untested approaches.

Integrity – An approach to implementation that can be contrasted with 'fidelity', where empirically warranted ideas and practices are

implemented in a way that takes account of the local context. Linked to 'tight but loose' implementation.

Interthinking – The process of thinking and reasoning collectively with others, leading to shared understanding and collaborative problem-solving.

Journey mapping – A technique used to contrast the status quo with a positive vision of the future by considering what a range of stakeholders might say, think or feel in both the current and future states.

Kaizen – A Japanese philosophy of continuous improvement through small, incremental changes that collectively lead to significant advancements.

Key element – A component within a complex intervention that is essential to the success of a project or improvement strategy.

Knoster model – A framework for managing complex change, suggesting that successful change requires vision, skills, incentives, resources, and an action plan.

Know-do gap – The discrepancy between what people know and what they actually do in practice, often due to barriers in applying knowledge. Also known as the research-practice gap.

Lean methodology – A process improvement approach that focuses on being responsive and reducing waste and inefficiency.

Lethal mutation – A concept borrowed from biology to describe the phenomenon when a beneficial educational idea deteriorates into an ineffective or harmful practice due to incremental changes.

Link governor – A member of a school's governing body who takes responsibility for specific areas, such as curriculum or safeguarding, ensuring alignment between policy and practice.

Logic model – A visual representation that links the desired outcomes of a school improvement initiative with the actions required to achieve those outcomes.

Mechanism of action – The specific process through which a strategy or intervention produces its intended outcomes. Often expressed using the frame: 'When we implement X, Y will happen because Z'. Initially

written as a prediction, mechanism of action statements also serves as hypotheses that can be tested through data collection and analysis.

Nemawashi – A Japanese term meaning 'laying the groundwork', referring to informal discussions and consensus-building before formal decisions are made.

Networked improvement community – A group of individuals or organisations working together to solve a specific problem, sharing data and learning to improve outcomes.

Norms – The shared expectations and rules that guide the behaviour of individuals within a group or organisation.

Nudge theory – A concept in behavioural science that suggests small changes in the way choices are presented can significantly influence decision-making.

Offboarding protocol – A formal process for managing the departure of employees from an organisation, ensuring that knowledge transfer and feedback are captured.

Onboarding protocol – A structured approach for integrating new employees into an organisation, helping them understand their roles, the school culture, and expectations.

Operations – The day-to-day activities and processes that ensure the functioning of an organisation or system. Ultimately, the aim of an improvement strategy is to embed effective practice into a school's operations.

Organisational support for change – The extent to which resources, structures, and culture within an organisation facilitate or hinder the successful implementation of an improvement strategy.

PDSA cycles – Plan-Do-Study-Act cycles, used to implement and refine school improvement initiatives through continuous feedback.

Pedagogical content knowledge – The blend of content knowledge and teaching strategies that educators use to effectively teach their subject.

Pivot or persevere meetings – Regular meetings where decisions are made about whether to adjust (pivot) or continue (persevere) with a current strategy based on a combination of data and dialogue.

Pre-mortem – A strategy used to anticipate potential problems with a project before they occur, allowing for proactive problem-solving.

Priority matrix – A tool used to prioritise tasks or projects based on impact and effort, helping organisations focus on what matters most.

Problem tree – A root cause analysis tool that sets out the core problem (the trunk), the consequences of that problem (the branches) and its root causes (the roots).

Project management – The process of planning, defining, managing and leading an improvement initiative. It involves deciding, mapping and monitoring who needs to do what, when, and in what order.

Psychological safety – The shared belief held by members of a team that it's OK to take risks, express their ideas and concerns, ask questions, and admit mistakes without fear of repercussion.

Research question – A specific question that guides the focus of a study or inquiry, aimed at generating new knowledge or understanding. In the *Making Change Stick* programme, research questions can focus on baseline, impact or side-effects.

Research summary – A concise synthesis of key findings from research used to inform decision-making or guide practice.

Root cause analysis – A systematic method used to identify the underlying reasons for a problem, with the aim of tackling the problem at its roots rather than addressing its symptoms.

Routines – Regular, repeated behaviours or activities that become habits over time, contributing to the smooth functioning of an organisation or classroom.

Running record – A tool used to track the development of a complex school improvement initiative over time.

Sampling – The process of selecting a subset of individuals or data from a larger population to make generalisations about the entire population. An important approach to data collection designed to maximise impact while minimising workload.

