

MAKING BEST USE OF TEACHING ASSISTANTS

Guidance Report



Education
Endowment
Foundation

About the authors:

Professor Jonathan Sharples is a senior researcher at the Education Endowment Foundation, on secondment from the Institute for Effective Education, University of York.

Rob Webster is an associate professor at the Centre for Inclusive Education, UCL Institute of Education, London, where he also leads the Maximising the Impact of Teaching Assistants (MITA) programme.

Professor Peter Blatchford is Professor of Psychology and Education at the UCL Institute of Education. He has directed large scale research programmes on class size, support staff and collaborative group work.

CONTENTS

Introduction	4
Background	5
What is the typical impact of TAs in schools?	6
How are TAs currently being used in schools?	8
Summary of recommendations	10

The effective use of TAs under everyday classroom conditions

Recommendation 1	TAs should not be used as an informal teaching resource for low attaining pupils	13
Recommendation 2	Use TAs to add value to what teachers do, not replace them	14
Recommendation 3	Use TAs to help pupils develop independent learning skills and manage their own learning	15
Recommendation 4	Ensure TAs are fully prepared for their role in the classroom	16

The effective use of TAs in delivering structured interventions out of class

Recommendation 5	Use TAs to deliver high quality one-to-one and small group support using structured interventions	18
Recommendation 6	Adopt evidence-based interventions to support TAs in their small group and one-to-one instruction	20

Integrating learning from everyday classroom contexts and structured interventions

Recommendation 7	Ensure explicit connections are made between learning from everyday classroom teaching and structured interventions	22
Acting on the evidence		24
Additional Resources		26
How was this guidance compiled?		27
References		28

INTRODUCTION

What is this guidance for?

This EEF Guidance Report is designed to provide practical, evidence-based guidance to help primary and secondary schools make the best use of teaching assistants* (TAs). It contains seven recommendations, based on the latest research examining the use of TAs in classrooms.

The guidance draws predominately on studies that feed into the [Teaching and Learning Toolkit](#), produced by the Education Endowment Foundation in collaboration with the Sutton Trust and Durham University.¹ Key studies include new findings from EEF-funded evaluations and a programme of research from UCL Institute of Education.² As such, it is not a new study in itself, but rather is intended as an accessible overview of existing research with clear, actionable guidance. Although the evidence base is still developing around TAs, there is an emerging picture from the research about how best to deploy, train and support them to improve learning outcomes for pupils.

The guidance begins by summarising the way in which TAs are typically used in English schools, with 'key findings' drawn from the latest research. This is followed by seven recommendations to guide schools in maximising the impact of TAs. These are arranged in three sections: a) recommendations on the use of TAs in everyday classroom contexts; b) recommendations on TAs delivering structured interventions out of class; and c) recommendations in linking learning in everyday classroom contexts and structured interventions. Each of the recommendations contains information on the relevant research and the implications for practice. At the end of the guidance there are some ideas and strategies on how schools might act on the evidence.

As well as presenting a snapshot of the current evidence, the report also highlights where further research is needed (see Boxes 1 and 3). Details of the approach used to develop the guidance are available in the section [‘How has this guidance been compiled?’](#)

Who is this guidance for?

This guidance is aimed primarily at headteachers and other members of the Senior Leadership Team (SLT) in both primary and secondary schools. Research

suggests that rethinking the role of TAs is much more likely to be successful if senior leaders coordinate action, given their responsibility for managing change at school level and making decisions on staff employment and deployment. As Special Educational Needs Coordinators (SENCOs) often play an important role in coordinating TAs, it is recommended they are included in this process. School governors should also find the guidance helpful in supporting the SLT with the deployment of staff and resources across the school. While the guidance draws primarily on research conducted in mainstream settings, it is anticipated that it will also be relevant to special schools, alternative provisions and pupil referral units.

Class teachers should also find this guidance useful, as they have the day-to-day responsibility for deciding how to make the most effective use of the TAs with whom they work. Finally, although this guidance is not specifically intended for TAs it is hoped they will also find it of relevance and interest, given they are often directly involved in the change process.

Using this guidance

This guidance highlights the need for careful planning when rethinking the use of TAs, taking into account the local context as well as the wider evidence base. There is no 'one size fits all' solution; as a school, you will need to arrive at solutions that draw on the research and apply them appropriately within your context. At the same time, it is important to consider the recommendations carefully and how faithfully and consistently they are applied in your school.

Inevitably, change takes time, and we recommend taking at least two terms to plan, develop and pilot strategies on a small scale at first, before rolling out new practices across the school. Gather support for change across the school and set aside regular time throughout the year to focus on this project and review progress.

The section 'Acting on the Evidence', suggests a range of strategies and tools that you might find helpful in planning, structuring and delivering a whole-school approach to improving the use of teaching assistants.

The rise and rise of TAs

While the number of teachers in mainstream schools in England has remained relatively steady over the last decade or so, the number of full-time equivalent TAs has more than trebled since 2000: from 79,000 to 243,700.³

Teaching assistants comprise over a quarter of the workforce in mainstream schools in England: 35% of the primary workforce, and 14% of the secondary school workforce. The number of full-time equivalent TAs has more than trebled since 2000: from 79,000 to 262,800. On the basis of headcount data, there are currently more TAs in English nursery and primary schools than teachers: 273,200 vs. 248,900.** About 7% of TAs in state-funded schools have higher-level teaching assistant (HLTA) status.

A key reason for increasing the number of TAs was to help deal with problems with teacher workloads. In 2003, the government introduced The National Agreement to help raise pupil standards and tackle excessive teacher workload, in large part via new and expanded support roles and responsibilities for TAs and other support staff.

The growth in the numbers of TAs has also been driven by the push for greater inclusion of pupils with special educational needs and disabilities (SEND) into

mainstream schools, with TAs often providing the key means by which inclusion is facilitated. Given that SEN pupils and low-attaining pupils are more likely to claim Free School Meals (FSM),*** TAs also work more closely with pupils from low-income backgrounds. Indeed, expenditure on TAs is one of the most common uses of the Pupil Premium in primary schools, a government initiative that assigns funding to schools in proportion to the number of pupils on FSM.⁴

A combination of these factors means that schools now spend approximately £4.4 billion each year on TAs, corresponding to 13% of the education budget. This presents an excellent opportunity for improvements in practice, with such a large and already committed resource in place. The recommendations in this guidance recognise the fact that schools are operating within already tight budgets; however, noticeable improvements in pupil outcomes can be made through the thoughtful use of existing resources, without significant additional expenditure.

“While the proportion of teachers in mainstream schools in England has remained relatively steady over the last decade or so, the proportion of full-time equivalent TAs has more than trebled since 2000: from 79,000 to 243,700.”

* In line with common usage, we use the term ‘teaching assistant’ (TA) to cover equivalent classroom- and pupil-based paraprofessional roles, such as ‘learning support assistant’ and ‘classroom assistant’. We also include ‘higher level teaching assistants’ in this definition.

** In secondary schools, the headcount ratio is roughly one TA to every four teachers. The size of the workforce can be explained by the fact that 90% of nursery/primary TAs work part-time, compared to 27% of teachers.

*** 30% of pupils with special educational needs also claim Free School Meals.

WHAT IS THE TYPICAL IMPACT OF TAs IN SCHOOLS?

What is the impact of TAs on pupils' academic attainment?

Key finding

The typical deployment and use of TAs, under everyday conditions, is not leading to improvements in academic outcomes

The largest and most detailed study investigating the deployment and impact of TAs in schools to date is the Deployment and Impact of Support Staff (DISS) project, conducted between 2003 and 2008 in UK schools.² The analysis studied the effects of the amount of TA support – based on teacher estimates of TA support and systematic observations – on 8,200 pupils' academic progress in English, mathematics and science. Two cohorts of pupils in seven age groups in mainstream schools were tracked over one year each. Other factors known to affect progress (and the allocation of TA support) were taken into account in the analysis, including pupils' SEN status, prior attainment, eligibility for Free School Meals, English as an Additional Language and deprivation.

