2026 ANNUAL REPORT

The State of Experiential Learning

A data-driven review of learning by doing — the evidence, the models, K-12 & higher ed, careers & apprenticeships, STEM & the arts, immersive & AI experiences, credentials, access, and the road ahead.

K12 Academics — helping learners & programs Find Your Community! since 2004

88%
Apprenticeship growth since 2015

670K
Registered apprentices

+10%
One-year rise in K-12 CTE

$85B
CTE market by 2033

EXECUTIVE SUMMARY

Learning by doing is having its moment — and its evidence

As employers press for real skills and AI reshapes entry-level work, education is rediscovering an old truth: people learn best by doing. Experiential learning — projects, labs, internships, apprenticeships, service, and immersive simulations — is surging, and unlike many trends it arrives with a solid research base. This report maps the landscape, the evidence, the models, and the equity questions, and profiles who is truly ready to make learning real.

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CTE market by 2033

Major trends

- Skills-gap & AI anxiety are driving a hands-on learning boom.
- Work-based learning is moving from extra to essential.
- Immersive & AI-powered experiences are scaling fast.
- Micro-credentials are turning experience into proof.

Key findings

- Active learning cuts STEM failure rates from ~34% to ~22%.
- Paid work-based learning lifts earnings & employment.
- Apprenticeships are up 88% since 2015, toward a 1M goal.
- Project-based learning boosts 21st-century skills.

Challenges

- An access gap: paid experiences are unevenly shared.
- Measuring & crediting real-world skills.
- Cost, logistics & educator capacity.
- Quality & equity of unpaid internships.

Opportunities

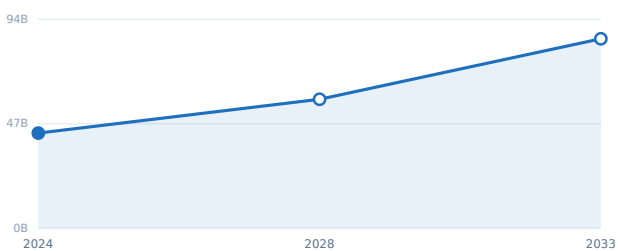
- Employer & community partnerships at scale.
- Immersive tech that widens access.
- Micro-credentials & portfolios that travel.
- Experiential learning as a recruitment differentiator.

From buzzword to strategy

Experiential learning — learning through direct experience and reflection — has moved from the margins to the mainstream. Driven by a widening skills gap and the sense that AI is reshaping traditional early-career jobs, demand for hands-on, career-connected education is climbing fast: K-12 career-and-technical enrollment rose about 10% in a single year, and the CTE market alone is projected to roughly double this decade.

A fast-growing market

Career & technical education market (USD billions)



Why now

The forces behind the boom

Skills gap — **employers want demonstrable skills**, not just degrees.

AI shift — **AI is reshaping** entry-level work — raising hands-on value.

+10% — **K-12 CTE enrollment** rose ~10% in one year.

Policy — **funding & policy** increasingly favor applied learning.

SECTION 02 — THE EVIDENCE: DOES IT WORK?

A rare trend with real research behind it

Unlike many education fads, experiential learning rests on decades of evidence. A landmark meta-analysis found that active, experiential instruction cuts STEM course failure rates from about 34% under traditional lecture to roughly 22%. Project-based learning meta-analyses link it to gains in achievement and 21st-century skills, and work-based learning is tied to higher earnings and stronger employment. The question is no longer whether it works, but how to do it well — and for whom.

Active learning lowers failure

STEM course failure rate by method



What the research shows

Evidence across settings

Achieve — **active & project-based** learning lift achievement.

Skills — **21st-century skills** — problem-solving, teamwork, communication.

Earn — **paid work-based learning** raises earnings & employment.

Persist — **high-impact practices** improve retention & graduation.

Many methods, one principle

Experiential learning is a family of models, not a single method — but all share a core: students construct knowledge through authentic experience and reflection. From project- and problem-based learning to place-based, service, and work-based learning, each model fits different goals, ages, and settings, and the strongest programs blend several.

The model family

Ways to learn by doing

- **Project-based (PBL)**
- **Problem-based**
- **Inquiry-based**
- **Challenge-based**
- **Place-based**
- **Service learning**
- **Work-based**
- **Competency-based**
- **Hands-on / maker**

The best programs **blend models** — a project that includes fieldwork, reflection, and a real audience.

Choosing a model

Fit to purpose

PBL	**projects** for deep, interdisciplinary learning.
Inquiry	**inquiry & problem-based** for critical thinking.
Service	**service & place-based** for civic & local relevance.
Work	**work-based** for career skills & readiness.

Making it real, from elementary up

In K-12, experiential learning shows up as makerspaces and STEM/STEAM challenges, outdoor classrooms and school gardens, community projects, and early career exploration. Started young and sustained, these experiences build the curiosity, collaboration, and persistence that later academic and career success depend on — and they are among the most effective tools for re-engaging students.

K-12 in practice

Hands-on across grades

Make — **makerspaces & fabrication** labs for building & iterating.

