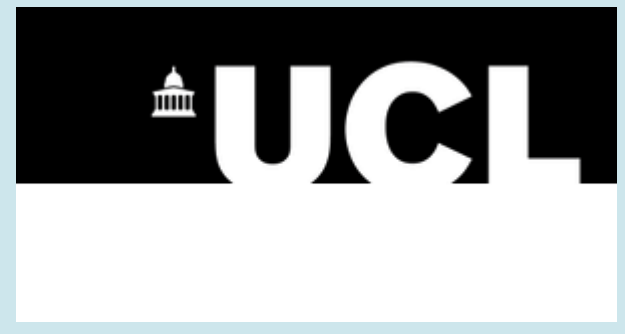




How are Abacus resources supporting transformational mathematics learning and assessment?

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A two year longitudinal study conducted from 2016-2018 by the Pearson UK Efficacy and Research team in conjunction with UCL Institute of Education.

What is Abacus?

Abacus is a coherent set of mathematics materials for use in Key Stages 1 and 2 (usually age 5-11, years 1 to 6) in England. The resources consist of both digital and print resources. The print resources include a variety of textbooks and workbooks. Abacus online resources ('ActiveLearn') include both an online toolkit for teachers and an online 'pupil world' that can be used to plan, develop, track and assess. They offer lesson plans, worksheets, whole class and interactive activities, and a variety of assessment and tracking tools and tests, together with reporting tools.



Research Highlights

We asked what impact Abacus Mathematics resources were having in schools and on young people: how were they being used, and how effective are they for supporting young people's learning of the 2014 National Curriculum in England.

Who was involved?

9 Schools 18 Classes

How did we get the data?

77* Teacher and Maths Coordinator phone interviews

34 Face-to-face Teacher and Maths Coordinator interviews

36 Pupil focus groups

34 Lesson Observations

*This number is indicative of phone interviews conducted in four phases of fieldwork across the two year study period.

This research contributes to the continuing improvement of the Abacus resources as well as the development, evaluation and evolution of the next phase of Mathematics Primary products.

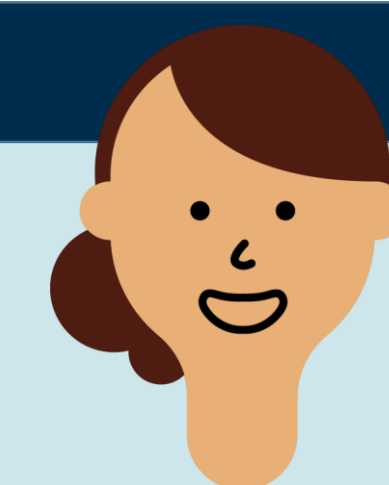
Key Findings

Learner and Teacher Affect

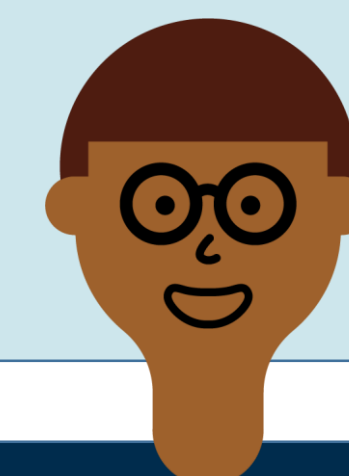
- The Abacus resources had a positive impact on pupil confidence, motivation and self-efficacy.
- Teachers who effectively engaged with the resources noted enriched subject knowledge (particularly for less experienced teachers) and improved confidence.

Use of Digital Resources

- Digital elements of the resource (e.g. interactive whiteboard, practical activities & online ActiveLearn homework) received the most positive feedback from teachers and pupils in terms of pupil engagement in their maths learning.



The interactive tools are very, very good, because they can physically do them. I'll bring them up to the front of the class and they'll go through them themselves.' (Maths Coordinator)



"when most people hear the word homework they're oh no, but when you hear ActiveLearn, it's yes." (Year 6 Pupil)

Impact on Mathematical Processes

- The resources were seen to be effective at supporting the development of key mathematical processes such as mastery, fluency and problem solving & reasoning.
- Teachers discussed using Abacus 'vocabulary lists' to ensure the improvement of children's basic mathematic understanding.

Progression

At the beginning of the study, we gathered initial benchmark attainment data & then compared this to performance in end of Key Stage tests to quantitatively indicate pupil progression. By the end of the study we found:

In KS1 50% of classes had made significantly better progress than the national average

In KS2 75% of classes had made significantly better progress than the national average