The results were striking: 16 of the 21 results were in a negative direction and there were no positive effects of TA support for any subject or for any year group. Those pupils receiving the most support from TAs made less progress than similar pupils who received little or no support from TAs. There was also evidence that the negative impact was most marked for pupils with the highest levels of SEN, who, as discussed, typically receive the most TA support.

Other research exploring the impact of TAs in everyday classroom contexts supports these findings. In the US, evidence from the Tennessee Student Teacher

Achievement Ratio (STAR) project found there was no beneficial effect on pupil attainment of having a 'teacher aide' in kindergarten to Grade 3 classes (equivalent of Years 1–4).⁵ In other UK studies, pupils with SEN assigned to TAs for support have been shown to make less progress than their unsupported peers, in both literacy and maths.^{6,7}

As we shall see, there is good emerging evidence that TAs can provide noticeable improvements to pupil attainment. Here, TAs are working well alongside teachers in providing excellent supplementary learning support. However, importantly, this is happening inconsistently across classrooms and schools.

While the DISS project results were reported in 2009, evidence from the Making a Statement (MAST) and SEN in Secondary Education (SENSE) studies, conducted between 2011 and 2017, and which focussed on the day-to-day educational experiences of pupils with SEND, suggest the deployment of TAs has not changed substantially since.

An independent evaluation is currently underway of [Maximising the Impact of TAs \(MITA\)](#), a whole-school programme designed to improve the areas of decision-making and classroom practice that explain the impact findings identified through the DISS project.

What is the impact of TAs on pupil behaviour, motivation and approaches to learning?

Key finding

There is mixed evidence to support the view that TA support has a positive impact on 'soft' outcomes. Some evidence suggests TA support may increase dependency

Teachers report that assigning TAs to particular pupils for individual support – usually those with difficulties connected to learning, behaviour or attention – helps them develop confidence and motivation, good working habits and the willingness to finish a task.² Other research has identified the benefits of TAs more in terms of the range of learning experiences provided and the effects on pupil motivation, confidence and self-esteem, and less in terms of pupil progress.⁸

On the other hand, there are concerns that TAs can encourage dependency, because they prioritise task completion, rather than encouraging pupils to think and act for themselves.⁹ Taken further, it has been argued that over-reliance on one-to-one support leads to a wide range of detrimental effects on pupils, in terms of interference with ownership and responsibility for learning, and separation from classmates.¹⁰

The DISS project examined the effect of the amount of TA support on eight scales representing 'Positive Approaches to Learning' (PAL): distractibility; task confidence; motivation; disruptiveness; independence; relationships with other pupils; completion of assigned work; and following instructions from adults. The results showed little evidence that the amount of support pupils received from TAs over a school year improved these dimensions, except for those in Year 9 (13–14-year-olds), where there was a clear positive effect of TA support across all eight PAL outcomes.

Nevertheless, the evidence on the impact of TAs on non-academic outcomes is thin and based largely on impressionistic data. This balance between a TA's contribution to academic and non-academic outcomes needs more attention.

What is the impact of TAs on teachers and learning?

Key finding

TAs help ease workload and stress, reduce classroom disruption and allow teachers more time to teach

Although the effects of TAs on pupils' academic learning are worrying, it is worth noting that there is good evidence that delegating routine administrative tasks to TAs frees teachers up to focus more time on the core functions of teaching – such as planning, assessment and time spent in class.^{2,11} Benefits are also found in terms of reducing workload and improving teachers' perceptions of stress and job satisfaction.²

Teachers are largely positive about the contribution of TAs in classrooms, reporting that increased attention and support for learning for those pupils who struggle most has a direct impact on their learning, and an indirect effect on the learning of the rest of the class.² Results from observations made as part of the DISS project confirm teachers' views that TAs had a positive effect in terms of reducing disruption and allowing more time for teachers to teach.²

HOW ARE TAs CURRENTLY BEING USED IN SCHOOLS?

EXPLAINING THE EFFECTS OF TA SUPPORT ON LEARNING OUTCOMES

In order to understand the impact of TAs on pupils' learning outcomes it is important to look at how they are currently being used in schools.

The DISS project revealed ambiguity and variation in the way TAs are used both within and between schools. In one sense TAs can help pupils indirectly, by assisting the school to enhance teaching (e.g. by taking on teachers' administrative duties), but as we shall see, many TAs also have a direct teaching role, interacting daily with pupils (mainly those with learning and behavioural needs), supplementing teacher input and providing one-to-one and small group support.

Simply put, research suggests it is the decisions made about TAs by school leaders and teachers, not decisions made by TAs, that best explain the effects of TA support in the classroom on pupil progress. In other words, don't blame TAs!

Key finding

TAs spend the majority of their time in an informal instructional role supporting pupils with most need

Key finding

Support from TAs tends to be more focussed on task completion and less concerned with developing understanding

A striking finding from the DISS study was the observation that the majority of TAs spent most of their time working in a direct, but informal, instructional role with pupils on a small group and one-to-one basis (both inside and outside of the classroom). Results were also clear about which pupils TAs worked with. TA support was principally for pupils failing to make expected levels of progress, or those identified as having SEND. TAs hardly ever supported average or higher attaining pupils.

Although this arrangement is often seen as beneficial for the pupils and the teacher – because the pupils in need receive more attention, while the teacher can concentrate on the rest of the class – the consequence of this arrangement is a 'separation' effect. As a result of high amounts of (sometimes, near-constant) TA support, pupils with the highest level of SEND spend less time in whole-class teaching, less time with the teacher, and have fewer opportunities for peer interaction, compared with non-SEND pupils.^{12,13}

The net result of this deployment is that TAs in mainstream schools regularly adopt the status of 'primary educator' for pupils in most need.

Previous studies have suggested a number of positive features regarding the nature and quality of TAs' interactions with pupils: interactions are less formal and more personalised than teacher to-pupil talk; they aid pupil engagement; help to keep them on-task; and allow access to immediate support and differentiation.¹⁴ However, other research has highlighted the unintended consequences of high amounts of TA support (see previous section).¹⁰

Evidence from classroom recordings made during the DISS project revealed that the quality of instruction pupils received from TAs was markedly lower compared to that provided by the teacher. TAs tended to close talk down and 'spoon-feed' answers.^{14,15} Over time, this can limit understanding, weaken pupils' sense of control over their learning and reduce their capacity to develop independent learning skills. As pupils 'outsource' their learning to TAs, they develop a 'learned helplessness'.