STEAM — **STEM/STEAM challenges** that apply concepts.

Outdoors — **outdoor classrooms & gardens** for place-based learning.

Explore — **early career exploration** & community projects.

K-12 experiences

Curiosity to capability

- **Makerspaces**
- **STEM / STEAM**
- **Outdoor classrooms**
- **School gardens**
- **Robotics**
- **Community projects**
- **Career exploration**

Hands-on experiences are also powerful **engagement & belonging** tools — students show up for work that feels real.

The high-impact practices that move the needle

In higher education, experiential learning is largely the story of high-impact practices: undergraduate research, internships and co-ops, capstones, field studies, clinical placements, and study abroad. Decades of research tie these to better learning, retention, graduation, and employment — which is why institutions increasingly weave them through the curriculum rather than leaving them optional.

High-impact practices

Proven college experiences

Research — **undergraduate research** deepens learning & persistence.

Intern — **internships & co-ops** drive employment outcomes.

Capstone — **capstones & field studies** integrate & apply learning.

Global — **study abroad & clinicals** build breadth & skill.

The HIP toolkit

Kuh / AAC&U practices

- **Undergraduate research**
- **Internships**
- **Co-ops**
- **Capstone projects**
- **Clinical education**
- **Field studies**
- **Study abroad**
- **Service learning**

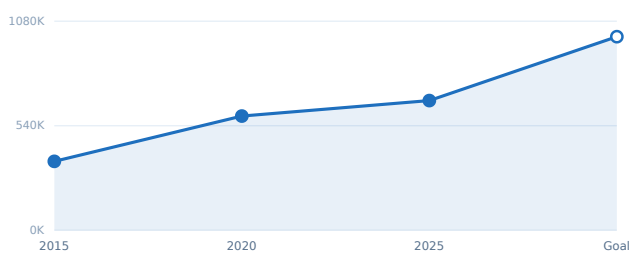
These practices work best when they are **intentional, mentored, and reflective** — not just added on.

The bridge from classroom to career

The clearest driver of the experiential boom is workforce readiness. Career-technical education, apprenticeships, internships, and industry certifications are surging as families and states seek debt-light, hands-on paths to good jobs — especially as AI reshapes entry-level work. Registered apprenticeships are up 88% since 2015, past 670,000 participants and climbing toward a national goal of one million, with employer retention around 94%.

Apprenticeships are surging

Registered apprentices (thousands)



Earn while you learn

Career-connected pathways

+88% — **apprenticeship growth** since 2015 — toward 1M.

94% — employer **retention** of apprentices.

Certify — **industry certifications** earned before graduation.

Bridge — **internships & CTE** cut employer training time.

Where hands-on meets high-tech

STEM is a natural home for experiential learning. Robotics and coding programs, engineering challenges, makerspaces and fabrication labs, design thinking, and research competitions turn abstract concepts into built, tested, iterated reality — and increasingly fold in data science and AI. These experiences build not just technical skill but the innovator habit of trying, failing, and improving.

Innovation in action

Build, test, iterate

Robotics — **robotics & coding** teach systems thinking.

Make — **makerspaces & fab labs** for hands-on building.

Design — **design thinking** & engineering challenges.

Compete — **research & innovation competitions** raise the bar.

The innovation toolkit

STEM you can touch

- **Robotics**
- **Coding**
- **Engineering challenges**
- **Makerspaces**
- **Fabrication labs**
- **Design thinking**
- **Data science**
- **AI projects**

The goal is the **innovator mindset** — comfort with iteration, failure, and real-world constraints.

Learning beyond the classroom walls

Some of the richest experiences happen outside — or on stage. Nature-based and environmental education, conservation and sustainability projects, and adventure and agriculture programs connect students to the living world; the performing and visual arts build creativity, confidence, and expression. Both turn learning into something students feel, not just study.

Outside & on stage

Nature, sustainability & the arts

Nature — **outdoor & environmental** education & conservation.

Sustain — **sustainability & agriculture** programs.

Arts — **performing & visual arts** build creativity & confidence.

Integrate — **arts integration** deepens learning across subjects.

Beyond the walls

Nature & creativity

- **Nature-based education**
- **Environmental science**
- **Conservation**
- **Adventure education**
- **Agriculture**
- **Performing arts**
- **Visual arts**
- **Arts integration**

Outdoor & arts experiences are powerful for **wellbeing, engagement & belonging**, too.

Immersive, simulated, and increasingly intelligent

Technology is expanding what a hands-on experience can be. Virtual and augmented reality, simulations and digital twins, and serious games let students practice high-stakes or hard-to-reach scenarios safely — a surgery, a chemistry reaction, an ancient city. Layered on top, AI adds tutoring coaches, adaptive learning, and instant feedback. Used well, immersive tech also widens access to experiences some schools could never otherwise offer.

The immersive frontier

Practice without limits

VR/AR — **virtual & augmented reality** for safe, vivid practice.

Simulate — **simulations & digital twins** for high-stakes scenarios.

