

DIGITAL UPSKILLING UPDATE:

INNOVATIVE APPROACHES TO CLOSE THE DIGITAL DIVIDE

Digital upskilling of young people: Innovative approaches to close the digital divide

This update highlights:

- The digital divide remains a persistent barrier to life chances as described in the 2024 Child of the North report [1], with **57 % of low-income families struggling to access devices** or reliable internet [2]. Government is taking welcome first steps to address these issues with its Digital Inclusion Action Plan and new digital standards framework [3]. However, targeted investment must deliver connectivity, devices and data for the North where exclusion is deepest.
- Evidence that **Blueprint Coding Clubs can deliver inclusive education**. Leeds University, Bradford Libraries, and Raspberry Pi Foundation resources have provided community-based learning and mentor training, offering a scalable solution.
- Novel evidence showing innovative approaches, including **brain scans and board games**, can help digital upskilling around risks, rights, and data - **inspiring interest in STEM careers**.
- Regional “testbeds” can identify **what works for AI, Virtual Reality, and adaptive learning** to reduce teacher workload and support equitable ‘EdTech’.adoption.

From Strategy to Delivery

In 2024, CotN called for a system-wide plan to **end digital poverty** and give every child in the North the access, digital skills, and confidence to thrive [1]. We called for leadership that connects devices, data, skills and support, and for investment that turns fragile pilots into reliable offers with and through schools. We now welcome a major milestone: In February 2025 the Department for Science, Innovation and Technology published the “**Digital Inclusion Action Plan: First Steps**” [3], established a cross-government Ministerial group, and opened a call for evidence to shape the next phase of digital inclusion [4]. The plan places digital exclusion on the national agenda, prioritises young people and low-income households, and sets initial actions on local delivery, skills, device and data poverty, accessible public services, and evidence [3], [4].

However, affordability remains the hard edge of the divide. Ofcom’s tracker shows that around **a quarter of UK households (an estimated 6 Million) had difficulty affording communications services** in May 2025 [5].

Improvements are being made, with new rules requiring any in-contract price rises to be shown in pounds and pence up front [5], [6]. This is improving clarity but does not remove the need for **targeted help where exclusion is concentrated**.

Education policy must align with DSIT activity. In March 2025, DfE consulted on making digital standards a requirement for all schools and announced £45 million for connectivity upgrades. In July 2025, Government set expectations for schools and colleges to meet six core digital standards by 2030, noting that **Connect the Classroom** has already improved connectivity for more than 1.3 million pupils in 3,700 schools [7], [8]. These standards and funds are welcome but **inclusion goals are now required** to ensure schools move beyond short-term pilots to sustained practice.

National action is necessary but CotN evidence shows **delivery should be local and use assets that communities trust**. Three examples illustrate how awareness, inclusion, and skills can grow together at low cost through integrated delivery.

1. Blueprint Coding Clubs – a scalable model for national delivery

On 1 July 2025 the Raspberry Pi Foundation launched its campaign for “a Code Club in every school and library”. Over the past decade, Raspberry Pi’s Code Club has supported more than **two million young people, with >2,000 clubs** now meeting in UK schools and libraries. Resources and training are free, with over 200 structured projects, including content that supports safe exploration of AI. Evaluations show gains not only in computer programming but also in confidence, problem-solving and communication [9].

In response, the University of Leeds, Future Transformation, and Bradford Libraries piloted a place-based delivery model using Raspberry Pi’s materials. The blueprint is simple: universities supply trained near-peer mentors; libraries provide safe, familiar venues embedded in communities, and local employers contribute project briefs linked to regional skills needs. The minimum infrastructure is modest (coordination, mentor stipends, DBS checks, device maintenance and connectivity) but it converts fragile volunteer-led activity into a reliable term-by-term offer. This approach is ready to replicate. Government support would accelerate rollout and help delivery of the National Action Plan.

2. Digital Pathways and Citizen Science: Raising awareness and engagement

Awareness is a vital first step to digital inclusion. The **University of Sheffield’s Digital Pathways and Possibilities board game** is an innovative example of how to translate complex information on digital inequality into an interactive format for schools, libraries and youth settings.

Participation also matters. Schools and students across West Yorkshire have worked with researchers at the University of Leeds to develop **"Citizen Neuroscience"** workshops where pupils roleplay as scientists, using low cost "EEG" brain scanning technology to learn how social media and digital technology impact on brain health and behaviour. These activities combine digital literacy, scientific inquiry, and community participation. This helps young people see themselves as active contributors in the generation of knowledge about how digital technologies affect learning, health and everyday life.

These initiatives show that **low-cost activities** can be embedded in wider **digital literacy campaigns** and be linked directly to skills development.

