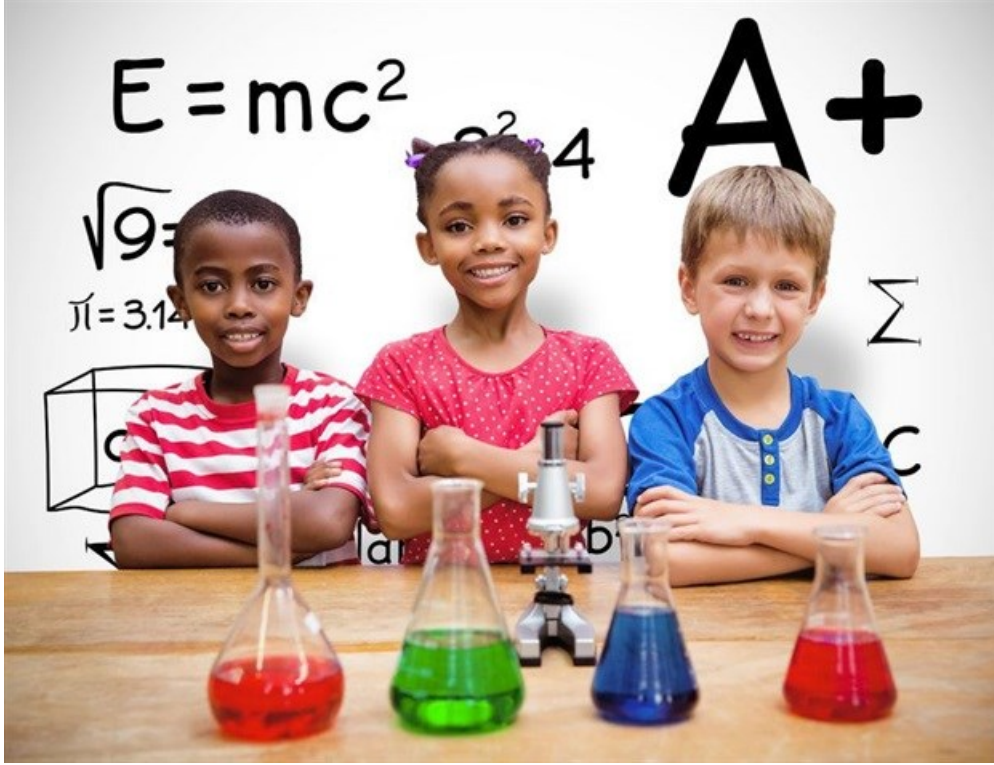


Boys no better at math than girls

Boys are no better at math than girls are, according to Smartick, an online math learning methodology and practice app, that is used to solve between 300,000 and 400,000 mathematical problems each day. in 70 different countries.



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Javier Arroyo, co-founder of Smartick, says their research shows that boys and girls are equally good at maths. “We believe that other factors influence the low number of women working in the science, technology, engineering and mathematics (STEM) fields globally.

“One of these factors is the environment in which children learn maths. We believe that boys and girls perform equally well when using our app, because they work at home without peer pressure, away from the constant competition in the classroom. Our students work in a familiar environment, where they have time to think and to work out answers. We believe that this will build confidence that will soon become visible within the classroom, leading to more girls entering the world of maths and science after school.”

Now in South Africa

The programme, which is supported by the EU and has helped 83% of the more than 32,000 participating students between 4 and 14 years of age improve their grades, is now available in South Africa.

South Africa has its own challenges in the field of teaching mathematics and science. The country's grade 5 and 9 pupils are among the lowest performing in the world, together with Jordan, Saudi Arabia, Morocco and Kuwait, according to Dr Vijay Reddy, principal investigator of Trends in International Mathematics and Science Study 2015.

The issue of the low number of girls choosing careers in mathematics is often discussed as one of their key areas of focus.

The 2016 matric results support international findings about gender-based performance. About 57% of boys passed maths compared with 46.4% of girls. However, a higher number of girls, 146,270, wrote the exam compared with 119,540 boys, confirming that there is not a big difference between boys and girls, as far as performance is concerned.

Cultural issue

Statistics compiled by UNESCO reveal that globally women make up less than 30% of the people working in STEM careers.

Dr Lanette Hattingh, an educational psychologist and owner of Brainwave Careers, believes it is more of a cultural than an intellectual issue. "Girls are not raised to be prepared for the challenges of a career in maths or science. When we play games with children, there are games for girls and games for boys. Boys play with toys that prepare them for technical or scientific careers, while girls' toys guide them towards a future of housework and child rearing. Gender roles are established very early and will have an influence on the person for the rest of his/her life.

"Once progressing into adulthood, the woman is still seen as the primary caregiver in the family and her career is seen as less important than that of her husband or partner. Women are not as competitive as men are, so they may not pursue a challenging career as aggressively as their male counterparts may.

"We know that girls can be very good at maths. We only need to convince them to believe that as well."

Using AI to develop competence

Smartick uses the latest artificial intelligence to adapt to the child's learning style, quickly addressing areas where the child needs to improve on. Once he or she is fully versed and competent, the app moves the child to the next level, unlike paper-based programmes that force the child on a pre-defined path. This approach builds confidence and helps children believe in themselves, which is an important factor for future success in mathematics.

Hattingh agrees that a computer-based programme is one of the best ways to teach maths. "There are two very important factors at play when learning maths: visual concepts and repetition. If one of these two is neglected, the child will never be able to master maths.

"Both are addressed very well by the Smartick app. Children often become bored with learning from books. Computers are much more entertaining and they would be able to concentrate for longer.

"The visual component of the programme is excellent and teaches children the concept of numbers, instead of just number recognition, which we know is crucial for children to be able to understand maths. The programme is also structured in a way that allows for enough repetition for the work to be committed to memory."

Hattingh says for the world to move forward, we need children who can do maths and who are able to work in STEM careers. "To achieve that, we need to look at the way we teach maths. Because the way we are doing it now, has not given us the results we need," she concludes.

High percentage increase in results

Smartick is an online math learning method for children ages 4 to 14. This innovative system, developed in Spain achieves extraordinary results. Eight out of ten students improve their grades in mathematics and 94% increase their ability to calculate logic and solve problems. This startup, which was founded in 2011 by two Spanish entrepreneurs, Daniel González de Vega and Javier Arroyo, has received numerous awards. In 2016, the jury of The Next Web in NY selected Smartick as one of the 15 best world startups of the year. Smartick has head offices in Boston and Madrid. The company employs a team of 42 engineers, mathematicians, pedagogues, psychologists and educators. It was launched in South Africa during April 2017. For more information, go to www.smartickmethod.com.

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