Key finding

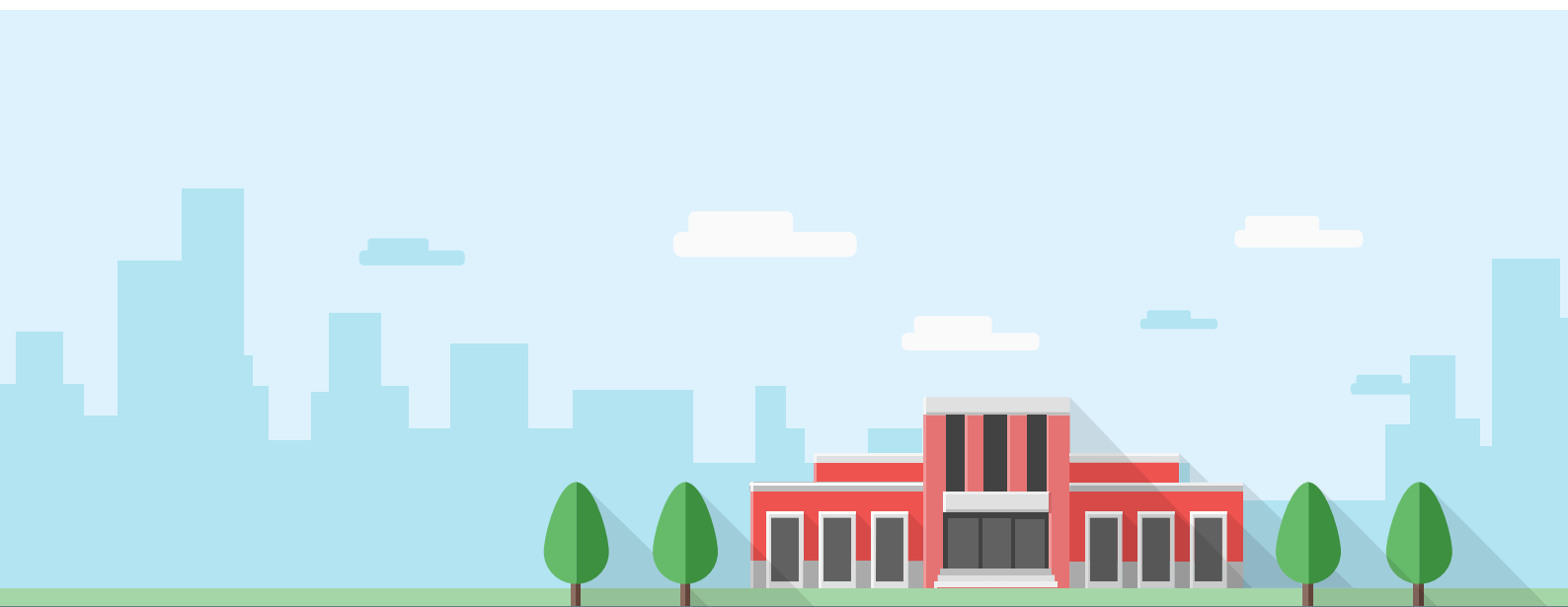
TAs are not adequately prepared for their role in classrooms and have little time for liaison with teachers

There was clear evidence from the DISS project that TAs frequently come into their role unprepared, both in terms of background training and day-to-day preparation. There are no specific entry qualifications for TAs and many do not receive any induction training.

TAs also have different levels of formal qualifications when compared with teachers; the majority of TAs, for example, do not have an undergraduate degree.² This level of training is important considering their common deployment as ‘primary educators’ for low-attaining with SEND. It is often argued – quite sensibly – that TAs’ qualifications should make a difference to pupil outcomes, but there is no evidence that this is the case.^{16,17,18} Schools still need to think more strategically about TA deployment to make the most of individuals’ qualifications and skills.

On a day-to-day level, the results from the DISS, MAST and SENSE studies revealed clear concerns about how TAs are prepared to support pupil learning. The vast majority of teachers (especially secondary teachers) reported having no allocated planning or feedback time with the TAs they worked with, and no training in relation to managing, organising or working with TAs.

Communication between teachers and TAs is largely ad hoc, taking place during lesson changeovers and before and after school. As such, conversations rely on the goodwill of TAs. Many TAs report feeling underprepared for the tasks they are given. They ‘go into lessons blind’ and have to ‘tune in’ to the teacher’s delivery in order to pick up vital subject and pedagogical knowledge, tasks and instructions.²



SUMMARY OF RECOMMENDATIONS

The effective use of TAs under everyday classroom conditions

1

TAs should not be used as an informal teaching resource for low attaining pupils



The evidence on TA deployment suggests schools have drifted into a situation in which TAs are often used as an informal instructional resource for pupils in most need. This has the effect of separating pupils from the classroom, their teacher and their peers.

Although this has happened with the best of intentions, this evidence suggests that the status quo is no longer an option.

School leaders should systematically review the roles of both teachers and TAs and take a wider view of how TAs can support learning and improve attainment throughout the school.

Page 13

2

Use TAs to add value to what teachers do, not replace them



If TAs have a direct instructional role it is important they add value to the work of the teacher, not replace them – the expectation should be that the needs of all pupils are addressed, first and foremost, through high quality classroom teaching. Schools should try and organise staff so that the pupils who struggle most have as much time with the teacher as others. Breaking away from a model of deployment where TAs are assigned to specific pupils for long periods requires more strategic approaches to classroom organisation. Instead, school leaders should develop effective teams of teachers and TAs, who understand their complementary roles in the classroom.

Where TAs are working individually with low attaining pupils the focus should be on retaining access to high-quality teaching, for example by delivering brief, but intensive, structured interventions (see Recommendations 5 and 6).

Page 14

3

Use TAs to help pupils develop independent learning skills and manage their own learning



Research has shown that improving the nature and quality of TAs' talk to pupils can support the development of independent learning skills, which are associated with improved learning outcomes. TAs should, for example, be trained to avoid prioritising task completion and instead concentrate on helping pupils develop ownership of tasks.

TAs should aim to give pupils the least amount of help first. They should allow sufficient wait time, so pupils can respond to a question or attempt the stage of a task independently. TAs should intervene appropriately when pupils demonstrate they are unable to proceed.

Page 15

4

Ensure TAs are fully prepared for their role in the classroom



Schools should provide sufficient time for TA training and for teachers and TAs to meet out of class to enable the necessary lesson preparation and feedback.

Creative ways of ensuring teachers and TAs have time to meet include adjusting TAs' working hours (start early, finish early), using assembly time and having TAs join teachers for (part of) Planning, Preparation and Assessment (PPA) time.

During lesson preparation time ensure TAs have the essential 'need to knows':

- Concepts, facts, information being taught
- Skills to be learned, applied, practised or extended
- Intended learning outcomes
- Expected/required feedback.

Page 16

The effective use of TAs in delivering structured interventions out of class

Integrating learning from work led by teachers and TAs

5

Use TAs to deliver high quality one-to-one and small group support using structured interventions



Research on TAs delivering targeted interventions in one-to-one or small group settings shows a consistent impact on attainment of approximately three to four additional months' progress (effect size 0.2–0.3). Crucially, these positive effects are only observed when TAs work in structured settings with high quality support and training. When TAs are deployed in more informal, unsupported instructional roles, they can impact negatively on pupils' learning outcomes.

Page 19

6

Adopt evidence-based interventions to support TAs in their small group and one-to-one instruction



Schools should use structured interventions with reliable evidence of effectiveness. There are presently only a handful of programmes in the UK for which there is a secure evidence base, so if schools are using programmes that are 'unproven', they should try and replicate some common elements of effective interventions:

- Sessions are often brief (20–50mins), occur regularly (3–5 times per week) and are maintained over a sustained period (8–20 weeks). Careful timetabling is in place to enable this consistent delivery
- TAs receive extensive training from experienced trainers and/or teachers (5–30 hours per intervention)
- The intervention has structured supporting resources and lesson plans, with clear objectives
- TAs closely follow the plan and structure of the intervention
- Assessments are used to identify appropriate pupils, guide areas for focus and track pupil progress. Effective interventions ensure the right support is being provided to the right child
- Connections are made between the out-of-class learning in the intervention and classroom teaching (see Rec 7).

Page 20

7

Ensure explicit connections are made between learning from everyday classroom teaching structured interventions



Interventions are often quite separate from classroom activities. Lack of time for teachers and TAs to liaise allows relatively little connection between what pupils experience in, and away, from, the classroom. The key is to ensure that learning in interventions is consistent with, and extends, work inside the classroom and that pupils understand the links between them. It should not be assumed that pupils can consistently identify and make sense of these links on their own.

