



micro:bit

Impact Report 2016-2026

Micro:bit Educational Foundation





Contents

4

**Ten years of sparking imagination:
Looking back, planning ahead**

6

**A message
from our Chair**

8

**Micro:bit Educational
Foundation in numbers**

9

**BBC micro:bit - the next gen - inspiring
primary pupils across the UK**

12

**(Colombia Programa) - transforming
education across Colombia**

16

**USA - from Compton to Los Angeles
County and now nationwide**

20

**Singapore - empowering 100,000+
students with digital making**

23

**ultra:bit - bringing digital creativity
to classrooms across Denmark**

26

**Accessibility - breaking barriers
in block-based coding**



Ten years of sparking imagination: Looking back, planning ahead

Over a decade ago, the BBC micro:bit project began with a simple yet ambitious goal: to demystify technology and put the power of digital creation directly into the hands of a more diverse group of young people.

Ten years later, the scale is beyond what we ever thought was possible. Thanks to our global community of partners

and supporters, more than 12 million micro:bits have been distributed across more than 85 countries. Most importantly, an estimated 73.5 million young learners have experienced the thrill of writing their first lines of code, and discovering that they too can be creators with technology.

When we started, our mission was never about creating an army of software engineers. It was about broadening participation, agency, and accessibility. Through hands-on physical computing, we set out to make abstract concepts concrete, break down traditional barriers in STEM, and ensure every child - regardless of gender, background, or learning needs - could be inspired to create their best digital future.

As we celebrate this milestone, we must, more importantly, look to the impact we can have in the future. The technological landscape is shifting at a breakneck speed, dominated by rapid advances in artificial intelligence. AI is beginning to fundamentally change how we work, learn, and interact with the world. Yet, as innovation accelerates, so does the risk of deepening the digital divide.

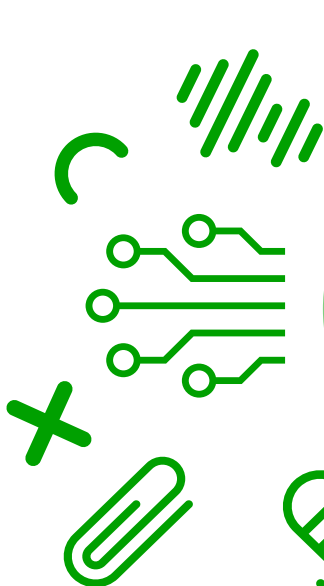
Technological progress should serve the whole of society, not just a privileged few. As we enter our second decade, our commitment to broadening participation is stronger than ever. We have expanded our focus beyond computing to encompass AI and data literacy, empowering students not only to understand how these complex systems function, but to question them, design with them creatively, and critically evaluate their impact.

Thank you to everyone who has been part of our journey over the past ten years. Our mission will be even more important in the next ten - the opportunities and challenges created by AI make having more people understanding and engaged in technology ever more vital. We look forward to working with you to make this happen.



Gareth Stockdale

CEO, Micro:bit Educational Foundation





A message from our Chair

Joining the Micro:bit Educational Foundation at this ten-year milestone is an immense privilege. Having spent my career working at the intersection of technology, data, AI and education, I have seen firsthand how rapidly our world is being reshaped. As technology accelerates, our mission to ensure every young person has the opportunity to shape their digital future becomes more vital than ever.

What makes the micro:bit truly transformative isn't just that it introduces children to code - it is how it unlocks essential, transferable skills for life. Through hands-on physical computing, young people don't just learn technical concepts - they learn how to collaborate, think critically, solve complex problems, and express their creativity. I am particularly passionate about critical thinking in the Age of AI - the next

generation needs to learn and use this skill, not simply succumb to the 'auto-pilot' of AI. These are the core career-ready skills that will empower the next generation to adapt and innovate in an AI-driven world, regardless of the career path they choose.

I've been genuinely moved by what our data tells us about equity and inclusion.

When girls are taught with the micro:bit, 81% say they'd like a career linked to coding, compared with just 37% of those who haven't been.

