

Let Teachers SHINE: key concepts and frameworks in an implementation readiness evaluation

Interim report 2013/14: summary paper

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Key learning points

- Our analysis of implementation readiness aims to identify projects for which there is an obvious **need**, which are **plausible** and **clear**, which connect well with the **implementation infrastructure**, and which can be **replicated**. We are using a series of frameworks, informed by implementation science, to assess the projects funded by Let Teachers SHINE against these criteria.
- Comparing the projects with key findings from the international evidence of effectiveness highlights areas where each project can be strengthened. The most consistent theme across the projects is the need for innovative approaches to be **embedded in a wider pedagogy** and to connect well with classroom-based learning.
- It is challenging to define and specify the **‘core components’** of projects - exactly *what* is done, *how* it is done and *why* it is done – but this is necessary for a project to have impact at scale.
- **Successful innovation is a staged approach** moving through exploration, installation, initial implementation and full implementation to sustained implementation. Active consideration needs to be given to what is needed for a project to move forward to the next stage.
- Effective implementation requires the enduring support of the **project lead as champion**: the capacity needed by project leads is easily under-estimated.
- Effective implementation intentionally engages an **implementation infrastructure**. Key elements of the infrastructure relate to people and skills; school processes and cultures; the wider education system; and leadership of projects, schools and wider education systems.
- The extent to which the project fits well with school **culture**, the school’s **strategies**, the **priorities of the school leadership team** and the **school timetable and schedule** (since school days and terms are tightly scheduled) are all particularly important. Most of the projects also require **skills development** for staff and for students involved in delivery.
- Key aspects of the scope for replication in other schools are: the likely **appeal** to other sites; the likely **fit** to other settings; the **feasibility** of project implementation, and the available of support and strategies to help other sites implement a model that is broadly **consistent with the original**.
- Overall, the project shows that schools can be positive and effective hosts of implementation. Several of the projects funded appear, on the basis of the information available so far, to have potential for continued support.

Implementation readiness: an introduction to key concepts and frameworks

Let Teachers SHINE is a funding programme established by *SHINE: Support and Help IN Education*, a leading UK education charity. The programme is intended to stimulate teacher-led innovation with a focus on raising the attainment of disadvantaged children in literacy, numeracy and science. Every year, approximately ten projects are selected through a national competition. After an initial year’s funding, the strongest projects are selected for a further one or two years’ funding. SHINE’s ultimate aim is that the programme produces one or more projects which have the potential for large-scale replication.

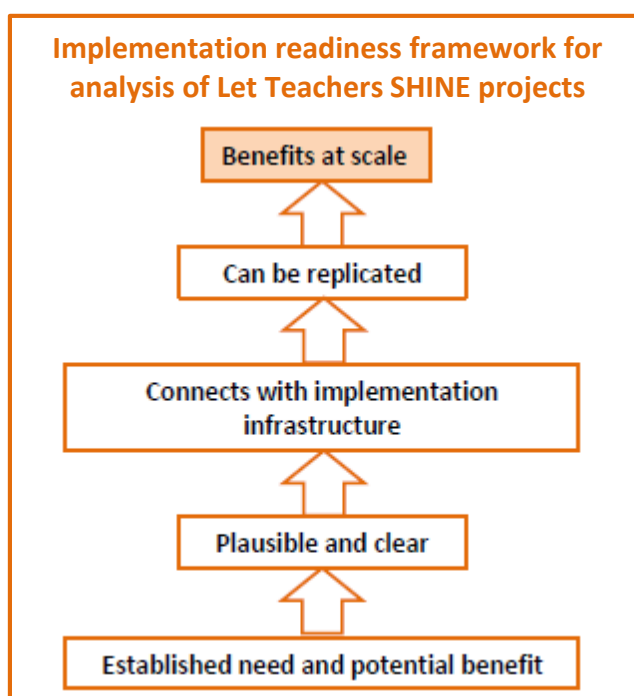
The Colebrooke Centre for Evidence and Implementation is undertaking an implementation readiness evaluation of the funded projects, over the course of two years, which provides evidence to inform SHINE's investment decisions. Although our analysis of individual projects remains confidential, this summary paper explains the theoretical framework that The Colebrooke Centre is using in the evaluation. It is an introduction to the key concepts and principles (drawn from the emerging international study of effective implementation) that we are applying to analyse the Let Teachers SHINE projects.

