

Improving Progress in Mathematics Project Cohort 3: 2018-2019 Impact Report

& Update on Cohorts 1 and 2: 2017-2018

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September 2019



Improving Progress in Mathematics Project, 2018-2019

Cohort 3

Summary of impact and learning

During 2018-2019, 23 Hertfordshire schools engaged in Cohort 3 of the project to improve their progress in mathematics across Key Stage 2.

The average increase by the project schools was +0.39 (from their previous year's progress score), based on a projected 2019 model.

In Hertfordshire as a whole, the change in progress in maths 2018 to 2019 is likely to be -0.08. Nationally, the figure remains unchanged at 0.

Aim of the project

The aim of the project was to support schools to implement changes to the teaching and leadership of mathematics to improve the progress of pupils across the whole of Key Stage 2. The impact of the activities schools engaged in will continue to be embedded over the next few years to sustain improvement. At the end of this report is also an update on Cohorts 1 and 2, who took part the previous academic year, and the continued impact on their outcomes.

Project outline and structure

Schools applied to join the project following an open invitation to all Hertfordshire Headteachers (with Key Stage 2 provision), who had not already taken part in the project. Twenty-three schools completed cohort 3.

The project began with a launch training day in September 2018, typically attended by two leaders from each school - the Headteacher and Mathematics Subject Leader.

All schools signed up to a contract and committed to a number of agreements. For example, the sharing of data with advisers and ensuring that the project was a key school priority area for the academic year.

The schools received a series of four follow up consultancy visits from a project adviser. They were strategically timed to discuss recent assessment data for the term, areas of focus related to the project and to discuss and agree actions going forward which would be likely to have the most impact upon progress (and attainment). The actions from the previous visit were also reviewed at each subsequent visit. The final visit for each school was undertaken in July 2019.

Impact measures

To gain an early indication of the impact on outcomes for pupils, data from the end of Key Stage 2 for 2019 was analysed. This took account of both a project progress figure (based on a projected 2019 model) and the percentage of pupils achieving the expected standard at Key Stage 2 in maths.

- **Overall progress**

As a collective of 23 schools, the average progress for 2017-18 (on entry to the project) was -1.08, which was below that of Hertfordshire (-0.35) and of schools in counties classed as statistical neighbours (-0.5). The early indication of 2018-19 average progress for the 23 schools is -0.69. This represents an average progress improvement of +0.39 from 2017-18 for the project schools, compared to a slight decline of -0.08 for the average across all Hertfordshire schools during the same period.

- **Impact on the most vulnerable schools**

Within the 13 schools who started the project with negative progress in 2017-18, the average change in progress between 2017-18 and 2018-19 was +0.79. The number of schools with a progress figure lower than -2.0 fell from 9 schools in 2017-18 to 5 schools in 2018-19.

- **Impact on attainment**

In terms of attainment, the 23 progress project schools in cohort 3 increased the percentage of pupils achieving the expected standard (or above) by 6% to 78.9% in 2019, from 72.9% in 2018. This represents a change which is almost twice the national average increase between 2018 and 2019, bringing the schools closer in line to the Hertfordshire average (76.9% in 2018 and 79.5% in 2019) and in line with national figures.

| <u>KS2 PROGRESS</u> | 2017-18 progress | 2018 -19 progress | Change in progress |
|----------------------------|------------------|-------------------|--------------------|
| Hertfordshire | - 0.36 | - 0.44* | -0.08 |
| Cohort 3 (23 schools) | - 1.08 | - 0.69* | +0.39 |

NB: Due to the way progress is calculated, the national average progress score is always 0.

**Provisional data*

| <u>KS2 ATTAINMENT</u> | 2017-18 KS2 EXS+ | 2018 -19 KS2 EXS+ | Change in attainment % |
|------------------------------|---------------------|----------------------|---------------------------|
| National | 75.5% | 78.6%* | +3.1% |
| Hertfordshire | 76.9% | 79.5%* | +2.6% |
| Cohort 3 (23 schools) | 72.9% | 78.9%* | +6.0% |

Learning from the project: Impact on leadership and teaching provision

The positive impact on the attainment and progress of pupils was a direct result of schools' drive to enhance both their own leadership effectiveness and the teaching provision.

