

Diminishing the differences for disadvantaged pupils in mathematics; developing teachers' and teaching assistants' subject knowledge and pedagogy alongside the strengthening of long lasting home-school partnership

Overview

Progress and attainment in maths in the participating schools at both KS2 and KS4 were below national average and there was a gap between disadvantaged and non-disadvantaged pupils' performance. Working with the Council's full support and in line Sub-regional Improvement Board's priorities, this project was aimed at pupils in year 2, 4 and 7 to ensure a sustainable and consistent approach to the teaching of mathematics and, in turn, a successful transition into KS2, and ultimately KS3.

The resulting improved teaching and learning as a result of high-quality professional development, alongside greater parental engagement, would support the improved outcomes at both KS2 and KS4 of all participating pupils and particularly those with disadvantaged backgrounds.

Good practice to share with others interested in running school improvement projects to ensure projects deliver the intended outcome.

- Giving teaching staff time to think about how they would approach a technique or teaching idea worked well. Collaborative time was used effectively, particularly where secondary and primary were able to work together.
- The quality of the Maths Hub training sessions were excellent. We originally planned to use a different provider for Secondary but the Maths Hub did such a good job we only used another provider for one session of secondary. We are glad we had the confidence to do this as it undoubtedly led to improved outcomes for secondary. It also meant the work from the Maths Hub SLEs could feed into the PD events.
- We didn't use the Maths Hub schemes of work because it didn't seem fair to insist part way through the year that all schools needed to change Schemes of Work, however, we have used a lot of the Maths Hub resources. The assessments and also the resources created by SLEs with maths leads were all excellent. The quality of the Teaching School SLEs and their advice and support was consistently of a very high standard. This was used most effectively to empower Maths Leads (senior and sometimes middle leaders) to carry on improving the quality of maths teaching in their schools beyond the life of the project.
- We were lucky to have appointed and retained a highly qualified and competent Project Manager for the duration of the project. This was fundamental in ensuring that the project was successful. In the first third of the project, this role was largely administrative but she quickly started to play an instrumental role in improving teaching and

monitoring the quality of the SLE delivery. This could not have been done by a non-teacher and it would have been very challenging if the project manager had been someone who was not as experienced in improving maths.

- A very tight and regular check on spending helped us to stay below budget and make savings.
- In terms of assessments, we didn't use as many as planned due to the DfE workload guidance, however we created the assessment resources for optional use. Several of the schools did still use them and found them to be useful as a diagnostic tool; perhaps more so than if they had been used summatively.
- Having a focus on maths in the home and how to use games to develop maths meant that we had good attendance from parents at the primary level as we took a non-threatening approach to introducing ideas of how parents can engage with their children and mathematics.

What the project may do differently in the future

- Communication across schools, particularly where they are geographically far away from each other is very challenging. The project has had most impact where schools were clustered together.
- When schools are involved in school improvement projects of this nature, the best teachers get pulled into supporting others; we have been very careful to ensure that this had not meant reducing the capacity of stronger schools in the process.
- We realised early on that it was better to use fewer providers to ensure a joined up delivery and monitoring of the project. We felt that to use the same SLEs to deliver training who were also supporting leaders and teachers in school would have more impact.
- Workload in schools is high and naturally, even despite every effort made to reduce the impact of the project, we know that we added to workload. There is no good time to hold after-school training, to set deadlines for testimonials or to have SLEs visiting. The lesson we learnt was simply to give schools as much time and notice as possible and to try and minimise the administration.
- The use of external companies for baseline and end of project assessment has not been a smooth process; they had very little understanding of the pressures that teachers are under and the difference that it would make to provide or ask for data in a logical way, compliant with existing systems.

Sustainability measures taken by projects to ensure improvement are sustained beyond the funding period.

- We have had good attendance from staff in both primary and secondary schools at all of the Maths Hub training sessions and also network events but where staff have not been able to attend this has been disseminated well; the primary schools have been particularly effective at this. We have also been able to use the role of the Maths Outreach Teacher to support schools to disseminate professional development.
- SLEs and MAT staff have worked with maths leaders particularly towards the end of the project to ensure that the diagnostic Quality Assurance of teaching and the support given to teachers carries on in the same focused way and that this feeds into the cycle for personal development for each of the schools. We were clear that unless the leaders are skilled enough to be able to carry on with this work, it would not be sustainable. We purchased extra SLE days towards the end to ensure that leaders with a greater level of need were fully supported.
- The network meetings have established very good working relationships between all of the schools, particularly the 5 primary schools. They will remain in regular contact despite being across MATs. Whilst they are at different stages in their improvement journey, the planned work with the Maths Hub will provide continuity and differentiated support.
- Our project manager met with the Maths Hub to ensure the position that each school is in has been communicated and a summary of next steps has been discussed.
- Whilst we weren't able to recruit maths fellows at the start of the project, we were able to recruit a high quality UPS teacher who has focused on a) delivering interventions and b) working with schools to show good practice and to support them with how best to organise and run interventions into the future. This has been a much more successful and sustainable use of funding, particularly where schools have been receptive to maintaining the interventions and retraining staff for beyond the life of the project.
- Work between the local sixth form college and the schools has built local relationships and networks which will continue and is already impacting on other areas outside the SSIF project, namely with Key Stage 5 maths at a local Academy.
- Parental relationships proved to be much harder to impact on at secondary school level although any headway made through the delivery of after school maths workshops at primary level will naturally impact on siblings as they progress through school.