The summary is intended for the funded projects and for potential future applicants; for SHINE's Trustees, funders and other stakeholders; and for other innovators in education.

Our framework for analysing implementation readiness

The challenges involved in sustaining innovations and producing benefits at scale are well documented. Few innovations are sustained successfully over time, and even well-designed and well-established programmes easily lose effectiveness when they are transferred to new settings. Our approach therefore focuses on assessing the prospects of the projects being sustainable beyond their initial operation.

Drawing on our earlier work¹, we define an implementation-ready project as one for which there is an obvious need, that is plausible and clear, that connects well with the implementation infrastructure, and that can be replicated. The first issue – need – is assessed by SHINE in its initial funding decisions. The remaining issues are the focus of our evaluation and result in five key questions:



- Q1: Are the projects consistent with the wider evidence about effective programmes or approaches of their type?**
- Q2: Are the projects sufficiently clear to be capable of implementation?**
- Q3: How has implementation progressed so far?**
- Q4: How well are the projects supported by an implementation infrastructure and by components known to be essential supports for effective implementation?**
- Q5: Can the projects be scaled up or replicated elsewhere?**

¹ Ghate D, Coe C and Lewis J (2014) *My Baby's Brain in Hertfordshire: the independent evaluation of Phase Two* http://www.cevi.org.uk/docs2/My_Baby's_Brain_final_report_February_2014.pdf

The ongoing evaluation involves three components: a rapid review of the international evidence of effectiveness of similar projects; an online implementation survey completed by the project leads; and a one-day site visit to projects which have progressed beyond the first year of funding.

Q1: Are the funded projects consistent with the wider evidence about effective programmes or approaches of their type?

Let Teachers SHINE intentionally aims to stimulate innovation rather than to fund projects that use well-tested and established approaches. However, to have realistic prospects of being effective at scale, the funded projects need to connect with what is known about effectiveness in similar areas. We identified three clusters of projects which together account for 12 of the 13 projects, and assessed the ‘fit’ of those 12 projects with the relevant body of evidence. The three clusters are: projects using peer tutoring approaches; projects developing or using technological learning aids; and projects using contextualised learning approaches where a curriculum subject is embedded in a ‘real life’ setting or in another curriculum subject.

Peer tutoring projects

Peer tutoring involves learners of broadly similar age working together in the role of tutor and learner. There is a very considerable body of evidence supporting the effectiveness of this kind of approach, including a number of meta-analyses. Key findings are:

- Peer tutoring has been shown to be effective in a range of curriculum areas, particularly maths and reading, and at both primary and secondary levels
- Some studies have found particularly strong effects for more disadvantaged students
- The evidence is more supportive of cross-age than same-age tutoring although with little specificity about how large the age gap should be
- The evidence about the duration and intensity needed to achieve measurable impact is very mixed
- Peer tutoring has also been shown to yield benefits in area such as social and communication skills and in affective functioning (eg self-esteem, enjoyment of the subject), and benefits to tutors as well as learners
- The evidence suggests that structured approaches supported by training for tutors are more effective, although findings are somewhat mixed
- There is much less evidence about computerised approaches although they are seen as promising.

