

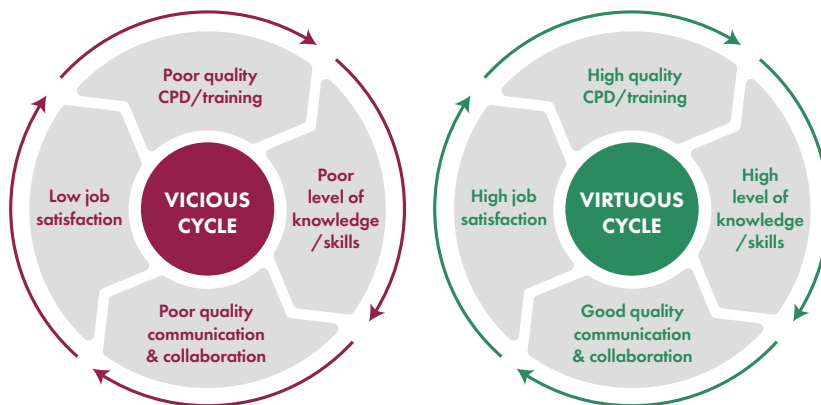
TALKING POINT:

WHAT DOES RESEARCH SUGGEST ABOUT EFFECTIVE UTILISATION OF TEACHING ASSISTANTS IN THE MATHS CLASSROOM?

IN SUMMARY

- When budgeting for TA support, schools should bear in mind that the increase in TA deployment has been driven by teacher shortages, increased teacher workload and larger class sizes rather than strong evidence of their efficacy
- Schools keen to utilise TAs effectively may need to define their roles clearly across different contexts
- There is a need for high-quality research to investigate how TAs can support students in mathematics lessons effectively. Teachers and headteachers should be aware that little consensus exists because of limited and mixed evidence
- TAs may benefit from training in discourse, questioning and feedback to encourage student progress
- Schools should consider the value of maths-specific training and professional development for TAs supporting mathematics lessons
- Coordinating the working hours of teachers and TAs could support meaningful collaboration
- Effective collaboration between TAs and teachers can have positive effects on all involved, including better preparation of, and support offered by, TAs during lessons

A possible ‘feedback loop’ model for the practice of teaching assistants



1 Teaching Assistants (TAs), also known as special needs assistants, teacher aides, learning support assistants (LSAs) or higher-level teaching assistants (HLTAs), are paraprofessionals who offer support in classrooms¹. International evidence suggests that the deployment of TAs to support students with specific educational needs and disabilities (SEND) has increased in many countries over the last two decades², mostly due to increasing teacher workload³, teacher shortages⁴ and large class sizes⁵ rather than as a result of a research-informed agenda⁵. The evidence also suggests that the role of TAs and their work is still unclear⁶ and varies between countries⁵. The roles and responsibilities of TAs also vary across contexts (e.g. primary and secondary schools). The lack of an educational framework that clearly defines the roles of TAs may be a barrier to their successful utilisation.

IMPLICATIONS: When budgeting for TA support, schools should bear in mind that the increase in TA deployment has been driven by teacher shortages, increased teacher workload and larger class sizes rather than strong evidence of their efficacy
Schools keen to utilise TAs effectively may need to define their roles clearly across different contexts

‘...TAs play a fundamental, although still misunderstood and poorly researched role in supporting the school, the children, the teachers and the curriculum’
Devecchi & Rouse, 2010

‘I hadn’t really thought before how difficult it must be for a TA to go between subject to subject, teacher to teacher, and sit in a classroom not really knowing what’s going on’
Secondary teacher in Webster et al, 2013

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There is limited and mixed evidence of the effects of TAs on student attainment in mathematics³: for example, a trial of Catch Up Numeracy — a one-to-one TA-led intervention for learners who struggled with numeracy — found that those who received the intervention made on average three additional months of progress compared with those who did not receive the intervention⁷. However, students in a third condition ('time equivalent' group) who received additional weekly support that reflected the nature of the one-to-one intervention, but which did not use the Catch Up Numeracy resources, also made similar progress⁷. This suggests that the improvement in numeracy may have resulted from regular one-to-one support rather than the intervention itself⁷. In another study, Numeracy Support Assistants (NSAs) provided additional support to a group of low achieving primary students during and after mathematics lessons, and no differences in mathematics progress were found between students supported by them and those who were not³. These results suggest that there is little research consensus regarding the impact of TAs on pupils' achievement in mathematics. There is also a lack of focus on the effectiveness of the ways in which TAs are used — often working with students who are struggling or have SEND⁴. There has been a call for more high-quality research on the most effective ways to use TAs in mathematics lessons to help clarify the picture¹.

IMPLICATIONS: Teachers and headteachers should be aware that little consensus exists regarding how best to utilise the skills of TAs in lessons because of limited and mixed evidence in mathematics settings

There is a need for high-quality research to investigate how TAs can support students in mathematics lessons effectively

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In a comparison between classroom behaviours of teachers and TAs, one study showed that whilst teachers tended to open up student talk, TAs tended to close it down; that teachers tended to use hints and prompts whilst TAs tended to supply answers. The researchers concluded that TAs might benefit from training in dialogic discourse and feedback¹.

In another study, TAs with little formal training '...perceive themselves as explaining mathematical ideas and dealing with difficulties. Some also reported having major or sole responsibility for teaching and planning mathematics'⁸. A large-scale report found that 96% of heads of mathematics departments in secondary schools reported receiving some support from TAs⁹, but only one-third of departments with maths support staff reported receiving support from staff who were maths specialists. Heads of departments with maths-specialist support staff were significantly more satisfied with the quality of in-class support than those without maths-dedicated support staff⁹. Training and professional development that is maths-specific can also support TAs in developing a sense of belonging to the team^{9,10}, although subject specialisation may be easier in secondary schools compared with primary schools, which are more likely to require TAs to support all lessons.

To facilitate TA-teacher collaboration, schools could adjust TAs' working hours to allow more time for meaningful communication between lessons, and headteachers could consider the role and utilisation of TAs in more strategic ways⁶. Better collaboration and clearer role definitions may be beneficial to TAs and teachers⁶. This could include sharing knowledge and lesson plans in advance to ensure that TAs feel prepared for their role in the lesson^{4,6,11}, encouraging them to circulate freely amongst the class and emphasising their presence and contribution to the students¹¹.

IMPLICATIONS: TAs may benefit from training in discourse, questioning and feedback to encourage student progress

Schools should consider the value of maths-specific training and professional development for TAs supporting mathematics lessons

Coordinating the working hours of teachers and TAs could support meaningful collaboration

Effective collaboration between TAs and teachers can have positive effects on all involved, including better preparation of and support offered by TAs during lessons

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