

TECH LITERACY:

A NEW CORNERSTONE OF MODERN PRIMARY SCHOOL EDUCATION

Executive Summary of a report from BT and Ipsos MORI. Find out more at techliteracy.co.uk

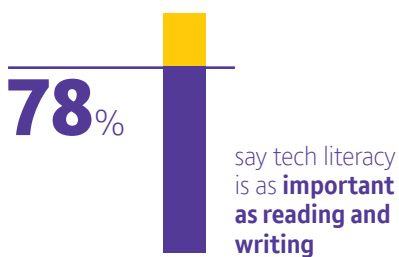
To build a culture of tech literacy, we need to start with the next generation. That will take collective energy from across sectors on a range of crunchpoints throughout childhood. At BT we've focused our initial efforts on a group that plays a crucial role in setting children's attitudes and aspirations: primary school teachers.

These research findings provide valuable insight into what teachers need to help make tech literacy a new cornerstone of modern education in primary schools. Through the Barefoot Computing Project, BT has been alongside primary school teachers across the country over the past two years, and that has taught us a great deal about the lie of the land. This report builds on what we've learnt with new research into 400 primary school teachers across England, Scotland and Wales, as well as teachers and pupils from five schools which have been through the Barefoot Computing Project.

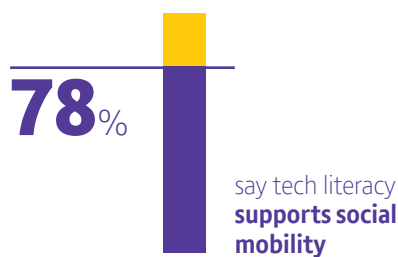
We hope the data and ideas presented here will be valuable and act as a spur for all who are committed to taking tech literacy to the next level in UK primary schools.

Teachers believe tech literacy is vital for their pupils' futures

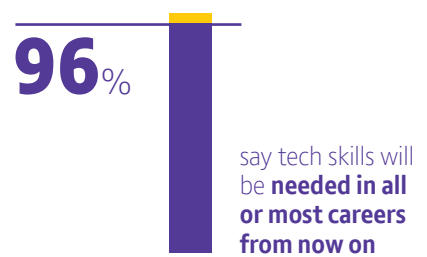
Fundamental skill



Social benefit

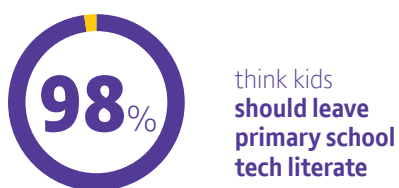


Professional prospects



Teachers see it as their role to prepare kids for the digital world...

Schools' responsibility



Teachers' role

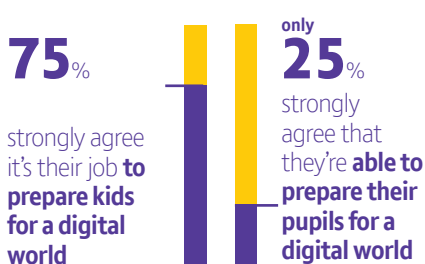


Creative approach

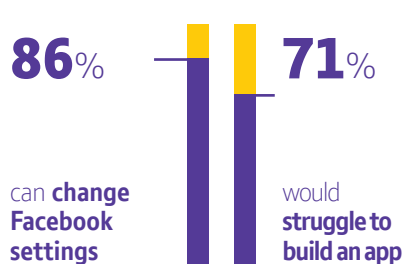
Teachers are using tech literacy concepts in creative ways across **diverse subjects** – like modelling tennis swings in PE with decomposition, or using logic in geography to learn where different animals come from.

...but many don't feel equipped to do so

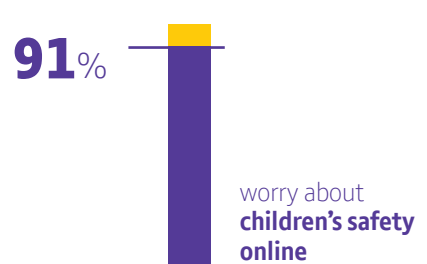
Under-equipped



Teacher tech literacy?

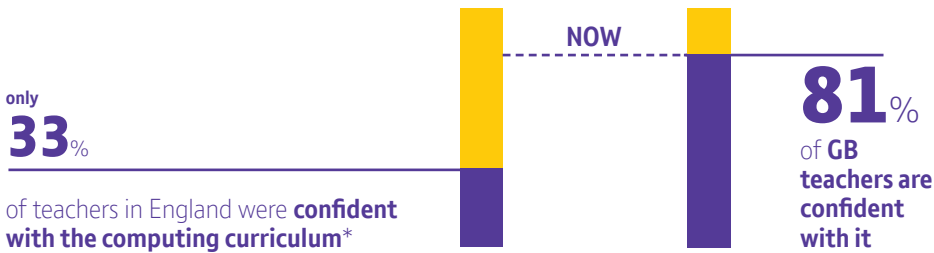


Online anxieties



Teachers are growing in confidence with what the computing curriculum requires of them

Confident with computing curriculum



*Source: YouGov / TES & Nesta, 2014

Teachers who use computational thinking in lessons see positive impacts on pupils' learning...