Digital technology learning aids

There is now a very substantial body of evidence about the impact of digital technologies on learning which consistently identifies positive benefits, although the scale of benefits is generally small to modest. It is probably *how* technology is used rather than *what* technology is used that is important. ‘Technology’ is well established as being somewhat more effective than ‘no technology’, but overall it compares less well with some other teaching innovations. The key messages, which come particularly from a large number of meta-analyses, are:

- Technology learning aids need to be integrated into classroom teaching and tend not to be sufficient to produce impacts on learning in their own right
- There is some evidence that they are more effective with younger learners than older students
- The gains tend to be greater in maths and science: in literacy the impact tends to be greater for improving writing than either reading or spelling
- Some studies have found paired or small group learning using technology is more effective than children working alone
- There is evidence for the particular effectiveness of technology in support of learning for students with low attainment, who are disadvantaged or who have special needs
- There is more evidence about the effects on student motivation than on attainment, but motivation does not always translate into improved learning
- Digital technology approaches to teaching are more likely to be more effective where there is a clear rationale for their use, they are used to support a different way of learning, and their use is embedded in teaching practice and pedagogy with professional development available to teachers.

Contextualised learning

The third cluster of projects use contextualised learning or integrated curriculum approaches. This is a much less well-researched area and the evidence does not point clearly either to, or away from, effectiveness. The very limited evidence base suggests that interventions need to include specific work to develop students' skills in learning through these approaches, and strategies to transfer knowledge to other contexts.

The projects in this cluster also show some of the features of co-operative learning (where students work in groups with a focus on supporting each other's learning) and meta-cognitive approaches (which aim to develop skills in 'learning to learn'), although they do not adhere to these defined models in full. There is good evidence to support co-operative learning approaches, particularly at primary school level. The most effective projects involve professional development for staff in the specific teaching methods involved, well-designed structured tasks, an approach that is embedded in the curriculum, and a supportive school culture. There is also a well-developed and strongly supportive evidence base for projects which aim to develop meta-cognitive skills. There is positive evidence across age groups and in a range of different curriculum areas. The evidence suggests that more effective approaches use small groups where learners can support each other and make their thinking explicit; have an underpinning rationale to improve meta-cognitive skills rather than a focus on a curriculum aim; include professional development for teachers; match the approach carefully to the specific learning context; and teach students to plan, describe their thinking and learning, monitor task progress and evaluate their approach to learning.

Overall, projects in this cluster are more likely to be effective if they are using eclectic and creative methods in specific and intentional ways, embedded in but not substituting for strong classroom teaching, with deliberate work to help students transfer learning to the curriculum area.

We have examined each funded project and analysed how well they fit with this evidence. Some are well supported by the evidence; for some the evidence is more mixed; and for a third group there is less support, either because the evidence is limited or because the project involves approaches or features that are somewhat at odds with what has been shown to work. For each project, our analysis has identified areas where they may need to be strengthened if they are to have more potential for scale-up. This includes, for example, refining the design and approach; providing more or broader support to students; or ensuring sufficient training for staff or students involved in the delivery of the project. However, the most consistent theme across the projects is the need for innovative approaches to be embedded in a wider pedagogy and to connect well with classroom-based learning. Students need help to see what they have learnt from innovative learning approaches and to apply this learning back to the core subject, and the specific practices involved in doing this need to be visible and explicit in the projects.

The evidence review highlights the key features of effective approaches and can be used by SHINE both to support funded project lead to refine project design, and to inform future funding decisions.

Q2: Are the funded projects sufficiently clear to be capable of implementation?

Being able to describe or specify the key elements or ‘core components’ of innovations is fundamental to their effective implementation. This is important for implementing in the initial host school, but it is critically important for replication. Other schools need to be able to implement the project ‘at full strength’ consistently with the original model, to make informed decisions about whether it is the right project for them, to assess the resources required, and to make *intentional* and *informed* adaptations which can be essential to successful implementation.

The framework we have developed, which draws on international implementation science, can be summarised as focusing on the *what*, the *how* and the *why* of a project. We have assessed the funded projects using this framework and have identified areas where project specifications need to be tightened or further work taken forward in continued implementation.

