ANALYSIS

The Missing Prerequisite for AI Literacy

Computer Ownership and AI-Ready Education and Workforce Systems

The nation's economic competitiveness increasingly depends on whether education and workforce systems can build skills at scale. The rapid rise of AI makes clear that this is not only a training challenge, but an infrastructure challenge. Across federal policy, employer demand, and education systems, AI literacy is emerging as a foundational skill. But there are structural prerequisites embedded in that shift: **people cannot develop AI capabilities without sustained access to a computer and broadband connection.** Without that foundation, even the most well-designed training programs will struggle to reach the people they are intended to serve.

Today, more than 32.9 million people in the United States do not have access to a computer, limiting their ability to participate in AI-driven learning, employment development pathways, and economic opportunities. As national and state leaders move to expand AI education and workforce development, increasing computer ownership is not a complementary effort; it is a necessary requirement for success.

Federal policy has already defined the direction of AI education. It also recognizes computer ownership as a barrier.

Federal policy has already begun to define AI literacy as a national workforce priority and, importantly, to identify what is required to make it attainable for as many people as possible. In April 2025, White House Executive Order 14277, Advancing Artificial Intelligence Education for American Youth, called for prioritizing AI knowledge and skills from kindergarten through 12th grade, directing the creation of an AI Education Task Force to identify existing federal funding mechanisms and explore public-private partnerships across nonprofits, higher education, and the private sector.

The Department of Labor now frames AI literacy as a foundational set of competencies for the modern workforce, supported by guidance that encourages states and local systems to integrate AI skill development into education and workforce programs. The Department of Labor guidance does more than elevate AI skills. It explicitly identifies the conditions under which people can acquire them. In February 2026, the Department of Labor published its AI Literacy

Framework and accompanying Training and Employment Notice No. 07-025, which states that device access is "integral" to any AI literacy program design. Device access, broadband adoption, and foundational digital skills are named as prerequisites to successful participation in AI learning pathways. Where those prerequisites are absent, programs are directed to identify and address those gaps as part of their design.

The Department's Training and Employment Guidance (TEGL) Letter 03-25 goes further, directing states and local governments to deploy Workforce Innovation and Opportunity Act (WIOA) funds toward AI skills development, with digital literacy and device access treated as complementary prerequisites. Similarly, Department of Education guidance encourages the use of federal grant funding for integrating AI into learning and teaching to increase AI literacy for students and staff and provide college and career navigation services for students.

At the same time, federal investments and directives—from workforce funding mechanisms to national AI education initiatives—are accelerating the expansion of AI training opportunities. States, school systems, and workforce agencies are being tasked with preparing students and workers for an AI-enabled economy.

Yet there is a disconnect between policy intent and policy implementation. While funding and program design are advancing, the underlying infrastructure required to support widespread participation remains uneven and underdeveloped, particularly when it comes to sustained computer ownership. As a result, systems are being asked to deliver outcomes that their current infrastructure is not fully equipped to support.

There are structural barriers to computer ownership

The scale of computer ownership gaps reveals the challenge facing current investments in AI across education and workforce sectors. Data from the 2024 American Community Survey (ACS) show that more than 32.9 million people in the United States live in households without a computer, representing roughly 1 in 10 individuals and 1 in 7 households. At the same time, approximately 1 in 5 households lacks a high-speed internet connection.

These gaps are not evenly distributed. They are concentrated among populations already navigating barriers to education, employment, and economic mobility—groups that are also the focus of many publicly funded workforce and training programs. Digitunity analysis of 2023 ACS data found that 1 in 3 adults without a high school diploma (29.1%) lack a computer at home and 1 in 5 rely solely on smartphones (20.5%). Higher educational attainment, such as a four-year degree or higher, is correlated with much higher rates in computer ownership. Individuals not in the labor force are more than four times as likely to be without any type of computing device as those who are employed. One in 10 unemployed people relied solely on a smartphone to access the internet, complicating a job search process that is increasingly dominated by AI algorithms. As a result, education and workforce programs are often designed

to serve those who are least able to fully participate due to structural barriers, such as a lack of computer ownership.

This structural disparity in computer ownership sits in direct tension with stated national priorities. The Department of Labor's report America's Talent Strategy: Building the Workforce for the Golden Age and the White House's Winning the Race: America's AI Action Plan both identify AI skill development as a core priority and central to the nation's economic competitiveness. These documents assume a population with the tools to participate. For 32.9 million people, that assumption does not hold.