What is computational thinking and why does it matter?

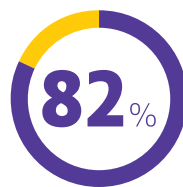
Computational thinking provides the building blocks of the digital world – like logic, sequencing, abstraction and programming. In an era shaped by tech, they're the core abilities kids need to actively shape their futures.

Problem-solving



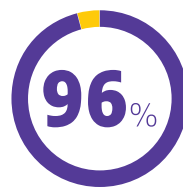
say it helps **pupils solve problems**

Collaboration



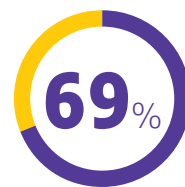
say it helps pupils **work together more collaboratively**

Numeracy



say it **improves pupils' numeracy skills**

Literacy



say it **improves pupils' literacy skills**

Views on computational thinking from teachers and pupils:

"The kids are less needy. They tend to work more independently or more collaboratively" – Teacher

"We tinker and persevere before we ask for help" – Pupil

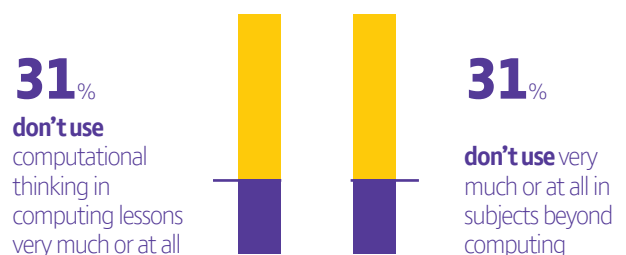
"I feel pleased after I debug something because I eventually learn why it isn't working" – Pupil

...but many still struggle to understand and teach the key concepts that underpin tech literacy across a range of subjects

Mixed picture with computational thinking



Difficulty embedding concepts across subjects

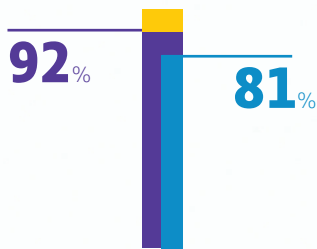


Teachers who have accessed the Barefoot resources are more confident with computing and computational thinking than those who have not

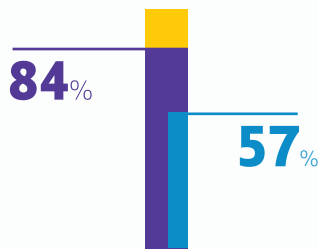
The Barefoot Computing Project

Barefoot gives primary school teachers free resources and training workshops on using the key concepts that underpin tech literacy. 35% of GB primary school teachers have heard of it. And it's having a positive impact.

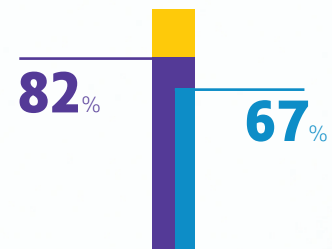
Confident with computing curriculum



Understand computational thinking



Use computational thinking in computing lessons



■ Teachers who accessed Barefoot resources ■ All teachers

Tech in lessons: no silver bullet.

83% of teachers have access to laptops, and 83% to iPads. However, they point to barriers that hamper their efforts – like limited technical support (38%) and poor internet connection (36%). 51% nonetheless use tech ‘all the time’ in lessons, and every single teacher says that pupils enjoy it – citing factors like the creativity (16%) and the problem-solving abilities (20%) it generates. So more tech’s not the answer: instead, we need to help teachers get their pupils confident with the concepts that underpin the digital world – which they can do with or without devices.

Teachers want more support to bring alive in the classroom the role tech plays in their pupils’ lives

Real-world examples



want **examples** that show the relevance of tech in real life

Training workshops



want **examples of how to teach tech** to give them practical support with key concepts

Online resources



want **online teaching materials**

Peer learning forum



want **a digital space** to share ideas with their peers

Taking tech literacy to the next level in primary schools

Teachers believe that tech literacy is of vital importance to their pupils' futures, and they feel more and more confident with what's required of them by the computing curriculum. However, there's more to do to make tech literacy a new cornerstone of modern education. Many teachers don't feel prepared to equip their pupils for a digital world, and can struggle with the key concepts that underpin so much of young people's personal and working lives.

Teachers have confirmed that they see value in online resources and face-to-face training, especially when it gives them practical ways to use computational thinking across the curriculum. Taking it to the next level will require the following actions:

Teaching resources and training

1

Give teachers the support they want to embed computational thinking concepts across subjects.

2

Provide real-world examples of how tech is shaping the modern world, and what this means for young people.

3

Improve support for early years, so children feel less overwhelmed by the adjustment from age 6–8.

4

Create content that children can use independently at home.

Outreach and engagement

1

Use tech savvy teachers as a lever to get into schools, and as a way to reach less confident colleagues – and provide training options that are tailored to teachers' level of knowledge to create constant improvement.

2

Create an interactive and dynamic online space for teachers to share ideas and learnings with peers.

3

Focus on head teachers to ensure that computational thinking can take root across the school.

"The whole school needs to be on board and the SLT have to lead on it" – Barefoot Teacher

Read the full report at techliteracy.co.uk