Source: mbit.io/impact-thenextgen-report-2025

Looking to our next decade, I am excited to help accelerate our global reach, forge new partnerships, and broaden participation so that every child, regardless of background or geography, develops the confidence to thrive. Our ambition to reach 100 million learners by 2028 is bold and I believe we can achieve it together with all the help of our partners and supporters.

Thank you for being part of this extraordinary journey. If you share our ambition, please get in touch. We would love to work together to inspire every child to create their best digital future.



Niresh Rajah

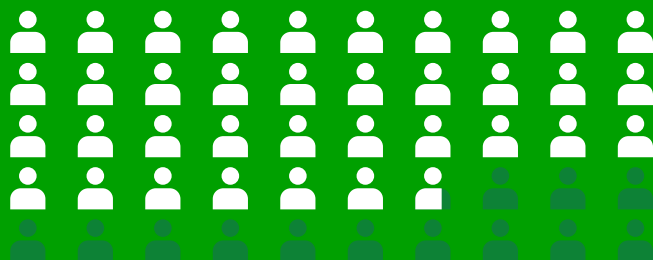
Chair, Micro:bit Educational Foundation



Micro:bit Educational Foundation in numbers

73.5 million

learners have programmed over
12 million micro:bits in over 85
countries around the world



Our aim: 100 million learners by 2028

75 million

micro:bit blocks coded every
month on Microsoft MakeCode



351,228



average active monthly users
across microbit.org, our Python
editor and micro:bit classroom

120+

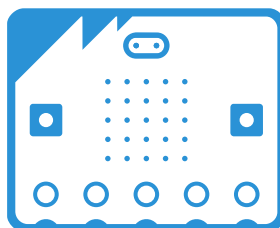
partner organisations
that we're working
with globally

384

micro:bit Champions from
54 countries around the
world in 2026

1 million

11- and 12-year-olds
received the original
BBC micro:bit in 2016



90%

of those surveyed after the first
year said the micro:bit helped
show that anyone can code

Source: mbit.io/impact-bbcresearch-2017

Over the past decade, along with our partners and supporters, we've worked on many inspiring projects that have touched millions of lives. These case studies are just a small selection from around the world.



Case Study

BBC micro:bit - the next gen - inspiring primary pupils across the UK

In this major partnership with Nominet and BBC Children's and Education, we rolled out an ambitious programme to reach and inspire primary school students across the UK. With generous financial support from Nominet, classroom packs

of micro:bits were made freely available to every primary school in the UK and a programme of activities was rolled out to inspire and excite children to get creative with their micro:bits.

Sparking digital curiosity

The next gen campaign aimed to spark digital curiosity in children aged 8-11, empower teachers with hands-on tools and training, and help close the UK's digital skills gap.

The campaign launched in September 2024 with slots on BBC Breakfast and entertainment collaborations through CBBC on well-loved programmes such as Blue Peter, Newsround, The Dumping Ground and Football Academy. Influencers such as DanTDM, Maddie Moate, Tilley Locky and Big Manny

all helped explain the micro:bits to teachers and pupils across the UK, and the campaign culminated in an exciting competition with stars from the television programme Gladiators in 2025.

Underpinning the star-studded activities, new educational resources were developed including webinars targeted to new users. We worked with a network of partners to deliver professional development, training and support to schools across the four UK nations.

Experimenting with machine learning

The campaign also featured the BBC micro:bit playground survey, an innovative data science project, where children could use the micro:bit to investigate and gather information about their playground. This included the launch of a machine learning tool, where pupils could train and test their own model, using movement data they collected with micro:bits. Developed with the BBC and the Office for National Statistics, the project transformed playgrounds into outdoor classrooms where pupils collected, analysed, and interpreted data using the micro:bit.



