

Maths Hubs
Evaluator in Residence
2022/23

Evidence and reporting
summary
Hub: BBO

Evaluator in Residence Summary	
Maths Hub	SE1 Bucks, Berks and Oxon
Strategic Goal	Secondary
Research question(s)	What factors lead to increased impact on students? (Systemic change at departmental or school level? Departmental factors? Contextual factors?)
What is the case?	Case study of a school

Context

<p>Brief overview of hub region and current activity/capacity in secondary</p> <p>Academic Year 2022/23: 36 schools actively involved in teaching for mastery pathway this year: 7 Developing, 10 Embedding, 27 Sustaining, 2 SMS C6 in training, 5 SMS C7 in training. 12 schools who are eligible for Embedding or Sustaining have chosen not to continue this year, several aim to re-join next year. The majority of these are taking a break due to high staff turnover or long-term absence. Oxfordshire operates a comprehensive system and Buckinghamshire and Berkshire are selective. Some of the schools involved in Sustaining have been working with us for at least five years.</p> <p>National priorities:</p> <p>The Secondary Strategic Goal states that ‘Maths Hubs support teachers and leaders in secondary schools to establish teaching for mastery approaches, so that all pupils develop deep knowledge, understanding and confidence. Providing support for participating schools to introduce, embed and sustain teaching for mastery with fidelity and consistency, encouraging the effective use of high-quality resources.’ The findings from this case study will provide us with insight into the factors that support secondary schools to implement teaching for mastery approaches with fidelity.</p> <p>Why is the focus important and interesting to the hub?</p> <p>We want to understand the factors that help to support schools implement a teaching for mastery approach with fidelity and have impact across the department. Successful strategies and ideas can be shared with participants to plan to overcome barriers and ensure that they have considered these in their planning and mitigated as far as possible to keep up the momentum of change. For LLME working with schools, we plan to use the information gathered to develop a bank of strategies to support schools to implement mastery with fidelity. By sharing what has worked well and why, we can work with schools to find solutions to overcoming barriers to embedding and sustaining the approach, improving the student experience of maths across the school.</p> <p>The case study schools:</p> <p>School A</p> <ul style="list-style-type: none"> ○ Part of a small trust ○ Mixed 11 to 18 comprehensive in Oxfordshire ○ Recent Inspection – November 2022 Requires Improvement ○ Involved with hub since 2016/17 <p>School B</p> <ul style="list-style-type: none"> ○ Academy and part of a medium sized Trust. Mixed 11 to 18 comprehensive in Oxfordshire. School Inspection March 2022 Good ‘Mathematics teaching is strong and many students study mathematics in the 6th form’. ○ 2022 results: GCSE 27% 9-7, 66% 9-5, 85% 9-4, 98% 9-1. A Level Maths 62% A*-B, 100% A*-E, Further Maths 100% A*-B. ○ Involved with hub since 2016/17
--

Activity and data collection

28/11/23	Initial online meeting MHLs and NCETM EIR	<ul style="list-style-type: none"> ● Identify suitable schools to approach ● Formulate approach with details of project and expectations ● Begin to consider detail of what we want to explore and why
11/01/23	Online review MHLs and NCETM EIR	<ul style="list-style-type: none"> ● Review responses from schools ● Refine plan

		<ul style="list-style-type: none"> Explore evidence collection methods; draft plan and questions
9/2/23	Online meeting School A MHLs and NCETM EIR School head of dept	<ul style="list-style-type: none"> Pre-visit preparation and confirmation of logistics Initial data collection Interview with head of department
10/2/23	Online meeting School B School head of dept	<ul style="list-style-type: none"> Pre-visit preparation and confirmation of logistics Initial data collection Interview with head of department
1/3/23	MHL and NCETM EIR School B	<ul style="list-style-type: none"> Full day school visit to include: <ul style="list-style-type: none"> Interview with deputy head Lesson observations in a range of year groups Informal discussion with student panel from Year 9 Interview with second in department
8/3/23	MHL and NCETM EIR School A	<ul style="list-style-type: none"> Full day school visit to include: <ul style="list-style-type: none"> Interview with headteacher and head of department Lesson observations in a range of year groups Informal discussion with a student panel from Year 9 Interview with second in department
March 23	MHL and NCETM EIR	<ul style="list-style-type: none"> Post-visit discussion to share observations and reflections Agree findings and key themes
April 23	MHL and NCETM EIR	<ul style="list-style-type: none"> Complete draft case studies Share with schools
June 23	MHLs and EIR School heads of department	<ul style="list-style-type: none"> Online meeting to finalise details of the case studies and agree implications and next steps