Page 23

Sections are colour coded for ease of reference

The effective use of TAs under everyday classroom conditions



1 TAs should not be used as an informal teaching resource for low attaining pupils



The research outlined previously suggests that the ways in which TAs are often used in schools do not represent a sound educational approach for low-attaining pupils or those with SEN. Indeed, it has led to questions about the overall cost-effectiveness of employing TAs in schools. Encouragingly, research is showing that schools can make relatively straightforward changes that enable TAs to work much more effectively, in ways that can have a potentially transformative effect on pupil outcomes.

The recommended strategies outlined in this section focus on maximising the use of TAs in everyday classroom contexts. They are based heavily on follow-on studies from the DISS project, in particular the Effective Deployment of Teaching Assistants (EDTA) project, and the developmental work of the Maximising the Impact of Teaching Assistants (MITA) programme, which worked with schools to develop alternative ways of using TAs that worked for both staff and pupils, and dealt with the challenges identified previously.¹⁹ Further information on this research is available in Box 1, *What evidence is there on the use of TAs in everyday classroom contexts?*

A key conclusion arising from the evidence on TA deployment is that they are often used as an informal teaching resource for pupils in most need. Though this has happened with the best of intentions, it often results in those pupils being separated from the teacher, whole-class teaching, and their peers. As this arrangement is associated with lower learning outcomes and independence, it suggests the status quo in terms of TA deployment is no longer an option.

Addressing the current situation is a school leadership issue: school leaders should rigorously define the role of TAs and consider their contribution in relation to the drive for whole-school improvement. These decisions on deployment are the starting point from which all other decisions about TAs flow.

Crucially, the starting point is to ensure low-attaining pupils and those with SEND receive high quality teaching, as the evidence shows that it is these children who are most disadvantaged by current arrangements. School leaders should not view the process of rethinking their TA workforce as a substitute for addressing the overall provision made for disadvantaged pupils, lower-attainers and those with SEND. The expectation should be that the needs of all pupils must be addressed, first and foremost, through excellent classroom teaching.

One central issue facing school leaders is to determine the appropriate pedagogical role for TAs, relative to

teachers. If the expectation is that TAs have an instructional teaching role it is important they are trained and supported to make this expectation achievable.

There may also be a case for some TAs to have a full or partial role in non-pedagogical activities, such as easing teachers' administrative workload or in meeting pupils' welfare or pastoral needs. Ultimately, the needs of the pupils must drive decisions around TA deployment. School leaders and governors may find the [Professional Standards for Teaching Assistants](#) helpful in defining the role, purpose and contribution of TAs.

It might be that the roles of some TAs need to change wholly or in part. This is why a thorough audit of current arrangements is advised to define the point from which each school starts, and the goals of reform. The section 'Acting on the Evidence' ([page 24](#)), outlines a number of tools and strategies that schools have successfully used to review the use of TAs and develop more effective practices.

“Addressing the current situation is a school leadership issue. School leaders should rigorously define the role of TAs and consider their contribution in relation to the drive for whole-school improvement.”

2 Use TAs to add value to what teachers do, not replace them



If TAs are to play a direct instructional role, it is important that they supplement, rather than replace, the teacher. Schools can mitigate 'separation effects' by ensuring the pupils who struggle most have no less time with the teacher than others. Rather than deploy TAs in ways that replace the teacher, TAs can be used to enable teachers to work more with lower-attaining pupils and those with SEND. Where TAs do work with pupils individually or in groups, it is essential that they are equipped with the skills to support learning, consistent with the teachers' intentions.

Breaking away from a model of deployment where TAs are assigned to specific pupils for long periods requires more strategic approaches to classroom organisation, based more around teamwork between teacher and TA. Evidence on the impact of some of these approaches is still developing, nevertheless, the examples below are consistent with the principle of 'supplement, not replace, the teacher':

- Rotating roles - Setting up the classroom in such a way that on day one, the teacher works with one group, the TA with another, and the other groups complete tasks collaboratively or independently. Then, on day two, the adults and activities rotate, and so on through the week. In this way, all pupils receive equal time working with the teacher, the TA, each other and under their own direction.
- Make TAs a more visible part of teaching during their whole-class deliver; for example, by using them to scribe answers on the whiteboard, or to demonstrate equipment. This can help the teacher maintain eye contact with the class.
- Using TAs to provide 'teaching triage': roving the classroom and identifying pupils who are having difficulty with a particular task, and who need further help, and flagging this to the teacher.
- Helping pupils in their readiness for learning, ensuring they are prepared and focused for the lesson.
- Using TAs to focus on a supplementary whole-class objective. For example, focusing on writing in a secondary science lesson.

Crucially, school leaders should work on developing effective classroom partnerships. A [teacher-TA agreement](#) can help staff specify their coordinated but differentiated classroom roles, by identifying the ways TAs might contribute at various stages of a lesson (see 'Acting on the Evidence' for a teacher-TA agreement template).

In time, as practices develop, school leaders might consider a whole-school policy, articulating a shared understanding of TA deployment, preparation and training (see '[Acting on the Evidence](#)' for a policy template for TA deployment, training and use).

3 Use TAs to help pupils develop independent learning skills and manage their own learning



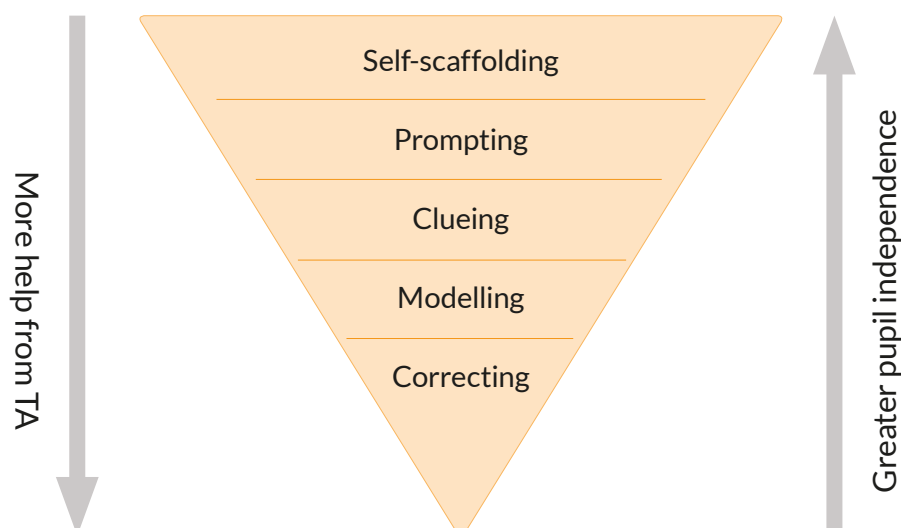
Schools in the EDTA project explored how TAs can help all pupils develop essential skills underpinning learning, such as self-scaffolding: encouraging pupils to ask themselves questions that help them get better at managing their learning. Recent research shows that improving the nature and quality of TAs' talk to pupils can support the development of independent learning skills,²⁰ which are associated with improved learning outcomes.¹ Figure 1 shows a range of ways in which TAs can inhibit, as well as encourage, pupils' independent learning skills.

The practical framework shown in Figure 2 is designed to help [TAs scaffold pupils' learning and encourage independence](#).²¹ TAs should move down the layers in turn. The initial expectation is that pupils self-scaffold whilst the TA observes their performance. TAs should then intervene appropriately when pupils demonstrate they are unable to proceed. The key is for TAs to give the least amount of help first. It is important the tasks set by teachers, and supported by TAs, provide pupils with the right level of challenge.

