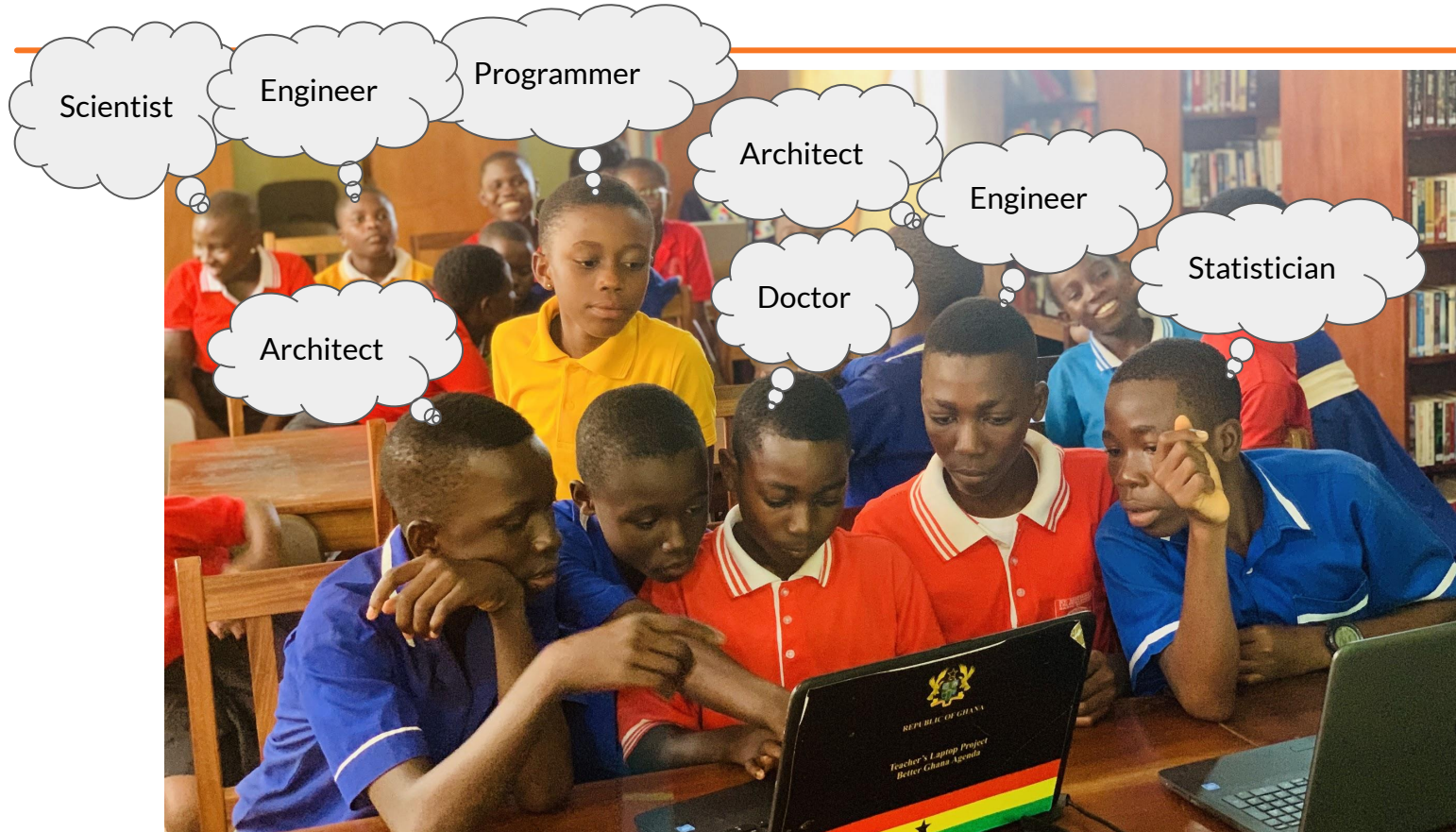




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Investing in Early-Age Numeracy Skills: Preparing Today's Young Africans for Jobs of the Future

What We Need...



What We Have...

Programmer



MARTIN

“To build a pipeline of future skills, Africa’s educators should design future-ready curricula that encourage critical thinking, creativity and emotional intelligence as well as accelerate acquisition of digital and STEM skills to match the way people will work and collaborate in the Fourth Industrial Revolution.”

World Economic Forum [The Future of Jobs and Skills in Africa](#) report

Governments Investing In **STEM** Education

STEM

The Problem: Mathematics Education Crisis

Teachers are Generalists

Most primary school teachers (grades 1-6) did not specialise in mathematics, they specialised in **Teaching**.