Federal guidance acknowledges this disconnect. The Department of Labor identifies device access as "integral" to AI literacy program design and calls on program administrators to proactively address a lack of access to computers. Yet in practice, device access is often treated as an external factor rather than a core component of employment and education systems.

This creates a structural mismatch. Investments are being made to expand AI training, including the use of WIOA funds, but the infrastructure required to support participation, particularly sustained computer ownership, remains insufficient. In this context, program performance is constrained not by curriculum or instruction, but by whether participants have the tools needed to engage consistently over time.

Stopgap approaches, such as reliance on public computer labs or mobile-first program design, provide partial solutions but do not address the underlying issue. Limited hours, shared devices, and functional constraints reduce people's ability to practice, iterate, and build proficiency with AI tools. These limitations are particularly significant for AI literacy, which depends on repeated, hands-on use.

Without addressing the structural disparities in computer ownership, the expansion of AI training risks reinforcing parallel disparities in skill development and workforce participation.

Addressing Computer Ownership Barriers Requires a Systems-Level Response

Addressing disparities in computer ownership requires more than isolated interventions. It requires coordination across the systems that already shape how computers move, how training programs are delivered, and how outcomes are measured.

The role of device sourcing

Large volumes of technology are retired or replaced each year across corporate and public sector organizations. These devices represent a significant but underutilized resource. Without structured pathways to redirect them into community distribution networks, much of this

potential remains disconnected from employment and education efforts that people facing barriers could benefit from.

The role of distribution

Local organizations, workforce providers, and education institutions are already delivering training and support. However, they often lack the consistent access to devices needed to ensure that participants can continue learning beyond program settings. This limits the effectiveness of otherwise well-designed initiatives.

The role of policy

Existing federal funding mechanisms, including those governing workforce and education programs, can support efforts to address device access as part of AI literacy program design. In practice, they rarely do. What's missing is a coordinated framework that makes computer ownership a consistent program requirement rather than an optional consideration.

For funders and system leaders, this represents an opportunity to strengthen the effectiveness of existing investments. When people have the tools required to engage fully, education and training programs can deliver stronger results, and workforce systems can respond more effectively to the demands of an AI-driven economy.

> **Building systems that support computer ownership is not a parallel effort to AI workforce development. It is part of the foundation on which those efforts succeed.**

Sustained Computer Ownership Requires Coordinated Infrastructure

Strengthening AI literacy outcomes requires more than expanding training programs. It requires building the infrastructure that allows those programs to function as intended and to benefit the people in greatest need. Computer ownership is a central component of that infrastructure, but reaching everyone who needs it requires reliable pathways for devices to move from corporate and institutional sources into communities, local organizations equipped to deliver them alongside training, and public funding streams that treat computer access as a core program component rather than an external factor.

The scope of that funding extends beyond workforce programs alone. In July 2025, the Department of Education's Dear Colleague guidance clarified that federal education grant funds

can be used to expand AI use in teaching and learning, including training educators, supporting students in exploring career pathways, and funding advising, college planning, and financial aid tools. In March 2026, the White House issued a National Policy Framework for AI, emphasizing the adoption of AI across education and workforce training programs. Computer ownership underpins all of these efforts.

Systems-level organizations play a critical role in this process. They help align stakeholders across sectors, translate policy into implementation pathways, and ensure that resources reach the communities and systems where they can have the greatest impact. Without this coordination, efforts remain fragmented, and gaps in access persist even as investments increase. Digitunity is a systems-level organization that serves this coordinating function - connecting technology sources, local organizations, and policy systems to make sustained computer ownership possible at scale.

For funders and system leaders, the window of opportunity lies in strengthening the return on existing investments. When people have sustained access to a computer, training programs can deliver measurable improvements in skill development, completion rates, and workforce outcomes. When that access is absent, those same programs face structural limitations that are difficult to overcome.

AI skills are foundational to the nation's economic future, and computer ownership is a prerequisite for acquiring them. Building the infrastructure to act on that recognition, at scale, with coordination and durable outcomes, is Digitunity's work.

32.9 million people in the U.S. don't have a computer at home, which means they can't fully participate in today's economy, access education, or benefit from the AI training programs being built for them. The problem isn't a shortage of devices. It's the absence of a coordinated system to get them to the people who need them. Digitunity is building that system. As a national nonprofit, we connect existing programs, policies, and partners to make computer ownership possible for everyone, at scale, with durable outcomes. Learn more at digitunity.org.