Figure 1. TA teaching strategies that encourage and inhibit independent learning

Avoid	Encourage
✗ Prioritising task completion	✓ Pupils to be comfortable taking risks with their learning
✗ Not allowing pupils enough thinking and response time	✓ Providing the right amount of support at the right time
✗ 'Stereo-teaching' (repeating verbatim what the teacher says)	✓ Pupils retaining responsibility for their learning
✗ High use of closed questions	✓ Use of open ended questions
✗ Over-prompting and spoon-feeding	✓ Giving the least amount of help first to support pupils' ownership of the task

Figure 2. Scaffolding framework for teaching assistant-pupil interactions



4 Ensure TAs are fully prepared for their role in the classroom

Finding extra time within schools is, of course, never easy. Nevertheless, without adequate out-of-class liaison it is difficult for teachers and TAs to work in the complementary way described above.

Schools that participated in the EDTA project, and those that have undertaken the MTA programme, have found creative ways to ensure teachers and TAs had time to meet, improving the quality of lesson preparation and feedback.¹⁹ For example, headteachers changed TAs' hours of work so that they started and finished their day earlier, thereby creating essential liaison time before school. Table 1 summarises a range of strategies that

schools have used to enable teacher-TA interactions out of class, as well as some key 'need to knows' for TAs in advance of lessons.

The preparedness of TAs also relates to their ongoing training and professional development. If a specific pedagogy is being used, such as formative assessment or cooperative learning, TAs should be trained so they fully understand the principles of the approach and the techniques required to apply it.

Training should also be provided for teachers on how to maximise the use of TAs in the classroom.

Table 1. Changes made by schools to help TA preparedness

Teacher-TA liaison	Ensure TAs have the lesson plan 'need to knows' in advance
<ul style="list-style-type: none"> Adjust TA's working hours: start early, finish early 	<ul style="list-style-type: none"> Concepts, facts, information being taught
<ul style="list-style-type: none"> Timetabling: use assembly time 	<ul style="list-style-type: none"> Skills to be learned, applied, practised or extended
<ul style="list-style-type: none"> TAs join teachers for (part of) PPA time 	<ul style="list-style-type: none"> Intended learning outcomes
<ul style="list-style-type: none"> SLT set expectations for how liaison time is used 	<ul style="list-style-type: none"> Expected/required feedback



Box 1. Evidence Summary

What evidence is there on the use of TAs in everyday classroom contexts?

Much of the research investigating the use of TAs in everyday classroom environments is small-scale and describes what TAs do in the classroom. Almost all of it has at least some focus on how TAs are employed and deployed to facilitate the inclusion of children with SEND.^{22,23,24,25} Early research looked at teamwork between teachers and other adults, such as parent-helpers and TAs,^{26,27} leading to a useful collaborative study with schools on alternative ways of organising classrooms.²⁸ Both the qualitative and quantitative work on impact relies principally on impressionistic data from school staff.

Findings from large-scale systematic analyses investigating the effects of TAs on learning outcomes challenge the assumption that there are unqualified benefits from TA support. Experimental studies are rare, but one in the USA found no differences in the outcomes for pupils in classes with TAs present.⁵ Longitudinal research in the UK has produced similar results.¹⁶ There are very few randomised control trials that investigate the impact of TAs in everyday classrooms, but two conducted in Denmark have found mixed effects.³⁰ However, there were insufficient data on school leaders' decision-making and classroom practices, meaning it is difficult to conclude what drove the effects.

Secondary analyses of school expenditure have suggested the expenditure on TAs is positively correlated with improved academic outcomes.^{29,32,33} However, these analyses of TA impact do not adequately rule out the possibility that other school factors might explain the correlations found, and the conclusions drawn are not supported by the evidence collected; in particular they do not include data on what actually happens in classrooms.

The evidence on the impact of TAs on non-academic outcomes (including well-being) is thin and largely based on impressionistic data. The balance between TAs' contribution to academic and non-academic outcomes needs more attention, but there are concerns that TAs can encourage dependency, because they prioritise task completion rather than encouraging pupils to think for themselves.^{2,9} Evidence shows that over-reliance on one-to-one TA support leads to a wide range of detrimental effects on pupils, in terms of interference with ownership and responsibility for learning, and separation from classmates.^{10,12,13}

The largest and most in-depth study ever carried out on the use and impact of TA support in everyday classroom environments is the multi-method DISS project.² Unlike other studies, it linked what TAs actually do in classrooms to effects on pupil progress. Researchers critically examined the relationship between TA support and the academic progress of 8,200 pupils, and put forward a coherent explanation for the negative relationship found on the basis of careful analyses of multiple forms of data collected in classrooms (see the section 'What is the impact of TAs on pupil's academic attainment?'). The findings have been referred to throughout this guidance.

Since then, there has been good observational evidence from the EDTA project demonstrating the positive impact on school and classroom processes made as a result of making changes consistent with the recommendations outlined in this guidance.¹⁹ The underlying model has been subjected to extensive professional validation through collaborative work with schools via the Maximising the Impact of Teaching Assistants (MITA) school improvement and CPD programme. The EEF is currently funding an independent evaluation of MITA to test the extent to which reforming TA deployment, practice and preparation in everyday classrooms can improve pupil attainment and engagement.

Literature reviews by Sharma and Salend (2016) and Masdeu Navarro (2015) provide good overviews of the international evidence on the roles and impact of teaching assistants.^{25,30}

The effective use of TAs in delivering structured interventions out of class



5

Use TAs to deliver high quality one-to-one and small group support using structured interventions



What is the impact of using TAs to provide one-to-one or small group intensive support using structured interventions?

The area of research showing the strongest evidence for TAs having a positive impact on pupil attainment focuses on their role in delivering structured interventions in one-to-one or small group settings.

This research shows a consistent impact on attainment of approximately three to four additional months' progress over an academic year (effect size 0.2–0.3).^{1,32,34} This can be seen as a moderate effect.

Crucially, these positive effects are only observed when TAs work in structured settings with high-quality support and training. When TAs are used in more informal, unsupported instructional roles, we see little or no impact on pupil outcomes (see the section 'What is the impact of TAs on pupils' academic attainment?').² This suggests that schools should use a small number of carefully chosen and well structured interventions, with reliable evidence of effectiveness. The aim should be to complement the overall teaching and learning objectives and minimise the time pupils spend away from the classroom. Characteristics of effective interventions are discussed below (see Recommendation 7).

Conduct an interventions 'health check'

When considering the use of TAs to deliver structured interventions it is important to think about which intervention is being used and how it is being delivered. One thing you might consider is conducting an [interventions 'health check'](#).

Useful questions to ask include:

- Are you using evidence-based interventions? If so, are they being used as intended, with the appropriate guidance and training?
- Is appropriate planning provided for timetabling out-of-class sessions so TAs complement classroom teaching?
- What does your data show for those pupils involved in intervention work? Is it in line with the expected progress from the research and/or provided by the programme developer?
- Do your findings suggest that training for TAs (and teachers) needs to be refreshed?
- How effective are TAs and teachers in reviewing work taking place in intervention sessions and are links being made with general classroom work?
- Is there designated time for teacher/TA liaison?

How does this compare with other forms of intensive instructional support?

The average impact of TAs delivering structured interventions is, perhaps unsurprisingly, less than that for interventions using experienced qualified teachers, which typically provide around six additional months' progress per year.¹ However, these teacher-led interventions tend to be expensive, requiring additional, and often specialist, staff. TA-led interventions typically produce better outcomes than volunteers when delivering interventions (typically one to two months' additional progress), although both these groups benefit significantly from training and ongoing coaching.^{32,34} Further information on the research conducted on TA-led interventions is available in Box 3 overleaf.

The positive effects seen for TAs delivering structured interventions challenges the idea that only certified teachers can provide effective one-to-one or small group support.

“The area of research showing the strongest evidence for TAs having a positive impact on pupil attainment focuses on their role in delivering structured interventions in one-to-one or small group settings.”