Impact

YouTuber DanTDM
visits a school to
launch next gen

90%

of UK primary schools signed up to receive a micro:bit pack with nearly 700,000 micro:bits distributed

87%

of teachers that recalled training resources agreed that using micro:bit had increased their confidence in teaching computing

79%

of teachers have seen students' other skills improve (e.g. logical reasoning, communications) because they used micro:bit

81%

of girls who recalled being taught with micro:bit agreed they'd like a job linked to coding, compared with just 37% of those who hadn't been taught with micro:bit

88%

of students that have been taught with micro:bit say computing and technology is more enjoyable and fun than other subjects - almost a 40% increase versus non-users

Source: Platypus research report - mbit.io/impact-thenextgen-report-2025



Case Study

(Colombia Programa) - transforming education across Colombia

Colombia Codes (Colombia Programa) is a landmark strategic initiative between the Colombian Ministry of ICT and the British Council. By integrating the BBC micro:bit into pedagogical practices

across the country through high-quality materials and large-scale initiatives, the programme aimed to help children and young people develop key digital skills for their future.



The challenge

To tackle the current challenges of the digital world, the Colombian government identified a need to empower teachers by embedding computational thinking and problem-solving into the classroom. The challenge was not just about providing

hardware but ensuring teachers across diverse environments - from bustling urban centres to remote rural schools - had the confidence and resources to teach coding effectively.



The Colombia Codes programme (2023-2026) was launched as an £11.3 million multi-year investment to reach almost one million students

The approach

The programme's success is built on a comprehensive, three-phase rollout designed for sustainability and scale:

01

A national curriculum: The programme developed pedagogical guides for grades 0-11 (age 5-17). These were validated by over 1,755 teachers to ensure they effectively covered computing concepts, problem-solving, and digital citizenship. The micro:bit is introduced in 5th grade as a means to learn block-based and text-based coding.

02

Bridging the rural divide: To ensure no child is left behind, the programme designed specific unplugged materials and trained 761 teachers from 362 rural schools, bringing computational thinking to 17,006 students in areas with limited infrastructure.

03

The hub model: The programme established 420 schools as “Computational Thinking Hubs” recognised for computing excellence. These hubs acted as regional centres of expertise, where trained teachers then mentor their peers in neighbouring schools, creating a self-sustaining ecosystem of professional development. This cascade model implemented a school playground challenge, using the micro:bit to explore biodiversity, measure school open areas and track physical activity with 102,112 students participating in 840 schools.

Impact & Inclusion

Since 2019, the Government of Colombia has distributed approximately 147,500 micro:bits, cementing it as the primary tool for learning to code in the country. Computational thinking has evolved from being an isolated activity to becoming an integral part of the school curriculum. The latest Colombia Codes phase (2023-2026) has achieved significant milestones in inclusion and reach:

Total student reach:

947,000+

students reached over
three years

Teachers' gender equality:

62%

of participating teachers
were women

Participation of girls:

55%

of the students leading
project showcases were girls

Perceptions in the use of the micro:bit in the classroom within Colombia Codes:

91.3%

of teachers found the micro:bit activities easy to implement

94.7%

found the instructional materials useful

97.5%

reported that students enjoyed using the micro:bit

More info: mbit.io/colombia-codes-british-council (Spanish)



Case Study

USA - from Compton to Los Angeles County and now nationwide

In 2024, the Foundation partnered with Compton Unified School District (CUSD) to bring world-class technology and physical computing education directly to underrepresented students. Backed by £20,000 in funding and 500 micro:bits from OKdo, CUSD collaborated with local non-profit 9 Dots to build sustainable instructional capacity. The initiative trained 33 key staff members who

subsequently delivered comprehensive professional development to 300 teachers across 33 CUSD schools, leading to the creation or expansion of 33 dedicated STEAM labs district-wide. In just its first year, over 12,500 children engaged with the programme, and the project's immediate, visible success inspired the neighbouring district to expand the training into its own schools.

