

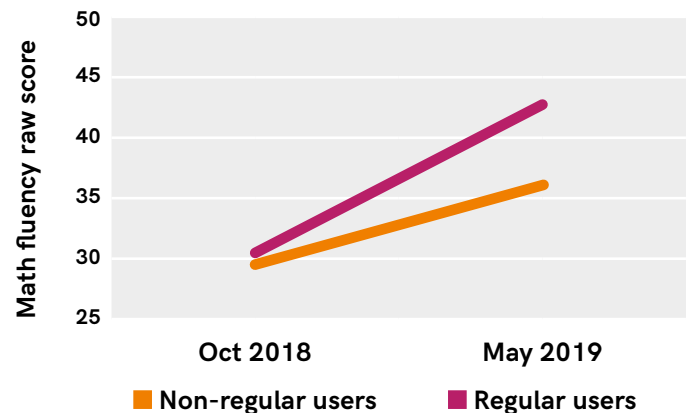
Sumdog is proven to significantly improve children's fluency

Mathematical fluency gives children the ability to recall and apply knowledge rapidly and accurately. It is a crucial building block and the foundation for later learning.

This study set out to investigate whether using Sumdog on a regular basis had an impact on students' mathematical fluency. The findings revealed that children who practiced math using Sumdog for 30 minutes or more a week almost doubled their mathematical fluency when compared to that of non-regular Sumdog users.

What impact did Sumdog have on children's fluency?

The study found that Sumdog had a real and quantifiable impact on children's mathematical fluency. Over an eight month period, math fluency progress for students who used Sumdog on a regular basis was almost double that of non-regular users. The Education Endowment Foundation (EEF) describes an effect size of this magnitude as "high impact"; equivalent to a six-month advantage.



Using Sumdog for 30 minutes a week almost doubled children's fluency progress



How was the study set up?

A quasi-experimental, longitudinal study measured the progress of 221 students across nine elementary schools.

Mathematical fluency was measured using a test of speed and accuracy. At the start and end of the school year, children were asked to answer as many questions including mixed operations as they could in three minutes. Progress was calculated for both 'regular' users, those who used Sumdog for at least 30 minutes a week, and the remaining 'non-regular' users. An analysis of the differences between the two groups was conducted in order to understand the impact of the resource.



How does Sumdog help to improve children's mathematical fluency?

Repetition

Sumdog reinforces learning by alternating and revisiting topics, strengthening mathematical fluency.

Quantity of practice

Sumdog can be played on smartphones, tablets, and computers enabling many children to continue learning at home.

Motivation

Sumdog is especially motivating for hard-to-reach children. They are engaged in the program and willing to learn.

Feedback

In the average US elementary class of 21 students (OECD, 2019), giving timely and effective feedback to every individual is a challenging task for one teacher. Sumdog provides rewards for correct answers and information about incorrect answers. This helps to strongly reinforce math facts and encourages lasting learning.

Impact studies are central to Sumdog's mission and help to guide our pedagogy and refine the program. To read more research papers on the effectiveness of Sumdog, please visit sumdog.com/research

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