6 Adopt evidence-based interventions to support TAs in their small group and one-to-one instruction

When considering the use of TAs to deliver structured interventions it is important to think about which intervention programme is being used and how it

is being delivered. As discussed, the key difference between effective and less effective TA-led interventions is the amount and type of training, coaching and support provided by the school. In this sense, evidence-based interventions provide a means of aiding consistent and high quality delivery.

At present there are relatively few programmes in the UK for which there is secure evidence of effectiveness. If your school is using, or considering, programmes that are ‘unproven’, ensure they include the common elements of effective interventions:

- Sessions are often brief (15-45 minutes), occur regularly (3–5 times per week) and are maintained over a sustained period (8–20 weeks). Careful timetabling is in place to enable consistent delivery;
- TAs receive extensive training from experienced trainers and/or teachers (5–30 hours per intervention);
- The intervention has structured supporting resources and lesson plans, with clear objectives and possibly a delivery script;
- Ensure there is fidelity to the programme and do not depart from suggested delivery protocols. If it says deliver every other day for 30 minutes to groups of no more than four pupils, do this!
- Likewise, ensure TAs closely follow the plan and structure of the intervention, and use delivery scripts;
- Assessments are used to identify appropriate pupils, guide areas for focus and track pupil progress. Effective interventions ensure the right support is being provided to the right child;
- Connections are made between the out-of-class learning in the intervention and classroom teaching (see Recommendation 7).
- Examples of evidence-based interventions available in the UK include [Catch Up Numeracy](#), [Catch Up Literacy](#), Reading Intervention Programme, [Talk for Literacy](#), [Nuffield Early Language Intervention](#), [ABRA](#), [1stClass@Number](#) and [Switch-on Reading](#) (see Box 2). Details of all EEF projects involving TA-led interventions, including the latest evaluation findings, can be found at the EEF website: <https://eef.li/projects/>



Box 2. Nuffield Early Language Intervention

The Nuffield Early Language Intervention (NELI) is an oral language intervention designed to improve listening, narrative and vocabulary skills in children in nursery and reception who show weakness in their oral language skills. Three to five weekly sessions are delivered to groups of 3-4 children for 20-30 weeks, by TAs who are extensively trained in the approach. NELI was independently evaluated using a randomised controlled trial involving 34 schools and nurseries. Children receiving intervention made approximately four months of additional progress in language skills compared to children receiving standard provision. These impacts on language skills were still seen six months after the intervention.

The full evaluation report is available at:

<https://educationendowmentfoundation.org.uk/projects-and-evaluation/projects/nuffield-early-language-intervention/>

Box 3. Evidence Summary

What research has been conducted on TAs delivering small group and one-to-one interventions?

The research investigating TAs delivering interventions is small but growing: in the Teaching and Learning Toolkit, there are 19 studies (80% of the total studies relating to TAs).¹ Nevertheless, most of these studies are small scale, typically involving 30 to 200 pupils. The majority of this research has been conducted internationally;^{32,34} however, the emerging findings from UK evaluations are consistent with the international picture. More research has been conducted on literacy interventions than for mathematics, although positive impacts are observed for both.

Although the majority of TA-delivered interventions showing positive effects involve one-to-one instruction, small group approaches also show promise, with similar impacts observed compared to one-to-one interventions. Although further research is needed, this suggests it may be worth exploring small group interventions as a cost-effective alternative to delivery on a one-to-one basis.

An additional area for investigation is the long-term impact of TA-delivered interventions. Studies showing positive impacts on learning outcomes tend to measure learning outcomes soon after the end of the intervention. We know less about how those immediate improvements translate into long-term learning and performance on national tests. This is particularly relevant given that pupils' learning in interventions is not regularly connected to the wider curriculum and learning in the classroom (see Recommendation 7). Encouragingly, a recent evaluation of [ABRA](#), a 20-week literacy programme delivered by trained teaching assistants to small groups of pupils in Key Stage 1, showed those pupils who participated in the programme continued to do better than their comparison-group peers a year after the intervention finished (as measured by Key Stage 1 SATS).

Integrating learning from everyday classroom contexts and structured interventions



7

Ensure explicit connections are made between learning from everyday classroom teaching and structured interventions



Training TAs for specific interventions does not, on its own, provide an answer to the ineffective way in which TAs have been found to be deployed in schools. Previous research has indicated concern over the extent to which learning via a structured intervention is related to the pupils' broader experiences of the curriculum.

Interventions are often quite separate from classroom activities and the lack of time for teachers and TAs to liaise means there is relatively little connection between what pupils experience in and away from the classroom. This means it can be left to the pupil to make links between the coverage of the intervention and the wider curriculum coverage back in the classroom. Given that supported pupils are usually those who find accessing learning difficult in the first place, this presents a huge additional challenge.

The integration of the specific intervention with the mainstream curriculum is therefore vital.

Pupils are typically withdrawn from class for interventions, so it should be a prerequisite of any TA-led programme that it at least compensates for time spent away from the teacher. Crucially, this does not mean that we should pile the responsibility for pupils making accelerated progress onto TAs.

The SEND Code of Practice makes it clear that 'teachers are responsible and accountable for the progress and development of the pupils in their class, *including* [our emphasis] where pupils access support from teaching assistants'.³⁴

“Addressing the current situation is a school leadership issue. School leaders should rigorously define the role of TAs and consider their contribution in relation to the drive for whole-school improvement.”

ACTING ON THE EVIDENCE

The evidence on effective TA deployment, training and use can be summarised in one clear principle – ‘Use TAs to supplement what teachers do, not replace them’ (Recommendation 2). The remaining recommendations in this guidance are either exemplifications of that principle (e.g. the careful use of TA-led interventions) or ways of achieving it (e.g. ensuring TAs and teachers understand their complementary roles). The evidence therefore is relatively straightforward. At the same time, there are also clear benefits to schools re-framing the way TAs are used, in terms of pupil outcomes, school outcomes and overall staff satisfaction and morale (see ‘Ten reasons to improve the use of Teaching Assistants’).

Nevertheless, our experiences of working with schools in improving the way TAs are trained and deployed suggests that making those changes is not straightforward. It can be a complex process, requiring changes across the school (senior leadership, middle leadership, teachers, TAs), addressing existing ways of working, training at all levels, and sometimes structural changes in terms of timetabling and working arrangements. Encouragingly, schools that overcome practical barriers to change do so by investing time, attention and effort into making improvements – not by spending lots of money.

Figure 3 shows a model for school improvement that schools have previously found useful in reviewing the current use of TAs and guiding a process of change. This should shape an implementation plan for your school, which can then act as a foundation for training and deploying staff - summarise the objectives for the project and the activities that will take place to support the changes. An additional EEF guidance report, [‘Putting Evidence to Work: A School’s Guide to Implementation’](#), provides more detail on the features and processes of effective implementation.