Post-implementation surveys demonstrated profound growth:

90%

of participating teachers reported high confidence in teaching computing and utilising the provided resources

Source: post-training survey of 19 teachers

76%

of students found coding easy after learning with micro:bit (up from 57% beforehand)

Source: pre-survey (311 students) and post-survey (248 students)

61%

of young people expressed a desire for future tech careers, jumping significantly from 47%

Source: pre-survey (311 students) and post-survey (248 students)



Bridging the STEM divide across Los Angeles County

Building directly on the successful CUSD pilot, the Foundation scaled its educational approach regionally in 2025 across the districts served by the Los Angeles County Office of Education (LACOE). Partnering with the Greater Los Angeles Area Education Fund (GLAEF) and the Texas Advanced Computing Center (TACC), with funding from Google.org, the effort evolved from a single-district initiative into a multi-district strategy targeting upper elementary classrooms in grades 3 through 5. The project specifically targeted high-need areas where seven out of ten students face socioeconomic challenges. It supplied co-designed, California standard-aligned curricula, localised summer professional development, and complete hands-on classroom kits featuring 10

micro:bits per educator to guarantee immediate implementation.

This county-wide expansion reached 154 educators across 84 schools and 28 school districts, directly impacting 3,172 students with a sharp focus on equity - 90% of all participating schools held Title I federal aid status. An independent external evaluation conducted by TACC confirmed massive systemic gains across the region.

Together, these two pilot programmes demonstrated a clear, powerful progression from an impactful district partnership to a scalable, evidence-based blueprint for bridging the digital divide across Los Angeles county and beyond.

42→82%

Teacher confidence in integrating computer science into their standard curriculum nearly doubled

96%

of teachers noted improvements in student problem-solving, creativity, and collaboration skills

99%

reported heightened student engagement and enjoyment of computer science

Source: TACC research report - mbit.io/impact-LA-County-report-2025

The future of physical computing and AI education in USA

The beginning of the 2026/2027 school year saw the launch of a national expansion for the coding and AI education programme. The programme will see the micro:bit used across schools in 49 states, Washington DC and two US territories. The national pilot includes partners from TACC, BootUp PD, Forward Education, with support from Google.org. It builds on the Los Angeles County programme, providing new professional development

and a community of practice for educators, as well as hands-on classroom opportunities for students to learn much-needed AI literacy and transferable skills for their future careers.

The expansion will see students across the US benefit from the micro:bit CreateAI tool, that allows pupils to explore artificial intelligence safely through movement and machine learning.





Case Study

Singapore - empowering 100,000+ students with digital making

In 2017, Singapore's Infocomm Media Development Authority (IMDA), in partnership with Singapore's Ministry of Education, launched a nationwide initiative to embed physical computing into the school curriculum. Through the **Digital Maker Programme (DMP)**

and the subsequent **Code For Fun (CFF)** initiative, micro:bit devices were introduced to foster inventive thinking, empathy-led problem solving, and core computational skills across primary and secondary education.

Key highlights

100,000+

micro:bits supplied to public schools across Singapore

105,000+

students reached through hands-on coding and digital making

220

schools involved (61% of all primary and secondary schools nationwide)

800

teachers trained in inventive thinking and micro:bit integration

The approach

The initiative focused on flexible school integration combined with practical teacher professional development:

- **Flexible device deployment:** Schools received 300–400 micro:bits to rotate across class groups each term. Implementation was customised by each school - integrating devices into Design & Technology lessons, STEM modules, or Applied Learning Programmes.
- **Educator workshops:** Teachers completed 1.5-day training sessions co-created with Microsoft. The curriculum introduced basic coding before guiding teachers on how to embed physical computing into existing subject lesson plans.
- **Design thinking framework:** The training prioritised design and inventive thinking over simple code syntax. Educators learned to lead students through a clear progression: identifying a real-world problem with empathy, brainstorming, iterative prototyping, and collaborative testing.

Outcomes

By focusing on physical computing, Singapore's initiative successfully shifted the focus from passive tech consumption to active creation. Students gained direct experience applying computational logic to physical hardware, giving them early confidence in digital problem-solving and instilling principles of inventive thinking to solve real-world problems.

The Digital Maker Programme has been so successful that further Code for Fun initiatives were introduced in 2020 and are continuing to evolve in primary and secondary schools across Singapore today. Meanwhile, Singapore's Ministry of Education has expanded computing as an elective subject in secondary schools.