Framework for analysis of ‘core components’

- **What is done?**
 - What practices and approaches are used?
 - How are they different from what was in place before?
- **How is it done?**
 - Who is the beneficiary group?
 - Who is involved in delivery?
 - How much of the intervention is necessary?
 - When and where does it take place?
 - What implementation strategies are needed?
- **Why is it done?**
 - What are the objectives and the intended outcomes?
 - What principles and values inform the project?

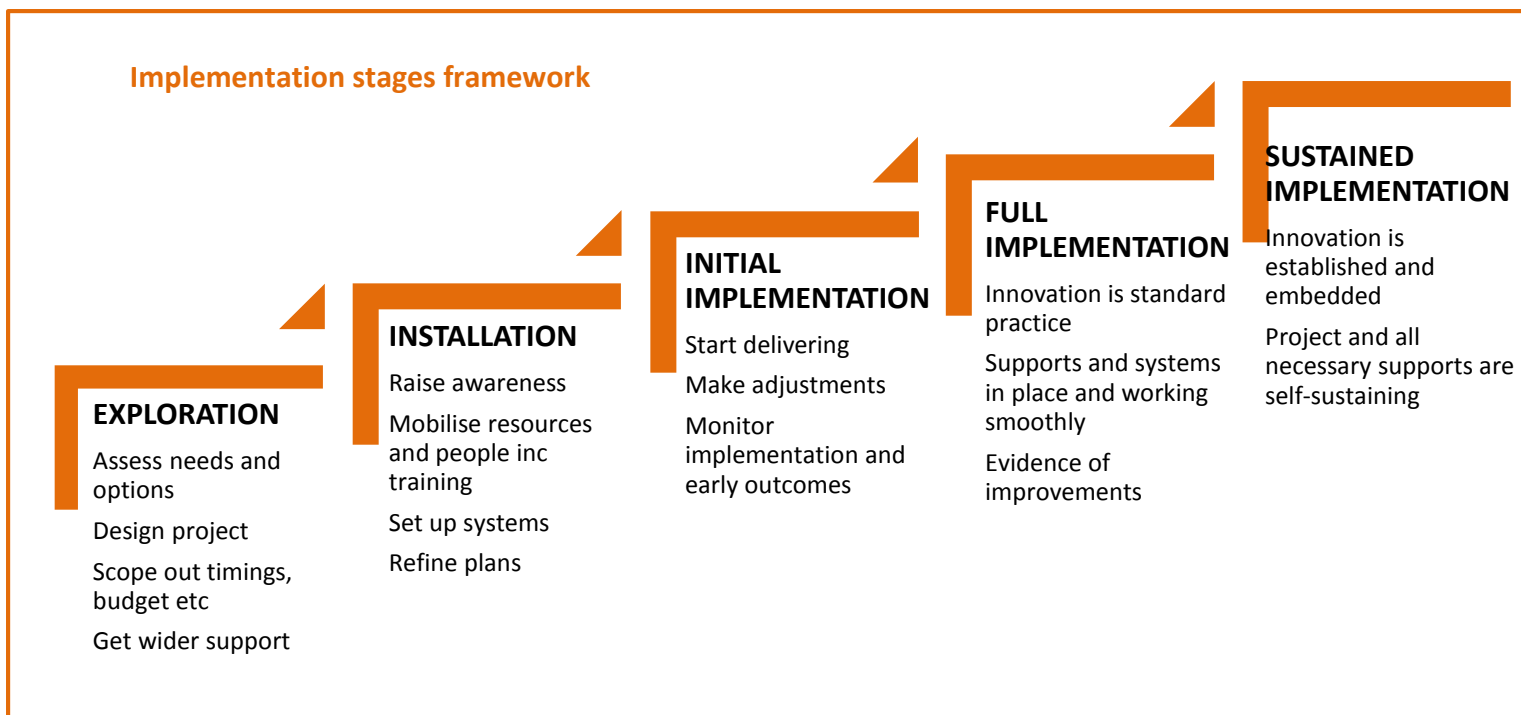
When we apply this framework to the funded projects, a recurrent issue highlighted in our analysis is the need to be clear about exactly what it is that would be promoted to other schools if the project were to be scaled up. What are the specific practices and behaviours that another school would be adopting; what materials or other learning resources would

they need to adopt or develop; and how much of the intervention is needed to produce the intended effects?