Significant themes

Themes (findings and process)	Possible implications
<p>A high level of support, understanding and commitment to change from Senior Leadership Team is key. Both schools in the case studies had commitment to developing a teaching for mastery approach from the headteacher and senior leaders. They described the approach and the work of the Maths Hubs Network as aligning with their own core principles and values. This meant that it has been possible to sustain engagement through more difficult periods and stress points with the schools. Senior Leaders are committed and recognise that the change is long term – they are not looking for overnight success and celebrate incremental changes in the department.</p>	<p>If this is recognised as a key factor in successful implementation, how do we plan to overcome any challenges in schools where this may not be the case? Our planning must include opportunities for the leadership teams in schools to understand and engage with what the maths department is doing and aiming to achieve. The Maths Hub should also look to build on the advocacy of supportive senior leaders and headteachers to share their experience and support others with implementation. Strong stories of impact on students but also on teacher development and retention may encourage sustained engagement at difficult times.</p>
<p>Collaborative planning is a key tool for developing the curriculum and teacher subject knowledge. Schools who have developed their own systems and processes to include collaborative planning and opportunities for professional discussions amongst staff are recognising and valuing the impact. Where this has happened, professional knowledge and growth has extended beyond Work Group participants to the rest of the department. Time has been ring-fenced to ensure that collaborative plans and lessons are developed to create a coherent curriculum with a detailed sequence of essential content to support students' progress, building on prior knowledge and understanding, over time.</p>	<p>We must acknowledge that it can be difficult for departments to ring-fence time to do this when they are often understaffed and stretched. Modelling and providing opportunities for collaborative planning in Work Group activity time allows participants to experience the benefits of working together to create coherent and well-designed lessons and to reflect on the impact of these on learning. It is important for senior leaders to recognise the potential of well-led collaborative planning as a tool for high-quality professional development. Understanding how the benefit outweighs the cost is key. As a hub, we have access to many teachers who could share their stories of personal growth to highlight this as an important factor in their development. Next steps should be to gather those impact stories and decide how we will share them.</p>

<p>Committed and motivated leadership of the department. A strong advocate in a department is key. Committed individuals who understand the pedagogy and share beliefs in the purpose of the programme are essential in continuing to make changes and develop the work of the department. Where the individual is supported to make changes by the senior leadership team there is good potential for success, even when faced with barriers and challenges. For the Maths Hub, sustaining relationships with these individuals is essential in enabling change across the department.</p>	<p>Identifying key advocates who have made positive changes in their departments and understanding their stories will help us to share successes and understand challenges that will be useful when planning to work with other schools. It is important to consider succession planning when leading change in schools to ensure that all of the momentum does not sit with just one strong advocate. Building and maintaining relationships with key advocates can also bring benefits when they move on and change schools.</p>
<p>Engagement with professional development offered through the Maths Hub helps to create a shared language around pedagogy. Through engagement with the Maths Hub Work Groups and their own research, heads of department were able to clearly articulate their understanding of the pedagogy that supports students in their learning and understanding of maths. Extending this to the rest of the department, either through the wider Maths Hubs Programme or through their own systems of professional development, ensures that all teachers think deeply about the sequencing of the curriculum and lesson design and the impact this has on students. This enables teachers to develop an understanding of the 'why', meaning that sustained change over time continues.</p>	<p>The hub can support heads of department to articulate their vision and understand why they are planning to make changes. Keeping the pedagogy and principles core and at the heart of all Work Group and school development activity helps to model this with teachers and leaders. Planning school development over a sustained period of time helps teachers and school leaders to think beyond individual Work Groups and to develop an understanding of the wider impact when there is a programme of engagement with more than one member of staff involved. Supporting the HoDs to strategically plan for the development of other members of staff – ECTs, new starters etc. – will support with building this sustained change.</p>
<p>Building expertise in evaluation will support the Maths Hub to continue to develop and strengthen the quality of work with schools. The case studies supported us in understanding the factors that have led to positive changes made in schools but also to understand more fully how schools have dealt with, and continue to deal with, challenges and barriers that they have encountered along the way. Information gathered through the case study approach has helped us to build a much clearer picture of the wider engagement of a school over time, rather than the impact of an individual Work Group. Acknowledging where things have been more difficult or not gone as planned will support us to develop the work that we do with schools in an honest and informed way, leading to more sustainable change over time.</p>	<p>The MHLMT have really valued being part of the pilot and want to continue to develop expertise in evaluating the work of the hub. The case study approach has been an effective way of gathering evidence of impact and has supported the development of the relationship between the hub and the schools. Both reported finding the experience valuable. The MHLMT should consider key questions/themes to explore that are important to us as a hub and could use the case study approach to gather data. It has been useful to reflect on what the data gathered told us about the schools and the question that we wanted to answer. We must continue to develop an analytical and honest approach to this and use all stories, successful or not, to inform our future work.</p>

Conclusion

Working with the Evaluator in Residence supported the MHLMT to begin to develop their expertise in critical evaluation and reflection on evidence gathered. The process of writing the case study was key in supporting the thinking of the MHLMT as it shifted the focus away from speculation or making recommendations to presenting a picture of the findings. Considering the original question, we can conclude only that the two case studies supported us to see some key themes, but these have also raised further questions that should be explored more deeply. We expect that as we go on to gather further evidence, we will have a better understanding of those key factors that support successful implementation of a teaching for mastery approach in schools and in turn, the impact on students.