Case Study

ultra:bit - bringing digital creativity to classrooms across Denmark

ultra:bit is a major national micro:bit programme in Denmark, developed and run by DR, the national broadcaster. Its aim is to bring micro:bit technology and digital creativity into the classrooms of children aged 7-14 in a structured,

meaningful and sustainable way by giving children exposure to digital technologies and computing.

ultra:bit launched in 2018 and continues, in its latest iteration – ULTRA:BYTES – to reach children across Denmark today.

Programme design and development

The education team at DR worked with teacher consultants in the early stages of ultra:bit's development to gain an understanding of key concerns and pedagogical needs. They developed education materials for a variety of different subjects such as mathematics, science, Danish, and craft and design, to integrate technological understanding and the use of the micro:bit directly into existing lessons. By incorporating

technology into core subjects, teachers could more easily find the time and purpose to use technology in school.

The latest iteration of the programme, ULTRA:BYTES, aims to show children that technology is all around them, and give them tools to analyse it, understand and even change algorithms, gaining a sense of agency in regard to AI and digital technology.



Impact & Research

ultra:bit has reached over 100,000 students between 2018 and the present day.

A survey of teachers who participated in the ultra:bit pilot in 2018 showed that:

90% of teachers found it was easier to code using micro:bit

95% of students found it easier to code than they thought

85% of teachers felt enabled to help students use technology for creative solutions

96% of teachers said students wanted to learn more about coding and technology

60%+ of teachers began to create their own lessons and materials indicating a change in practice and sustainability

Source: DR Danish Broadcasting Corporation report - mbit.io/impact-ultrabit-report-2018

Accessibility - breaking barriers in block-based coding

For a decade, the Foundation has championed equal access to digital education. However, block-based coding environments like Microsoft MakeCode traditionally relied on mouse-driven drag-and-drop mechanics. This created significant accessibility barriers for students who are blind, visually impaired, or have fine motor challenges, often forcing them straight into the more complex text-based coding and setting them apart from their peers.

In 2023, funding from Nominet enabled the Foundation to conduct a comprehensive audit across its product portfolio, unearthing critical barriers in MakeCode and laying the groundwork for a dedicated accessibility roadmap. To resolve these challenges, the team launched a two-year project funded by Google's Blockly Accessibility Fund in partnership with Blockly and Microsoft MakeCode. The initiative rolled out in two major phases: keyboard controls launched in summer 2025 for users with fine motor challenges, followed by full screen reader compatibility in July 2026.



Co-design and deep user engagement

Our target audience's lived experience drove the design process from day one:

Targeted testing:

The team conducted face-to-face testing and beta reviews across the UK, USA, and the Netherlands, collaborating with Dundee University to create a report on low-vision learning experiences.

Youth Ideation Panel:

A dedicated panel of six young coders (five blind, one visually impaired) co-created accessible text and refined interaction terms. For instance, they replaced terms like "C-shaped block" because "C" in Braille does not match the visual shape.

Tactile resources:

The team worked with students at Cornell University to develop 3D tactile blocks. 2D blocks and comprehensive onboarding materials were directly tested by students aged 11–16 and educators.

Transformative impact and future plans

According to a 2021 UNICEF report, approximately 5% to 6% of children experience a level of fine motor difficulties, while roughly 1% of children globally live with a significant vision impairment. With over 70 million learners reached by micro:bit globally, an estimated 100,000 to 150,000 children per month could benefit from these improvements already. Feedback from educators has been overwhelming, with a STEM consultant calling the ability to manipulate code blocks via keystrokes "a dream". Because these features were integrated into the core Blockly platform, the code can now be adopted by other popular platforms like Scratch, extending potential reach to millions more global users.

Looking ahead through 2026 and into 2027, the Foundation's roadmap includes:

- Publishing ACRs (Accessibility Conformance Reports based on VPAT, the Voluntary Product Accessibility Template) to help schools understand our products' accessibility
- Working with partners to develop accessibility-focused hardware accessories like Diversi:bit from Sistema THEAD and vibrating hardware for deaf and hard-of-hearing students
- Considering how we might better support other accessibility communities in the future (such as support for neurodiversity).

With thanks

Our partners



Our supporters

