John Bee - Written Evidence (NUM0042)

I am submitting evidence to this inquiry as someone who has spent most of their working life in and around primary classrooms, and who has also lived the long tail of what low confidence with maths can do to a person. I am currently a trust-wide Primary Maths Adviser, working across 48 schools with very different contexts, but many shared challenges. I am also a former class teacher, an education author, and someone who grew up on a council estate in the North East of England and the first in my family to go to university. Numeracy, for me, has never been an abstract policy issue. It has always been about access, identity and equity.

One of the reasons this inquiry matters so much is that we are finally beginning to talk about numeracy as something that does not end with a GCSE certificate. For many people, numeracy shapes their everyday lives far more than their school experiences ever did. It affects how they manage money, how they understand risk, how they navigate health information, and how confident they feel supporting their own children. And yet, for a large proportion of adults, numeracy remains something associated with anxiety, embarrassment or avoidance.

In my work across schools, I see very clearly where this begins.

Children do not arrive in school believing they are "bad at maths". They learn that idea. Often very early. They learn it from small, repeated experiences of failure, from being rushed past understanding, from being compared to others, or from seeing adults around them openly declare that maths "was never my thing". By the time they reach adulthood, that belief is often so fixed that it feels like a fact rather than a story.

One of the most damaging aspects of our national relationship with numeracy is that maths is treated as a measure of intelligence or worth, rather than as a set of ideas that can be learned, refined and revisited over time. This is particularly pronounced in communities where educational success has historically been presented as something for "other people". When someone grows up feeling that maths is not for people like them, it becomes very hard to re-engage later in life, no matter how good the adult provision might be.

I see this intergenerationally. Parents who had poor experiences of maths at school often want desperately to help their children, but don't know how. Homework becomes a site of tension or avoidance rather than

connection. Over time, children absorb not just the content but the emotional message: maths is stressful, maths is risky, maths is something you either get or you don't. This is how low numeracy reproduces itself across generations.

This is why early experience matters so much.

In the early years, the most important thing we can give children is not early formal methods or impressive-looking worksheets, but a secure sense of what number actually means. Quantity, comparison, pattern, and part-whole relationships are the foundations on which everything else rests. When children are allowed to explore these ideas through talk, play and carefully structured experiences, they build something far more important than early outcomes: they build trust in themselves as mathematical thinkers.

Where this goes wrong is when pressure from later year groups creeps downwards. When Reception becomes about "keeping up", rather than building up, we see children who can recite numbers but do not understand them. That lack of understanding rarely shows itself immediately. In fact, it is often masked. But it emerges later, in Key Stage 2, and then even more sharply in secondary school, when flexibility, reasoning and sense-making are required.

As a Primary Maths Adviser, one of my constant messages to school leaders is that pace is not the same as progress. Moving on without understanding does not save time. It stores up difficulty.

This is particularly true when it comes to number facts. Across the schools I work with, insecure number facts are one of the biggest barriers to later success in maths. When children have to work too hard to recall basic facts, there is simply no cognitive space left for thinking. Maths becomes exhausting and inaccessible. Unsurprisingly, children then avoid it. To address this, I have been involved in the development of a trust-wide Number Fact Checker. This is not designed to be a test in the traditional sense. It is diagnostic, low-stakes and focused on identifying what children really understand, rather than what they can answer under pressure. Its real value is in helping teachers respond intelligently: revisiting structures, using representations, and giving children repeated, meaningful encounters with number facts rather than drilling them into short-term memory.

This links closely to my wider work as an author and writing around maths mastery. One of the ideas I return to again and again is that

so-called “greater depth” should not be an outcome label reserved for a small group of pupils, but an entitlement created through better teaching. When we design lessons that allow everyone to experience depth through representation, variation and discussion, we reduce the need for artificial acceleration and create classrooms where struggling is part of learning, not a sign of failure.

This matters enormously for later life. Pupils who leave primary school with a sense that maths is something they can think about, rather than something they must get right quickly, are far more likely to engage positively with it beyond school. Pupils who leave with fragile methods and shaky confidence are far more likely to disengage, even if they technically “passed”.

The primary-secondary transition is a particularly dangerous point. I see many pupils who appear secure at the end of Year 6 but unravel in Year 7. This is rarely because they forgot content. It is because their understanding was procedural rather than conceptual. When maths becomes less scaffolded, they no longer know what to do. Their response, understandably, is to retreat.

By adulthood, these experiences harden into identity. Adult numeracy programmes often run into difficulty not because the teaching is poor, but because the emotional barrier is high. Many adults do not fail numeracy courses; they opt out of them long before that.

From my work with parents and carers, I am convinced that confidence must come before qualification. If adult numeracy provision starts with exams, many people will simply never step through the door. There needs to be space for adults to rebuild their relationship with number through everyday contexts: money, work, health, estimation, interpretation. For some, qualifications will follow. For others, renewed confidence itself may be the most important outcome.

There is also a moral dimension here that should not be ignored. Low numeracy is not evenly distributed across society. It clusters in areas of disadvantage. Schools in these areas often do extraordinary work, but they do not operate on a level playing field. In more affluent contexts, insecure understanding can be patched over through tutoring and parental support. In less affluent contexts, school is often the only line of defence.

Because of my own background, I am acutely aware of how easily systems can mistake compliance for understanding. I was a child who did

what was asked, completed the work, and still quietly believed that maths was not really for me. It took a long time to unpick that. Many adults never do.

Technology adds a further layer of complexity. Used well, digital tools can support diagnosis, personalise practice and reduce teacher workload. Used badly, they amplify anxiety. Speed-based platforms, public leader boards and reward systems tied to rapid recall may motivate a small number of pupils, but they alienate many more. The long-term effect is often negative, particularly for those who already doubt themselves.

Looking ahead, AI and automation make numeracy more important, not less. As calculations are increasingly done for us, the real skill becomes judgement: estimating, checking, spotting when something doesn't make sense. Adults with low numeracy confidence are at risk of over-trusting outputs they do not fully understand, with consequences for financial decision-making, health choices and employment.

This is why foundational numeracy, built slowly and securely, is a matter of public interest.

If I were to leave the Committee with one central message, it would be this: numeracy for life is not primarily about curriculum coverage or test results. It is about how people feel when they encounter numbers. Policy has a role to play in shaping that feeling, whether intentionally or not.

When systems reward speed over sense, movement over mastery, and outcome over understanding, they create adults who can pass tests but do not trust themselves. When systems protect depth, curiosity and dignity, they create adults who are willing to engage, even when things feel difficult.

I am grateful for the opportunity to contribute to this inquiry and would welcome further discussion or the opportunity to give oral evidence. Numeracy has shaped my life profoundly, both in its absence and its presence. I believe we can do better, and I believe the work starts earlier, runs deeper, and lasts longer than we often admit.

Let's work together to change that and ensure the best is yet to come.

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