Insufficient conceptual understanding leads to an over-emphasis on teaching **Procedures**.

Teaching Procedures

Most books and digital resources tend to teach procedures at the expense of teaching **conceptual understanding**.

Conceptual understanding is the key to building a positive attitude towards mathematics.

Math Anxiety

Math anxiety is a cross-cultural phenomenon.

Learning of mathematics provokes **fear** and **anxiety**, leading to underachievement and abstention from STEM.

Current Way of Learning Math: Word Problems

Julia made a necklace.
She used 3 red beads,
and 2 green bead.

How many beads

John made a necklace.
She used 2 red beads,
and 3 green bead.

How many beads Julia

Julio made a necklace.
She used 4 red beads,
and 1 green bead.

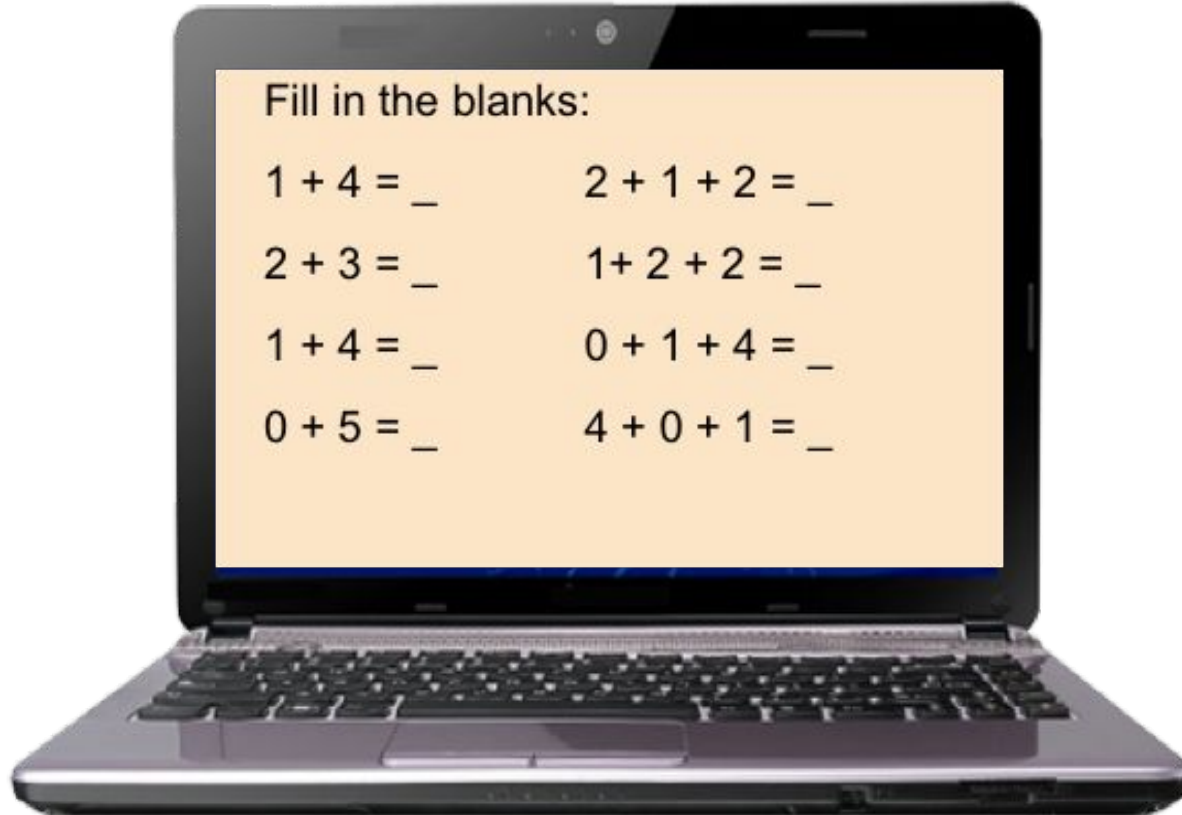
How many beads Julia used?

word problems...