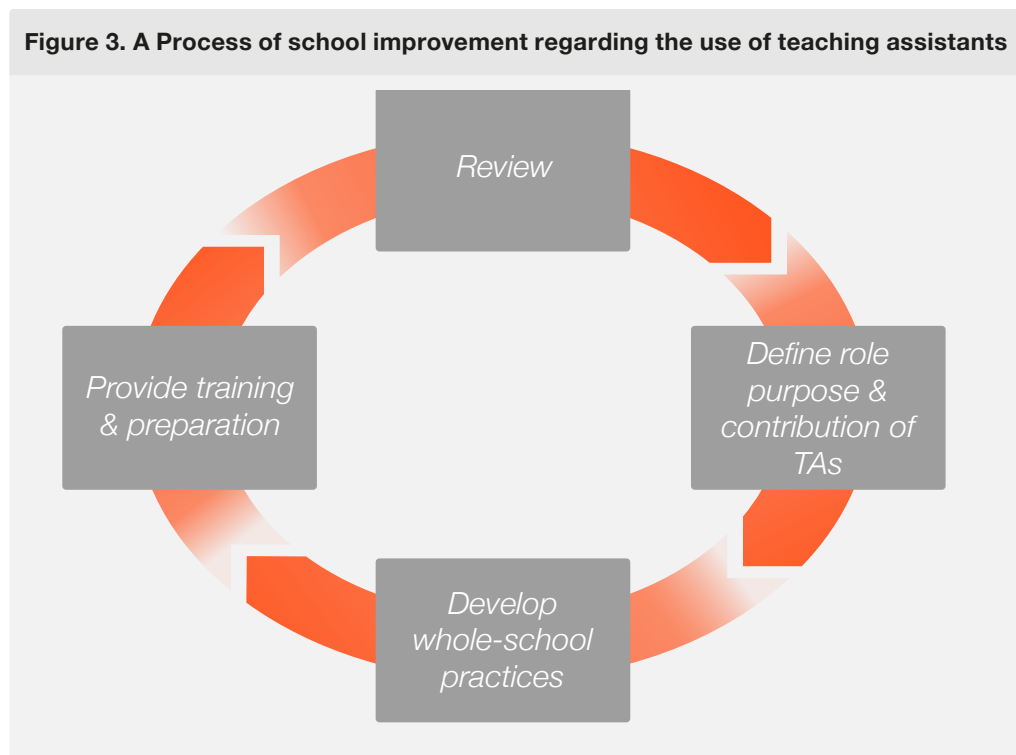


Figure 3 shows a model for school improvement that SLTs have previously found useful in reviewing the current use of TAs and guiding a process of change. This should shape an action plan for your school, which can then act as a foundation for training and deploying staff. Importantly, training should include supporting teachers in how to work effectively with TAs.

Developmental work with schools has revealed a number of key principles to successfully taking action on the recommendations in this guidance:^{19,36}

1. The headteacher forms and leads a small development team with responsibility for managing the changes. This is essential, as staffing and contractual issues inevitably feature in decision making and change cannot be sanctioned without the headteacher's understanding and approval.
2. This development team schedules dedicated time over the course of two or three terms for discussion, planning, decision making and action. Time is ring fenced for these discussions.
3. The Senior Leadership Team (SLT) should develop and communicate a clear vision for what the schools needs from its TA workforce. Think about TAs' role and contribution, and what pupils and staff will do differently as a result of improving TA deployment and preparation. Keep discussions open and positive.
4. A thorough audit of the current situation is conducted (see Figure 3 and ³⁶). This can include:
 - Self-assessment of current practices;
 - Surveying staff (anonymously) for their views and experiences;
 - Conducting observations and asking questions about teachers' decision-making regarding TA deployment;
 - Making an effort to listen to TAs' interactions with pupils;
 - A skills audit to collect details of TAs' qualifications, certifications, training, experience, specialisms and talents; and
 - Obtaining the views of other stakeholders, such as pupils and parents/carers.

SLT should explain the purpose of the audit process to staff, and emphasis the collaborative nature of the review and the changes to practice that will follow. It is important to be alive to the sensitives of carrying a process, the intentions of which could be misread by TAs in particular.

5. Change is rolled out gradually, testing ideas and winning support from staff across the school. The initial team is extended to include a small group of enthusiastic teachers and TAs who are interested in working with research evidence and willing to test new strategies and feed back on progress.

ADDITIONAL RESOURCES

A set of free practical resources are available to help schools implement the recommendations in this guidance report. The resources either relate to specific recommendations in the report, or to different stages in Figure 3 (e.g. Red Amber Green self-assessment).

These files can all be found at:

<https://educationendowmentfoundation.org.uk/tools/guidance-reports/making-best-use-of-teaching-assistants/>

Resources relating to recommendations in the guidance report

Recommendations 1 and 2 - Deployment of TAs in classrooms

- [Teacher-TA agreement template](#) - Support staff to develop and specify their coordinated, but differentiated, roles during lessons.

Recommendation 3 - TAs' interactions with pupils

- [Scaffolding framework](#) - Help TAs scaffold pupils' learning and encourage independent learning.

Recommendations 5, 6 and 7 - TAs delivering targeted, structured interventions

- [Interventions health check](#) - Consider how TA-led interventions are being delivered in your school in line with the research
- [Evidence-based TA-led literacy and numeracy intervention](#) - Adopt evidence-based TA-led interventions that have previously been shown to impact positively on pupil attainment.

Resources relating to the 'Acting on the evidence' school improvement process:

- [Visioning exercise](#) - Create a clear vision for your TA workforce. Define what great TA deployment and practice will look like in your school
- [A self-assessment guide](#) - Assess current practice and monitor progress against the report's recommendations using the Red Amber Green (RAG) ratings.
- [Online audit surveys](#) - Survey teachers, TAs and senior leaders anonymously for their perspectives on your school's current use of TAs.
- [TA observation schedule](#) - Collect data to aid your understanding of how TAs are deployed in classrooms across the school.
- [Action planning template](#) - Structure your thinking around reframing the use of TAs, and develop action plan points to realise your vision.
- [TA policy template](#) - Create a policy articulating a shared understanding of TA deployment, use and training in your school.

OTHER HELPFUL RESOURCES

The Maximising the Impact of Teaching Assistants (MITA) website contains resources and tools to help schools review practice and implement the recommendations in this guidance report, including the Teaching Assistant Deployment Review Guide, which school leaders can use to evaluate their current practices and processes against the best available research evidence, and a Guide to Useful Online Resources, which signposts free online resources to support decision-making and practice. The MITA website also contains details of courses and training, and downloadable papers and articles on the extensive research conducted at the UCL Institute of Education, London.

<http://www.maximisingtas.co.uk>

A number of Research Schools around the country offer training and support for schools in improving their use of TAs, in line with the evidence in this guidance report. Further information and contact details can be found at the Research School Network website.

<https://researchschool.org.uk>

HOW WAS THIS GUIDANCE COMPILED?

This guidance adopts a ‘mixed methods’ approach, drawing on both quantitative and qualitative research investigating TA deployment and use. The emphasis is on where there is reliable evidence of an impact on pupil learning outcomes – based on quantitative evaluations – although we also consider the wider research context on TAs, incorporating a range of qualitative methods. The intention is to provide a reliable foundation of ‘what works’, based on robust evidence and looking retrospectively, but also to provide a broad overview of the emerging research understanding (although not necessarily ‘proven’) and look prospectively at where the field is heading.

The primary source of evidence is the Teaching and Learning Toolkit, based on meta-analyses of evaluations of educational interventions developed by Prof. Steve Higgins and colleagues at the University of Durham, with the support of the Sutton Trust and the EEF.¹ The Toolkit entry on Teaching Assistants includes the widely referenced DISS study.² Findings are triangulated with other reviews of quantitative evaluations of TA led interventions, such as the Best Evidence Encyclopedia (BEE) reviews on Struggling Reading³¹ and Primary Reading.³⁴

Meta-analysis is a method of combining the findings of similar studies to provide a combined quantitative synthesis or overall ‘pooled estimate of effect’. The results of, say, interventions seeking to improve low-attaining students’ learning in mathematics can be combined so as to identify clearer conclusions about which interventions work and what factors are associated with more effective approaches. The advantages of meta-analysis over other approaches to reviewing are that it combines, or ‘pools’, estimates from a range of studies and should therefore produce more widely applicable or more generalisable results.