The project and adviser support focused upon enabling schools to consider what might be enhanced/improved and how best to do this.

Schools decided, in discussion with their linked adviser, what areas to invest their energy into. Across the cohort, there were common themes, which are outlined below.

The key areas of leadership schools focused on:

- **How the leadership team work strategically together** to ensure the impact of their work: seeing actions as related and part of an overall priority. There was, for many schools, a focus upon 'joining the dots', rather than separate activities. For example, tracking of pupils, Pupil Progress Meetings (PPMs), book/work scrutiny and lesson observations/learning walks all underpinned by the common thread of 'are we supporting those pupils who are off track for progress/attainment to secure learning and catch up?'
- **Ensuring robust and accurate assessment data from all year groups** to avoid using data that was not accurate, either because it was too cautious or too generous. This was key to ensure the school was tracking the 'right' pupils/cohorts and had effective PPMs.
- **Increasing the effectiveness of Pupil Progress Meetings** to focus on the pupils who are not on track for progress (and attainment) and what specifically would help to address this. This also relied upon teachers and leaders preparing for the meeting (analysing data in advance and coming ready to discuss actions) and then having a robust discussion.
- **Having the expectation that all pupils will make progress** and that the large majority will achieve age-related expectations. Setting out this expectation clearly at the start and ensuring that all leaders communicate the same high expectation throughout; following this through into the other leadership actions such as data analysis, PPMs, book/work scrutiny and lesson observations/learning walks.
- **More refined and strategic tracking of Year 6 pupils** (from their KS1 attainment). For example, looking at any practice SATs paper scaled scores in a more informed way (understanding how the progress calculation is made), using this to help raise expectations (where appropriate) and to plan targeted provision. Generally, tracking of pupils in all year groups from their previous Key Stage prior attainment also improved, not just in Year 6.

The key areas of teaching and learning schools focused on included:

- **Ensuring that planning systems were embedded** with clear reference to the school's expectations, such as clear modelling of the learning, use of a concrete, pictorial, abstract (CPA) approach, pupils having sufficient chance to rehearse and practise the learning, as well as opportunity to apply and reason.
- **Reasoning, application and problem solving opportunities for all pupils** to use and apply what they have rehearsed and learnt. These might be in the form of single questions, a few questions or a longer task. For those schools using ESSENTIALmaths planning and resources (from HfL), this often focused on how the 'Destination Questions' were being used. This helped to inform whether the pupils had understood the learning.
- **Developing pupils' fluency** so that they are able to recall and use the learning they have been taught that is expected for their age. Many schools worked to establish, develop or embed fluency sessions, so that there was a protected slot in the timetable regularly (3-4 times per week) of 10-15 minutes, with a focus on the recall and use of prior maths learning, covering a few areas of maths with fluency.
- **'Rapid' or 'Same-day' intervention** (sometimes called immediate intervention or rapid feedback). The focus being to pick up pupils who had not fully secured the learning from that lesson and address this before the learning moves on (in the next lesson). Many schools were in the process of reviewing the impact of more traditional maths interventions. They felt that moving towards a 'keep up' rather than 'catch up' approach would better meet the pupils' needs.

Learning and thinking that the project schools are most likely to take forwards

- Small tweaks to enhance what the school is already doing can have a big impact. Consider how to make the most of current systems and ways of working to increase effectiveness.
- Where schools found the pupil tracking process (identifying pupils not on track for progress and setting appropriate learning targets) proved to be beneficial in mathematics, they are considering transferring the system to English as well.
- It will take time to embed the changes from this year. For example, schools who began to adopt fluency sessions this year will look to embed this work in the coming year and so it has remained on the action plan for mathematics.

