



Digital devices for learning

Executive Summary

May 2026

Topics: Education and Skills, Health and Wellbeing

Executive Summary

Overview

Fife Council's Transforming Learning programme represents a significant shift towards embedding digital technology within teaching and learning through the rollout of 1:1 digital devices. The digital devices for learning research report examines the evidence, opportunities, risks, and implementation of this approach, with a focus on children's rights, wellbeing, equity, and educational outcomes.

The findings indicate that digital devices have the potential to enhance learning experiences, improve equity of access, and support inclusive practice. However, their impact is highly dependent on effective implementation, strong pedagogy, and robust systems to manage risks. The report also highlights the importance of a whole-system approach, ensuring that children, staff, and families are supported to use devices safely and effectively across school and home environments.

Key Drivers and Demand

The demand for digital devices in education has increased significantly, driven by:

- the shift to remote and blended learning during the COVID-19 pandemic.
- national policy commitments to digital inclusion and equity.
- the need to prepare learners with essential digital skills.

Government frameworks, including the Digital Learning and Teaching Strategy and the National Improvement Framework, emphasise:

- equitable access to digital technology.
- integration of digital tools into curriculum and assessment.
- workforce capability and leadership in digital learning.

In Fife, prior inconsistencies in device access, linked to school budgets and household resources, contributed to inequalities in learning experiences. The 1:1 model seeks to address these disparities, particularly for disadvantaged learners and those with additional support needs (ASN), where accessibility tools provide significant benefits.

Opportunities and Impact

Evidence suggests that digital devices can support learning where use is purposeful and aligned with pedagogy.

Key opportunities include:

1. Enhanced engagement and motivation
 - Interactive and adaptive learning tools can increase learner interest, participation, and confidence, particularly in subjects such as maths and science.
2. Personalised and inclusive learning
 - Devices enable differentiated learning, real-time feedback, and varied methods of demonstrating understanding.

- Accessibility features (e.g. text-to-speech, translation tools) support learners with additional support needs (ASN), increasing independence and inclusion.
3. Improved teaching and learning practices
 - Digital tools support explanation, modelling, assessment, and feedback.
 - Shared platforms enable consistency across schools and support collaborative practice.
 4. Development of digital skills
 - Learners gain essential digital literacy, problem-solving and collaboration skills required for learning, life, and work.
 5. Continuity of learning
 - Devices support remote and flexible learning, reducing disruption due to absence and improving access to learning materials.
 6. Strengthened parental engagement
 - Digital platforms enable parents to access learning materials and support children's learning at home.

Risks and Challenges

The report highlights that risks are not inherent to device access alone but are shaped by the type, duration, and context of use.

Key risks include:

1. Health and wellbeing: potential impacts on sleep, eyesight, and mental wellbeing where use is excessive or unregulated.
2. Distraction and reduced focus: particularly where digital use is unstructured.
3. Learning implications: evidence of reduced reading comprehension from screen-based reading compared to print.
4. Online safety and privacy risks: exposure to harmful content and data protection challenges.
5. Equity in digital skills: variation in family confidence supporting learning at home.
6. Displacement of other activities: potential reduction in physical activity, reading, and face-to-face interaction.

The findings emphasise that not all screen time is equal, and outcomes depend on the quality and purpose of use ("digital diet"). Structured educational use presents fewer risks than passive or unregulated use.

Influence of Local Initiatives and Consultation

Fife's approach has been shaped by:

- pilot activity across schools since 2021.
- large-scale consultation with learners, staff, and families.
- ongoing professional learning and engagement.

These processes have:

- identified both benefits (e.g. personalisation, access) and concerns (e.g. screen time, staff confidence).
- directly informed policy, guidance, and safeguards.
- supported the development of a more consistent and evidence-informed approach.

Support, Safeguards, and Implementation

A whole-system approach is in place to support responsible use across children, staff, and families.

Support for children includes:

- structured digital literacy progression frameworks.
- teaching of safe online behaviours and digital citizenship.
- equitable device access and accessibility tools.
- targeted support through specialist services (e.g. Assistive Technology Support Service).

Support for staff includes:

- sustained professional learning in digital pedagogy, safeguarding, and device use.
- clear policies on data protection, acceptable use, and safeguarding.
- collaborative networks, including digital ambassadors.

Support for families includes:

- guidance, workshops, and engagement events.
- parental agreements and clear communication.
- support for safe device use at home.

Safeguards and systems include:

- device management (Jamf) and filtering/monitoring (Lightspeed).
- approved applications and controlled learning platforms.
- structured reporting and escalation processes.
- ongoing monitoring and evaluation to identify risks and inform improvement.

Evaluation and Communication

Evaluation of the 1:1 rollout is ongoing and multi-faceted, combining:

- attainment data and inspection evidence.
- platform usage and engagement data.
- feedback from learners, staff, and families.

Early findings indicate:

- increased learner engagement.
- growing staff confidence.
- high levels of parental confidence in device safety.

However, the report identifies a key gap in that there is not yet a fully developed, consistent framework for measuring the direct impact of digital devices on attainment, teaching quality, and outcomes.

Communication is supported through:

- internal systems (intranet, briefings, ambassador networks).
- external communication (schools, social media, parent engagement).
- ongoing dialogue with stakeholders.

Overall Conclusions

Fife Council has developed a mature and evolving framework for the implementation of 1:1 digital devices, characterised by:

- strong alignment with national policy and children's rights frameworks.
- a whole-community approach involving learners, staff, and families.
- robust safeguards and continuous monitoring processes.

The evidence highlights that:

- digital devices can enhance learning, particularly through improved accessibility, engagement, and feedback.
- outcomes depend on effective teaching and purposeful use, rather than technology alone.
- a balanced approach is required, ensuring digital learning complements broader educational experiences.

Key Areas for Further Development

The report identifies priority areas to strengthen impact:

- further development of evaluation frameworks and impact measures.
- strengthening learner voice and participation.
- embedding digital wellbeing and balanced use.
- improving consistency across school and home contexts.
- enhancing support for families with lower digital confidence.
- clarifying expectations for staff practice.

Future Direction

The success of Fife's 1:1 device rollout will depend on sustaining a careful balance between opportunity and risk. Continued investment in pedagogy, professional learning, and evaluation, alongside strong partnership with families, will be essential to ensure digital technologies are used where they add clear educational value and support positive outcomes for all children and young people.

About this report

Fife Council Research and Insight Team works on prioritised projects to deliver strategic insight for the Council and community planning partners in Fife.

We aim to deliver engaging high-quality general insight for those involved in delivering public services across Fife.

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Important notes on this report

1. This is the executive summary of a report that has been commissioned by Education Directorate to inform the Transforming Learning Strategy.
2. The report provides a contextual overview of the role of 1:1 digital device in supporting teaching and learning, drawing on relevant research and evidence.
3. For further information regarding the Transforming Learning Strategy in Fife please contact education.services@fife.gov.uk.