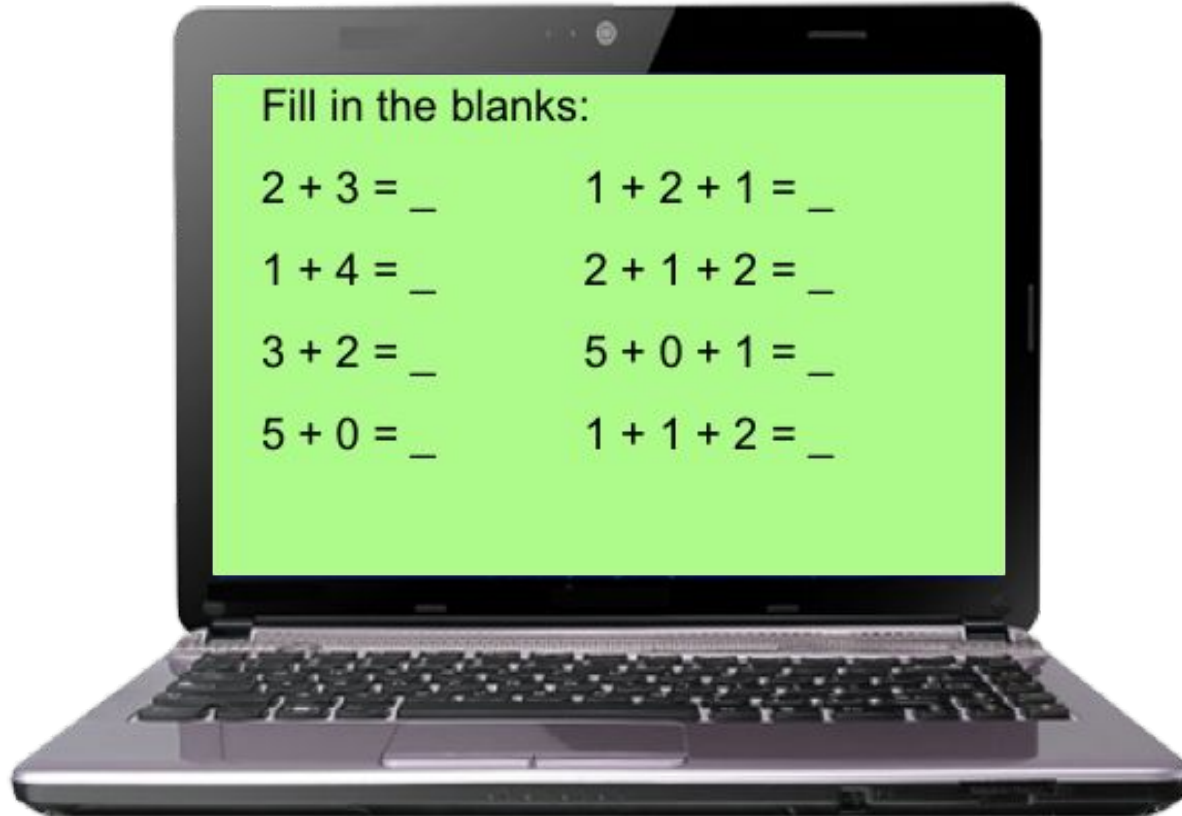
Current Way of Learning Math: Worksheets