Advice the project schools would provide to others taking part in future cohorts

- Consider how the project is 'launched' with all staff in school so that they buy into the aims and work with the school leaders, understanding the rationale and purpose of what is being asked of them.
- As a school, take ownership of the project. Schools should carefully consider what they are trying to achieve and what best suits their school setting. Schools should also consider what they are already doing and where small tweaks would have an impact.
- Protect time for meaningful dialogue and discussion, including creating a clear space for the adviser visits, so that the most can be made of this time. During the adviser visits, be open to robust discussion about what is having an impact and what else might be considered. Be willing to commit to actions.
- Invest time and effort in *both* the leadership elements and the teaching and learning elements within the project. The combined approach is likely to have greater impact than focusing on one of them alone.

It was a privilege to work alongside all the schools who took part in cohort 3. The team of advisers learnt much from the cohort and the individual schools within it which will inform our future work in this area.

The mutual trust established enabled deep discussion and learning to take place and the Herts for Learning team on this project would like to extend their thanks to all those schools who took part.

Improving Progress in Mathematics Project

Cohorts 1 & 2 (2017-2018) update: July 2019

Between July 2017 and July 2018, a total of 35 schools completed the Herts for Learning 'Improving Progress in Mathematics' project across two cohorts.

Within the first year, the average increase in progress was +0.6 and the average increase in the percentage of pupils achieving the expected standard (or above) increased from 75.7% in 2017 to 77.2% in 2018. End of Key Stage 2 data for the following year (July 2019) was analysed for the same schools to evaluate continued impact of the work.

| <u>KS2 PROGRESS</u> | 2016-17 progress | 2017-18 progress | Change in progress 2017 to 2018 | 2018-19 progress | Change in progress 2018 to 2019 | Change in progress 2017 to 2019 |
|-------------------------------------|-------------------------|-------------------------|--|-------------------------|--|--|
| All schools in Hertfordshire | -0.30 | -0.35 | -0.05 | -0.43* | -0.08 | -0.13 |
| Cohorts 1 and 2 (35 schools) | -0.97 | -0.40 | +0.58 | -0.09* | +0.31 | +0.88 |
| Cohort 1 (18 schools) | -1.53 | -0.71 | +0.82 | -0.36* | +0.35 | +1.17 |
| Cohort 2 (17 schools) | -0.38 | -0.06 | +0.32 | 0.20* | +0.26 | +0.58 |

*denotes provisional 2019 figures

| <u>KS2 ATTAINMENT</u> | 2016-17 EXS+ | 2017-18 EXS+ | 2018-19 EXS+ | Change in attainment 2018 to 2019 | Change in attainment 2017 to 2019 |
|-------------------------------------|---------------------|---------------------|---------------------|--|--|
| National | 75.7% | 75.5% | 78.6%* | +3.1% | +2.9% |
| Hertfordshire | 77.0% | 76.9% | 79.5%* | +2.6% | +2.5% |
| Cohorts 1 and 2 (35 schools) | 75.7% | 77.2% | 81.4%* | +4.2% | +5.7% |

*denotes provisional 2019 figures

Analysis has been completed to determine whether the improvements made during 2017-18 have been sustained. Provisional data indicates that the gains made in the project year have continued. During 2018-19, the cohort of 35 schools continued to improve their end of key stage 2 outcomes. The average progress score for the cohort 1 and 2 schools improved by a further +0.31. This has resulted in a two year increase from 2017 to 2019 of +0.88. Within these schools over the last two years, the percentage of pupils achieving the expected standard (or above) increased by 5.7% from 75.7% in 2017 to 81.4% in 2019. This is above both national and Herts averages. Herts for Learning is looking forward to welcoming schools into cohort 4 of the project, which runs from September 2019 to July 2020.

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September 2019

For more information about the Herts for Learning **Improving Progress in Mathematics Project** please contact training@hertsforlearning.co.uk

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