This framework will also be useful to teachers developing their own ideas for a funding application and can be used by SHINE in decisions about whether an application is sufficiently clear and well-developed to justify funding.

Q3: How has implementation progressed so far?

Challenge and complexity are inevitable parts of implementation. Any implementation effort will go through a series of stages, and the implementation journey is an evolving process. In this part of our analysis, we have developed a model of implementation stages which is based on the work of one of the leading US implementation research groups^{2 3}.



Applying this framework to the funded projects shows that the projects in their second year of funding are at the full implementation stage in most respects, while those in their first year of funding are mostly at preparation or initial implementation. (Evidence from implementation science suggests that it typically takes two to four years for an innovation to reach the final stage of sustained implementation.)

The projects at more advanced stages of progress generally now require further clarification of the specific practices required; refinement of project materials and resources;

² Fixsen D, Naoom S, Blase K, Friedman R and Wallace F (2005) *Implementation Research: A synthesis of the literature* National Implementation Research Network Tampa FL: University of South Florida

³ Metz A and Bartley L (2012) 'Active Implementation Frameworks for Program Success: How to Use Implementation Science to Improve Outcomes for Children' *Zero to Three* March 2012 11-18

documentation of working processes; and establishing a sustainable funding stream. For projects at earlier stages, progress will particularly involve continuing to develop working practices and materials; completing staff training; and refining how the project fits with schools systems and timetables.

SHINE can use this framework to inform its continuing support for each project, identifying what is required for each project to move on to the next stage.

Q4 How well do the projects connect with the implementation infrastructure?

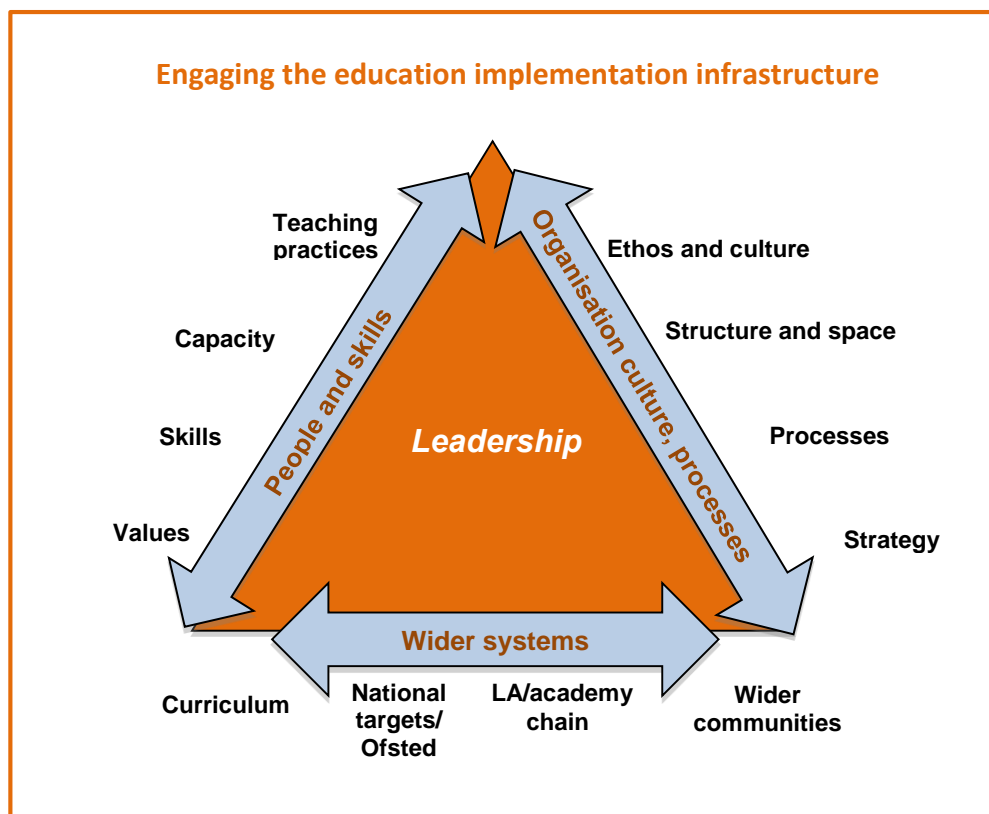
To be effective, any innovation needs an implementation infrastructure: a set of supports that provide the essential underpinning to the innovation. Implementation science has helped to identify the elements of the infrastructure that are likely to be most relevant. The framework we have developed for this part of our analysis draws on earlier work⁴ which describes the 'drivers' of effective implementation, and we have developed this model further and adapted it specifically to innovation in school contexts. To provide effective support to an innovation, the innovation needs to *fit* with aspects of the setting or system where it is being used, to include the *installation or development* of essential support that are not yet fully in place, and most importantly to *engage* elements in intentional support of the innovation. If the fit is poor, the element is not in place or it is not engaged to support the innovation, these are also features of the implementation infrastructure that could hinder successful implementation. So they are important to the *readiness* of the system to support the innovation.