Educational Technology: Most Common Solution



Educational Technology: **Most Common Solution**



Educational Technology: **Most Common Solution**



The Matic Way: Adaptive Game-Based Learning



The Matic Way: 10 Pedagogical Principles

Conceptual Understanding

Learning By Doing

Concrete-to-Abstract

Exploiting Technology Capabilities

Motivated Mathematics

Engagement

Problem Solving

Adaptive Feedback

Spiral Learning & Seeding Ahead

The Heterogeneous Classroom

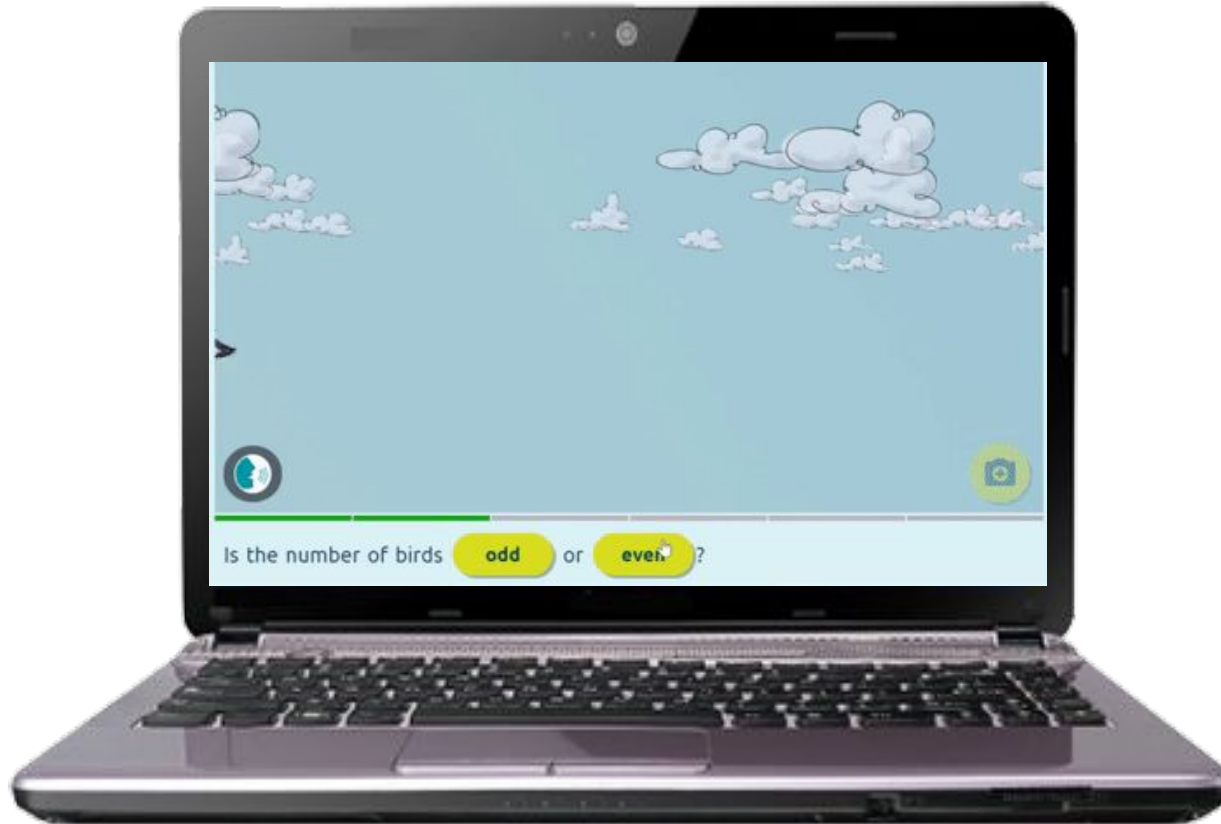
The Matic Way: Learning by Doing



The Matific Way: **Motivated Mathematics**



The Maticfic Way: **Conceptual Understanding**



The Matific Way: Concrete to Abstract



“Africa’s educators should begin by encouraging critical thinking, creativity, cognitive flexibility and emotional intelligence, as opposed to rote learning, to match the way people will increasingly work and collaborate in the Fourth Industrial Revolution.”

World Economic Forum [The Future of Jobs and Skills in Africa](#) report

Matific Works On **All Devices**



Offline when using Matific on Tablets or Mobile Phones

Matific Around the World

Curriculum Aligned in over 50 Countries & 40 Languages



*Matific works with
Ministries of Education on
nearly every continent*

Matific Around the World

Matific in Estonia



OECD PISA: The Top Rated Countries/Regions 2016

Sum of mean science, reading and mathematics scores from the OECD PISA Results 2015*



Estonia, ranked 5th in PISA, recently partnered with Matific. Since October 2019, nearly 50% of Estonian Schools are using Matific to further improve attitudes and motivations towards mathematics.