3. Universities and schools as research partners – building the evidence for effective adoption

The Education Secretary's **BETT 2025** address set a new direction for education technology, placing innovation "at the centre of mission-led government and our Plan for Change" [10]. Bridget Phillipson outlined a vision where AI, virtual reality and adaptive learning are tools to raise standards, reduce workload, and improve equality of opportunity, supported by new initiatives including the *EdTech Evidence Board*, *Connect the Classroom* and *Plan Technology for Your School* [10].

Regional university-school partnerships can help deliver this vision. Structured "learning technology testbeds" across the North of England should trial new tools under shared governance frameworks, evaluating their impact on learning, workload and accessibility, particularly for pupils with SEND. Universities bring expertise in data ethics and evaluation while teachers and students can co-produce solutions to ensure relevance and realism. Data from these trials should feed directly into the national *EdTech Evidence Board*, enabling government to identify and fund approaches that work [11].

This model will ensure that the UK's growing edtech market, now **over 1,000 business strong**, is guided by robust evidence and equitable implementation. It aligns regional research strength with national policy ambition and would help turn the North of England into a living testbed for digital inclusion and innovation.

Policy recommendations

- Target connectivity, devices, and data support where exclusion is deepest, ensuring DSIT's *Digital Inclusion Action Plan* and DfE's *Digital Standards* deliver measurable improvements in the North of England.
- National delivery of Blueprint Coding Clubs would enable civic partnerships between universities and libraries, and allow employers to scale inclusion reliably.
- Ongoing evidence-based awareness and participation initiatives should be embedded within national digital literacy campaigns to build confidence and early engagement.
- Regional university-school testbeds should evaluate AI, VR and adaptive learning tools, feeding evidence into DfE's *EdTech Evidence Board* and *Connect the Classroom* initiative.
- A Northern England pilot that brings DSIT, DfE and local partners together should be trialled to align innovation, evaluation and delivery across education and community settings in the UK's most disadvantaged areas.

Conclusion

Government has taken an important first step in putting digital inclusion at the heart of national policy. This strategy must now be **connected with the people and places where digital exclusion remains most acute** - such as Northern England.

National policy will translate into measurable local impact through national delivery of **Blueprint Coding Clubs**, support of ongoing awareness, development of engagement pathways, and establishment of regional research partnerships for 'edtech' adoption.

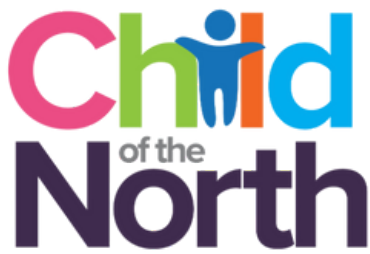
Government must move to a coherent, evidence-based system where every child, **regardless of postcode**, has the access, confidence and skills to thrive in the digital economy. This requires pairing DSIT's innovation agenda with DfE's modernisation drive.

"New technologies are having a profound impact on the employment and economic landscape for our students of today. But millions of children are at risk of being left behind because they don't have regular access to the technology and skills education they need to take advantage of the opportunities digital spaces afford the rest of the population."

- Professor Rowsell, University of Sheffield

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This report is a collaborative programme of work between Child of the North and the Centre for Young Lives.

A note about language

Please note that this report often uses “schools” as shorthand for “schools, nurseries, and other educational settings such as pupil referral units and special schools.” One central message of this report is the need for a “whole system” approach that includes all relevant stakeholders, and this includes all parts of the education system.

About Child of the North

Child of the North is a partnership between the N8 Research Partnership and Health Equity North which aims to build a fairer future for children across the North of England by building a platform for collaboration, high quality research, and policy engagement. [@ChildoftheNort1](#) [@childofthenorth.bsky.social](#)

About the N8 Research Partnership

The N8 Research Partnership is a collaboration of the eight most research-intensive Universities in the North of England: Durham, Lancaster, Leeds, Liverpool, Manchester, Newcastle, Sheffield, and York. Working with partner universities, industry, and society (N8+), the N8 aims to maximise the impact of this research base by promoting collaboration, establishing innovative research capabilities and programmes of national and international prominence, and driving economic growth. www.n8research.org.uk [@N8research](#) [@n8research.bsky.social](#)

About the Centre for Young Lives

The Centre for Young Lives is a dynamic and highly experienced innovation organisation dedicated to improving the lives of children, young people, and families in the UK – particularly the most vulnerable. Led by former Children’s Commissioner, Baroness Anne Longfield CBE, who has been at the forefront of children’s issues for decades, the Centre’s agile team is highly skilled, experienced, and regarded. It is widely known and well respected across government departments, Parliament, local and regional government, academia, the voluntary sector, and national and local media. The Centre wants to see children and young people’s futures placed at the heart of policy making, a high priority for government and at the core of the drive for a future for our country which can be much stronger and more prosperous. www.centreforyounglives.org.uk [@CfYounglives](#)

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