Our framework describes four aspects of the education infrastructure which need to be engaged to support the SHINE projects:

- elements relating to **people and skills**: particularly project leaders, staff and students, and including values, skills, capacity and roles
- aspects of **school processes and culture**: eg school ethos; intake population; scheduling of the school day; data systems; merit and punishment systems; the school's priorities and strategies
- those relating to the **wider education system**: the curriculum; the regulatory system; national targets; the strategy of the local authority and/or the academy chain; parents and wider communities
- **leadership**: both project leadership, and the way in which the innovation connects with leadership within the school and within the wider system.

We are using this framework to assess the fit of the projects with the implementation infrastructure and the extent to which support from each set of elements is available in the project lead's own school. This is providing valuable insight not only about what is required for implementation in the host school, but also about what is required for sustainability and for replication.

⁴ Fixsen D and Blase K (2008) *Drivers framework* Chapel Hill NC: The National Implementation Research Network, Frank Porter Graham Child Development Institute, University of North Carolina



Our analysis suggests that most projects fit well with and are well supported by the school infrastructure. Importantly for the scope for replication, most elements of the infrastructure necessary to support the projects are likely to exist, or to be feasible to install, in other schools. The issues that emerge most recurrently in our analysis of the projects are: the need for training, particularly to use new equipment or technology; the project lead having sufficient capacity for project management and administration; the fit of the project with the school timetable; the school leadership team recognising the need for and value of the project and providing support; the project fitting well with school culture and ethos and with school strategies; and the fact that engaging external partners necessary for project delivery (local venues, businesses, IT experts as well as parents) takes time and effort.

