PRESS RELEASE

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Research reveals that 'Singapore' approach to teaching maths can work in UK classrooms

Oxford University Press calls for a debate on raising maths attainment by supporting teachers embed mastery in UK education

Oxford University Press (OUP) announced today the findings of educational research into mastery – an approach to teaching maths commonly used in East Asian countries.

The independent research, conducted by the Oxford University Department of Education, is the first academic study to demonstrate that a mastery in maths textbook and professional development programme can significantly benefit children in UK schools.

OUP has welcomed the findings, but highlighted that supporting UK teachers deliver mastery requires a change of mind-set - and has called for a debate about how to support schools in embedding it in the interests of raising children's attainment levels.

The Oxford University research used a Randomised Control Trial (RCT) involving OUP's *Inspire Maths* – the mastery textbook and professional development programme based on *My Pals are Here!,* which is used in the majority of Singaporean primary schools.

It revealed that Year 1 pupils taught with the programme for two terms made significantly more progress than students using it for a shorter period. Teachers reported that the programme could boost children's motivation and engagement, and the evaluation found that it can be used creatively and flexibly.

The research combined child assessments with classrooms observations and interviews with teachers - allowing the research team to investigate teachers' views while also measuring pupils' progress. James Hall, lead-author, and now Lecturer at the University of Exeter, said; "O*verall we found positive evidence that Inspire Maths benefitted children's maths achievement and supported teachers' professional development. This boost to progress was surprising because pupils had only been in a classroom setting for a short period and because it often takes time to embed new teaching approaches."*

Professor Pam Sammons of the Oxford University Department of Education, and co-author of the research, added: "*Our RCT evaluation of Inspire Maths was an exciting opportunity to test out the impact of new mastery approaches to teaching maths in England. We found significant positive effects on children's maths progress after only two terms use of Inspire Maths materials. Teachers value the professional development provided to support their use of the Inspire Maths resources and reported it helped them implement the new mastery approaches."*

The mastery approach to learning maths involves children developing a deep understanding of a concept before moving on. It builds on a number of theories, including research conducted at Oxford University in the 1970's by developmental psychologist Jerome Bruner around how the brain assimilates new ideas.

It is increasingly popular in UK schools, and in July 2016, Schools Minister Nick Gibb announced £41 million over four years to support mastery in mathematics through a network of 'mastery specialist teachers'.

The UK Government believes that investing in mastery can help raise attainment in maths, which the OECD has highlighted as a key way of improving life chances. The UK is currently ranked 26th in the world 'PISA' education rankings for mathematics – far behind 'high performing jurisdictions' such as Singapore and Shanghai, which use mastery approaches.

OUP has welcomed the UK Government's funding and the increased focus on mastery. However, it highlighted that some significant challenges remain in helping schools looking to deliver mastery in UK classrooms.

These challenges include addressing concerns about how mastery can cover the UK's year-on-year National Curriculum with a large number of topics to cover, as well as the need to bring school management teams on board with the new way of teaching across primary schools. The study also highlighted the need for significant professional development for teachers adapting to the way of teaching.

Jill Cornish, Maths Editorial Director at OUP said: *'We now have clear evidence that a mastery approach can makes a real difference to UK maths classrooms, and we support the government's moves to support it through funding and professional development. However, it is clear that mastery cannot be a 'Far East bolt-on' and there is no quick fix to introducing it to UK schools. Mastery requires a whole-scale change in mind-set when teaching maths, with ongoing training for teachers, and support from school management teams. If we are serious about raising maths attainment in the UK, we need a debate about how we can achieve this in a way that works for teachers and learners"*

Ms Lee Fei Chen, Head of Publishing at Marshall Cavendish, a subsidiary of Times Publishing Group, which publishes *My Pals are Here! in Singapore* added*: 'We are excited about this research and that it demonstrates the effectiveness of a mastery method of teaching mathematics in UK classrooms that has been so successful in Singapore. At the same time we are positive about the UK initiatives in changing the landscape of mathematics teaching and learning in the UK.'*

More information about mastery approaches can be found on the Mastery section of the Oxford University Press website and those looking to get involved in the debate can use the #UKmastery hashtag.

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For further information and to set up interviews relating to this research, please contact:
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Notes to Editors

About the research
Evaluation of the Impact and Implementation of Inspire Maths in English Year 1 Classrooms by Dr James Hall, Professor Pam Sammons, and Ariel Lindorff at the Oxford University Department of Education draws on data from more than 550 Year 1 pupils across 12 schools in England whose progress was tracked over one academic year (2015/2016). It is the first research study to evaluate the impact of a combined textbook and professional development programme being used in UK classrooms. It is also the first programme to test the effectiveness of mastery approaches when being taught in conjunction with the 2014 UK National Curriculum, and the first UK study to simultaneously evaluate impact upon teacher practices.
The *Inspire Maths* programme was evaluated using the "gold standard" scientific technique for demonstrating cause and effect: a Randomised Control Trial. An executive summary can be found on the OUP website.

About *Inspire Maths*

Inspire Maths is a whole-school UK primary maths programme from Oxford University Press, based on Singapore's maths series, *My Pals are Here!*, published by Marshall Cavendish Education. It consists of a textbook series and pedagogical approach that emphasises the teaching of mathematics through multiple representations of mathematical concepts – specifically the use of a Concrete, Pictorial, Abstract (CPA) approach. It offers a high-quality textbook programme combined with online support, and face-to-face professional development from UK experts trained in the Singapore approach.

About Oxford University Press

Oxford University Press (OUP) is a department of the University of Oxford. It furthers the University's objective of excellence in research, scholarship, and education by publishing worldwide. OUP is the world's largest university press with the widest global presence. It currently publishes thousands of new publications a year, has offices in around fifty countries, and employs more than 6,000 people worldwide. It has become familiar to millions through a diverse publishing programme that includes scholarly works in all academic disciplines, bibles, music, school and college resources, children's books, materials for teaching English as a foreign language, business books, dictionaries and reference books, and academic journals.