The Toolkit adopts a ‘confidence approach’ when reviewing evidence – How much is there? How reliable is it? How consistent are the findings? In addition to summarising on ‘what works’ the Toolkit also explores ‘how’, ‘why’ and ‘in what contexts’ approaches have an impact. Full details of the method used to produce the Teaching and Learning Toolkit – including search criteria, effect size/months’ progress estimate and quality assessment – are available at:

<https://educationendowmentfoundation.org.uk/evidence-summaries/about-the-toolkits/>

REFERENCES

1. Higgins, S., Katsipataki, M., Kokotsaki, D., Coleman, R., Major, L.E. and Coe, R. (2013) *The Sutton Trust-Education Endowment Foundation Teaching and Learning Toolkit*. London: Education Endowment Foundation. Available at <https://eef.li/toolkit/>
2. Blatchford, P., Russell, A. and Webster, R. (2012) *Reassessing the impact of teaching assistants: How research challenges practice and policy*. Oxon: Routledge.
3. DfE. *School Workforce in England: November 2017*. Published 28 June 2018. Available at <https://www.gov.uk/government/statistics/school-workforce-in-england-november-2017>
4. NFER Teacher Voice Omnibus Survey – The use of the Pupil Premium (2012). London: The Sutton Trust. Available at <https://www.nfer.ac.uk/publications/91062/91062.pdf>
5. Finn, J. D., Gerber, S. B., Farber, S. L. and Achilles, C. M. (2000) 'Teacher aides: an alternative to small classes?', in M.C. Wang and J.D. Finn (eds) *How small classes help teachers do their best*, 131–174. Philadelphia, PA: Temple University Center for Research in Human Development.
6. Klassen, R. (2001) 'After the statement: reading progress made by secondary students with specific literacy difficulty provision', *Educational Psychology in Practice*, 17(2): 121–133.
7. Reynolds, D. and Muijs, D. (2003) 'The effectiveness of the use of learning support assistants in improving the mathematics achievement of low achieving pupils in primary school', *Educational Research*, 45(3): 219–230.
8. Schlapp, U., Davidson, J. and Wilson, V. (2003) 'An 'extra pair of hands'?: Managing classroom assistants in Scottish primary schools', *Educational Management and Administration*, 31(2): 189–205.
9. Moyles, J. and Suschitzky, W. (1997) 'The employment and deployment of classroom support staff: Head teachers' perspectives', *Research in Education*, 58: 21–34.
10. Giangreco, M. F. (2010) 'One-to-one paraprofessionals for students with disabilities in inclusive classrooms: Is conventional wisdom wrong?' *Intellectual & Developmental Disabilities*, 48, 1–13.
11. Hutchings, M., Seeds, K., Coleman, N., Harding, C., Mansaray, A., Maylor, U., Minty, S. and Pickering, E. (2009) *Aspects of school workforce remodelling strategies used and impact on workload and standards*, Research Report DCSF-RR153, London: DCSF.
12. Webster, R. and Blatchford, P. (2013) 'The educational experiences of pupils with a Statement for special educational needs in mainstream primary schools. Results from a systematic observation study', *European Journal of Special Needs Education*, 28(4): 463–479.
13. Blatchford, P. and Webster, R. (2018) *Classroom contexts for learning at primary and secondary school: Class size, groupings, interactions and special educational needs*, *British Educational Research Journal*, 44(4): 681-703.
14. Rubie-Davies, C., Blatchford, P., Webster, R., Koutsoubou, M. and Bassett, P. (2010) 'Enhancing student learning? A comparison of teacher and teaching assistant interaction with pupils', *School Effectiveness and School Improvement*, 21(4): 429–449.
15. Radford, J., Blatchford, P. and Webster, R. (2011) 'Opening up and closing down: Comparing teacher and TA talk in mathematics lessons', *Learning and Instruction*, 21(5): 625–635.
16. Blatchford, P., Russell, A., Bassett, P., Brown, P. and Martin, C. (2004) *The effects and role of Teaching Assistants in English primary schools (Years 4 to 6) 2000–2003: results from the Class size and Pupil-Adult Ratios (CSPAR) Project*. Final Report. (Research Report 605), London: DfES.
17. Muijs, R.D. and Reynolds, D. (2001) *Effective teaching. Evidence and practice*, London: Paul Chapman.
18. Wiliam, D. (2010) 'How should we use what we know about learning to read?', keynote address at *Changing Lives: 7th International Reading Recovery Institute*, at the Institute of Education, London, 8 Jul
19. Webster, R., Blatchford, P. and Russell, A. (2013) *Challenging and changing how schools use teaching assistants: Findings from the Effective Deployment of Teaching Assistants project*, *School Leadership and Management*, 33(1): 78–96.
20. Radford, J., Bosanquet, P., Webster, R. and Blatchford, P. (2015) *Scaffolding learning for independence: clarifying teacher and TA roles for children with SEN*, *Learning and Instruction*, 36: 1–10.

21. Bosanquet, P., Radford, J. and Webster, R. (2016) *The Teaching Assistant's Guide to Effective Interaction: How to maximise your practice*, Oxon: Routledge
22. Moyles, J. and Suschitzky, W. (1997) *Jills of all trades? Classroom assistants in KS 1 classes*, London: ATL Publications.
23. Farrell, P., Balshaw, M. H. and Polat, F. (1999) *The management, role and training of learning support assistants*, London: DfEE Publications.
24. Lacey, P. (2001) 'The role of learning support assistants in the inclusive learning of pupils with severe and profound learning difficulties', *Educational Review*, 53(2): 157–167.
25. Sharma, U. and Salend, S. J. (2016). Teaching Assistants in Inclusive Classrooms: A Systematic Analysis of the International Research. *Australian Journal of Teacher Education*, 41(8). <http://dx.doi.org/10.14221/ajte.2016v41n8.7>
26. Geen, A. G. (1985) 'Team teaching in the secondary schools of England and Wales', *Educational Review*, 37(1): 29–38.
27. Thomas, G. (1992) *Effective classroom teamwork: support or intrusion*. London: Routledge.
28. Cremin, H., Thomas, G. and Vincett, K. (2005) 'Working with teaching assistants: three models evaluated', *Research Papers in Education*, 20(4): 413–432.
29. Brown, J. and Harris, A. (2010) *Increased Expenditure on Associate Staff in Schools and Changes in Student Attainment*, London: Training and Development Agency for Schools.
30. Masdeu Navarro, F. (2015) 'Learning Support Staff: A literature review', *OECD Education Working Papers* no.125, OECD Publishing, Paris. <https://doi.org/10.1787/5jrnm39w45l-en>
31. Slavin, R. E., Lake, C., Davis, S., & Madden, N. (2011). Effective programs for struggling readers: A best-evidence synthesis. *Educational Research Review*, 6: 1-26.
32. Nicoletti, C., and Rabe, B. (2014) *Spending it wisely: how can schools use resources to help poorer pupils?*. London: Nuffield Foundation
33. Hemelt, S. W. and Ladd, H. F. (2016) *Teaching Assistants and Nonteaching Staff: Do They Improve Student Outcomes?* CALDER Working Paper No.169 <https://caldercenter.org/sites/default/files/WP%20169.pdf>
34. Slavin, R.E., Lake, C., Cheung, A., and Davis, S. (2008). *Beyond the Basics: Effective Reading Programs for the Upper Elementary Grades*. Washington, DC: Institute of Education Sciences, U.S. Department of Education.
35. Department for Education and Department of Health (2015) *Special educational needs and disability code of practice: 0 to 25 years*. Statutory guidance for organisations which work with and support children and young people who have special educational needs or disabilities. January 2015. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/398815/SEND_Code_of_Practice_January_2015.pdf
36. Webster, R., Russell, A. and Blatchford, P. (2016) *Maximising the impact of teaching assistants: Guidance for school leaders and teachers*. Second edition, Oxon: Routledge

NOTES

Production and artwork by Percipio
<https://percipio.london>



Education
Endowment
Foundation

Education Endowment Foundation
5th Floor, Millbank Tower
21-24 Millbank
London
SW1P 4QP

www.educationendowmentfoundation.org.uk

 @EducEndowFoundn

 Facebook.com/EducEndowFoundn