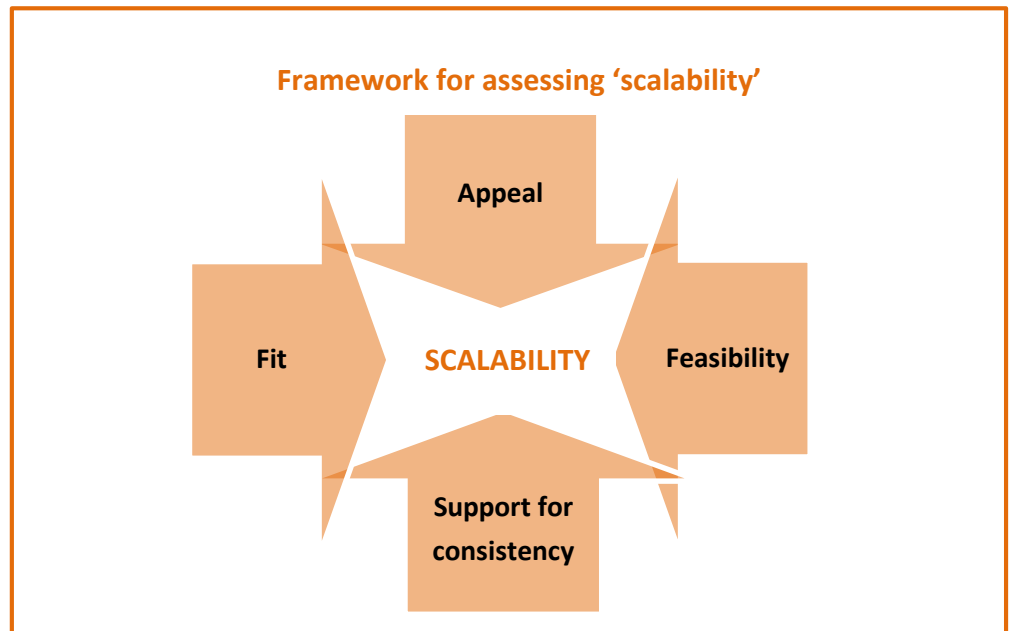
This framework can be used by project leads to consider how they can progress and strengthen the implementation of their project, and by SHINE to inform their ongoing support to projects. It also highlights issues that SHINE should consider in assessing the viability of projects both for initial funding and for replication.

Q5: Can the funded projects be scaled up or replicated elsewhere?

The final framework we have developed for the implementation readiness evaluation involves assessing scalability. Again, it draws on research from implementation science that highlights the *features* or *characteristics* of innovations that are associated with effective implementation^{5 6 7}, but we have extended the thinking to issues of scalability.

The key elements of the framework are:

- the likely **appeal** to other sites: the relative advantage of the innovation compared with teaching practice ‘as usual’; the strength of the evidence of effectiveness; the extent to which impact can be evaluated; the visibility of benefits arising from the innovation; the relevance of the innovation to the needs and priorities of other settings
- likely **fit** to other settings: the availability of key elements of the implementation infrastructure (as discussed above); the compatibility with professional norms and ways of working; the adaptability of the innovation to new contexts
- **feasibility**: whether it can be piloted on a small scale; the simplicity of the innovation and what is involved in delivering it; costs; whether unusual knowledge or skills are required
- the availability of implementation strategies and supports which will help new sites implement a model that is **consistent with the original**: core components (see above) that are or can be highly specified, clearly documented and monitored; a strategy for replication; support from the initial developer of the project.



This analysis is particularly highlighting potential constraints on replication relevant to each of the projects. For example, some projects depend on the lead having specialist or technical knowledge; would require another school to develop extensive materials or resources rather than being able to use resources from the original project; would be more

⁵ Damschroder L, Aron D, Keith R, Kirsh S, Alexander J and Lowery J (2009) 'Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science' *Implementation Science* 4: 50

⁶ Durlak J and DuPre E (2008) 'Implementation Matters: A Review of Research on the Influence of Implementation on Program Outcomes and the Factors Affecting Implementation' *American Journal of Community Psychology* 41: 327-35

⁷ Greenhalgh T, Robert G, MacFarlane F, Bate P and Kyriakidou O (2004) 'Diffusion of Innovations in Service Organizations: Systematic Review and Recommendations' *Milbank Quarterly* 82 (4) 582-629

complex to fit into the school timetable; involve quite complex processes, more preparation or more people in delivery; or less obviously lend themselves to consistent approaches that can be standardised.

This framework can be used by SHINE to inform decisions about where to orient future funding and replication efforts, as well as decisions about applications for initial funding.

Overall, the project is showing that schools can be positive and effective hosts of innovation. Several of the projects funded by Let Teachers SHINE appear, on the basis of the information available to the evaluation so far, to have potential for continued support. The programme is producing valuable learning about what is necessary for effective innovation in school settings.



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