Scaling up – The process of expanding a successful programme or initiative from a small-scale pilot to a broader implementation across an organisation or system.

Scout mindset – A mindset that prioritises truth-seeking and understanding over defending preconceived beliefs (opposite of soldier mindset).

Side-effects data – Information collected to monitor unintended consequences or negative outcomes that may arise from an intervention or improvement strategy.

Significant projects – Key initiatives or programmes that have a major impact on the strategic goals of an organisation, often requiring substantial resources or time to implement. The *Making Change Stick* programme is designed for such significant projects, although the ideas and strategies can be applied to any improvement initiative or existing area of practice.

Slice team – An alternative to top-down change where decision-making is devolved to a team of representative stakeholders.

Soldier mindset – A mindset focused on defending existing beliefs or positions rather than being open to new evidence or ideas (opposite of scout mindset).

Steel man – A technique used in argumentation where one presents the strongest possible version of the opposing argument before offering a rebuttal.

Steps to success – A framework for managing the process of change from the current state to a target level of use. Often progresses through five stages: baseline, next steps, mid-point, almost there and target level.

Sunk cost fallacy – The tendency to continue investing in a project or decision based on the amount of resources already committed, rather than its current viability. The opposite of the weathervane trap.

Team flow – A state of optimal team performance where group members are fully engaged and working harmoniously towards achieving their group goals.

Theory of action – A framework that explains how and why specific actions are expected to lead to desired outcomes, often used in planning and evaluation. A theory of action comprises three stages: beliefs and values, consequences, and actions.

Theory of change – A comprehensive description of how and why a desired change is expected to happen in a specific context, often used to guide strategic planning. Similar to a logic model.

Tight but loose – A framework suggesting that while the core of an improvement strategy should remain 'tight' (consistent), its implementation should be 'loose' (flexible) to adapt to local contexts.

Timeline – A visual representation of the sequence and duration of events or activities within a project, helping to track progress and manage deadlines.

Tipping point – The critical moment when an innovation reaches enough momentum that its adoption accelerates rapidly across a population. At the tipping point, the innovation shifts from early adopters to widespread acceptance, causing a significant, often irreversible change in uptake.

Top-down change – A change approach where decisions are made by leaders and implemented by others, with little input from those affected. Though it can be effective in some circumstances, top-down change is less effective at implementing significant change initiatives.

Toyota Production System – A manufacturing approach focused on efficiency, reducing waste, and improving quality. It centres around the use of continuous improvement (Kaizen) to streamline processes.

Unfreeze-change-refreeze – A three-stage model of change developed by Kurt Lewin suggesting that change involves unfreezing current behaviours, making changes, and then refreezing new behaviours to make them stick.

Valley of potential – A metaphor for the challenging phase in a change process where progress slows or stalls before the benefits become apparent.

Values mapping – A process used to align individual or group actions with shared values, ensuring that decisions and behaviours reflect core principles.

Walk versus talk – An exercise designed to compare what people say should happen (the espoused theory) with what is happening on the ground (the theory-in-use). A useful exercise in pivot or persevere meetings.

Weathervane trap – The phenomenon whereby decisions are overly influenced by external pressures, popular opinion or an implementation dip, leading to poor outcomes and initiative-itis. The opposite of the sunk-cost fallacy.

Implementing change is a complex undertaking, and most school improvement initiatives fail to meet their stated aims. But it doesn't have to be this way.

Drawing on a decade of research and development in schools around the world, Dr James Mannion introduces the *Making Change Stick* programme, a groundbreaking approach to implementing sustainable school improvement.

This practical guide draws together insights from implementation and improvement science, equipping educators with tried-and-tested strategies and a systematic framework to lead effective change that positively impacts pupil outcomes. Inside, you'll find:

- A step-by-step framework, including guidance on data collection, habit formation, and team collaboration.
- Detailed examples of effective change implementation, tailored to different school contexts.
- A range of research-informed strategies to turn intentions into lasting improvement.

Whether you're a teacher, school leader, or policymaker, *Making Change Stick* offers essential tools to create a culture of continuous improvement and make a lasting difference.

'Your no-nonsense companion for securing school change – steeped in evidence and packed with practical insight.'
Peps Mccrea

"It's easy to be overwhelmed by books offering advice. If you read one this year, read this. It exudes practical wisdom.'
Sir Anthony Seldon

Packed full of sage advice, practical activities and relevant worked examples.'
Rachel Macfarlane

ISBN 978-1-3983-8748-5