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What is K-12 Technology Environmental Sustainability?

K-12 Technology Environmental Sustainability refers to the intentional integration of eco-conscious practices, efficient resource management, and responsible decision-making throughout the lifecycle of educational technology in schools. It involves reducing environmental impact, extending device lifespan, and adopting smarter approaches to procurement, recycling, and energy use. By prioritizing sustainability, schools can support student learning, reduce district costs, and foster a culture of environmental stewardship.

Why is it Important?

The widespread adoption of 1:1 computing in K-12 has transformed education, but it has also introduced challenges related to device breakage, replacement cycles, and electronic waste. Many districts refresh their devices every 3–5 years, leading to significant environmental and financial costs. Sustainability in K-12 technology goes beyond extending device life—it ensures cost-effective choices, reduces electronic waste, and contributes to a greener future.

How Can Districts Participate?

To build a more sustainable technology ecosystem, districts should adopt best practices in procurement, maintenance, and end-of-life management.

• **Sustainable Procurement:** Schools can partner with vendors that prioritize sustainability by offering modular, repairable devices and eco-friendly bulk packaging. Procurement strategies should consider total lifecycle costs, spare parts availability, and environmental impact.

• **Device Longevity and Repairability:** A proactive break-fix plan extends device lifecycles. Self-maintenance programs, such as student-run help desks, help reduce breakage and improve longevity. Self-maintenance programs, such as student-run helpdesks, reduces breakage and extends device lifespans. Extended warranties can keep devices in hands longer and mitigate any unexpected costs. Schools can also consider leasing models to ensure responsible disposal and recycling.

• **End-of-Life Management:** Rather than stockpiling outdated devices, schools should establish resale or recycling programs, partnering with vendors committed to eco-friendly and secure disposal of e-waste.

• **Energy Efficiency and Responsible Use:** Schools should educate students, parents/caregivers, and staff on responsible device care and digital citizenship. Data analytics can help track breakage patterns, optimize device use, and inform future purchasing decisions.

By prioritizing sustainability in technology decisions, schools can reduce costs, minimize waste, and contribute to a greener future for education. Collaboration among districts, vendors, and policymakers will be essential in scaling sustainable practices.

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