Matific Around the World

Matific in Ghana

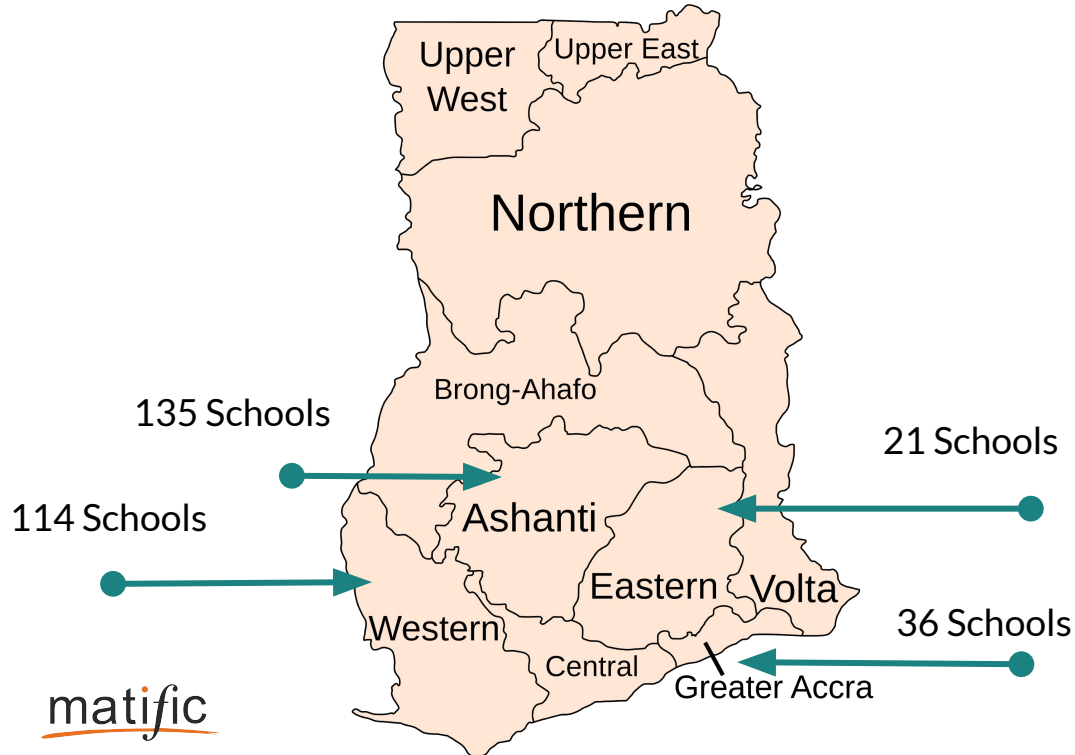


Ghana Ministry of Education and the Ghana Education Service supported Matific pilot in over 300 government schools across the country.

Schools range from those with decent connectivity to those in the most rural areas.

Matific Around the World

Matific in Ghana - Not Just Accra



Matific is working with over 300 government schools spread across Ghana, not only in Accra.

Matific Around the World

Matific in Ghana - on all devices



Students and teachers can access Matific from any device, smartphones, tablets and even internet cafes.

50% of users in Ghana are accessing Matific using a mobile device.

Matific Around the World

Matific in Ghana - Using Matific



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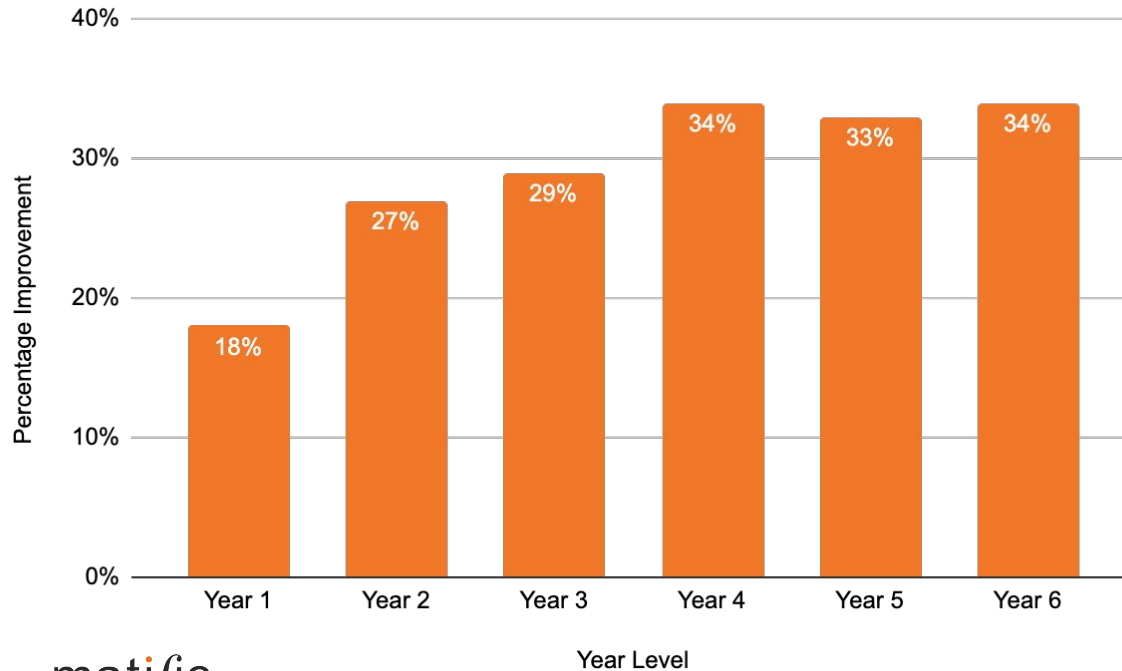


66% of activities completed by Ghana students are Self-Directed!

Matific encourages students to authentically engage with mathematics on their own, without any teacher involvement on the platform.

Matific Around the World

Raising Results for all students



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Matific is raising results across all grade levels. For students who played a Matific activity more than once, we see significant improvement in their understanding of the maths skill they are practicing.

“If we teach today as we taught yesterday,
we rob our children of tomorrow.”

John Dewey, Educational Philosopher