AI coach — **AI coaches & feedback** personalize the experience.

Access — immersive tech can **widen access** to rare experiences.

The tech-enhanced toolkit

Immersive & intelligent

- **Virtual reality**
- **Augmented reality**
- **Simulations**
- **Digital twins**
- **Serious games**
- **AI tutors**
- **Adaptive learning**
- **AI feedback**

Immersive tech should **extend** real experience — not replace the messy, human reality that makes it stick.

Learning with, and for, others

Experience becomes meaningful when it reaches beyond the self. Service learning and civic engagement tie academics to real community needs; international exchange, study abroad, and virtual global collaboration build cross-cultural understanding and global citizenship. Research links community-engaged learning to student thriving as well as academic gains — learning that serves others tends to serve the learner too.

Beyond the self

Service & global learning

Serve — **service learning & civic engagement** tie study to need.

Thrive — **community-engaged learning** boosts student thriving.

Exchange — **study abroad & virtual exchange** build global fluency.

Citizen — **global citizenship** & cross-cultural collaboration.

Community & global

Learning that connects

- Service learning
- Civic engagement
- Volunteer programs
- Community partnerships
- Study abroad
- Virtual exchange
- Global citizenship
- Language immersion

Virtual exchange now brings **global collaboration** to students who cannot travel.

Proving what experience builds

Experiential learning poses a real challenge: how do you grade a project, an internship, or a skill? The answer is a shift from tests to evidence — portfolios, performance and competency assessment, reflection, and rubrics — increasingly captured in digital badges and micro-credentials that verify specific skills. As employers seek proof over pedigree, these portable credentials are turning experience into currency.

From tests to evidence

Assessing real skill

Portfolio — **portfolios & performance** assessment show real work.

Competency — **competency-based** assessment measures mastery.

Reflect — **reflection** turns experience into learning.

Badge — **badges & micro-credentials** verify & travel.

The credential shift

Proof over pedigree

- Portfolios
- Competency assessment
- Performance tasks
- Rubrics
- Reflection journals
- Digital badges
- Micro-credentials
- Skills verification

Micro-credentials let a skill **travel with the learner** — into the next school, or the workforce.

The equity question at the heart of it

The promise of experiential learning comes with a catch: access is deeply unequal. Paid internships, apprenticeships, and rich programs cluster in well-resourced schools and communities, while unpaid experiences quietly gatekeep out students who must work. If learning by doing is the future, then who gets to do it becomes one of the most important equity questions in education — and universal design is central to answering it.

Who gets to do it

The access divide

Paid gap — **paid experiences** cluster in resourced communities.

Unpaid — **unpaid internships** gatekeep out working students.

Design — **universal design (UDL)** makes experiences inclusive.

Reach — **virtual & funded** options can widen access.

Toward inclusive experience

Access for every learner

- Universal Design (UDL)
- Paid opportunities
- Neurodiverse learners
- English learners
- Special education
- Funded access
- Virtual options

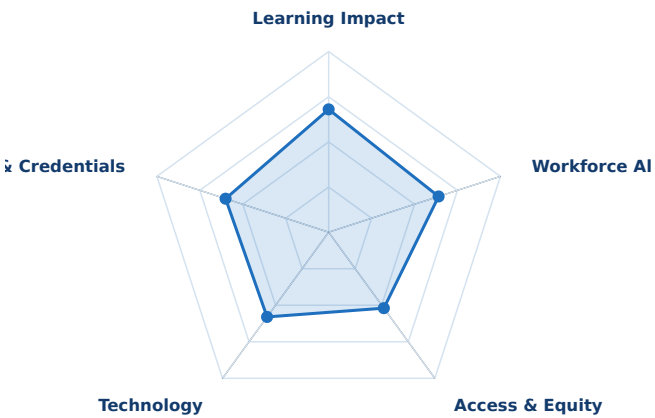
The goal is simple to state, hard to reach: **every learner gets a real experience** — not just the well-resourced ones.

A K12 Academics framework for institutions

Offering a few field trips is not the same as being built for experiential learning. The Index profiles a school or institution across five weighted pillars — so leaders can see where they excel, where they fall short, and where to invest to make learning genuinely real for every student.

Five-pillar profile

Illustrative — weights sum to 100



Learning Impact & Engagement — 25%

Depth, rigor & motivation.

Work-Based & Career Alignment — 25%

Internships, CTE & employer ties.

Access & Equity — 20%

Who gets real experiences.

Assessment & Credentials — 15%

Portfolios & micro-credentials.

Technology & Innovation — 15%

Immersive & AI-enhanced experiences.

SECTION 14 — THE FUTURE

Toward AI-powered, work-aligned, lifelong experience

Toward 2027 and beyond, experiential learning gets more immersive, more personalized, and more tightly aligned to work. AI will generate and coach rich simulations; XR classrooms will make the distant and dangerous safe to explore; and stackable micro-credentials will link school, work, and lifelong learning into a continuous, evidence-based path. The winners will pair powerful new tools with the timeless core — real experience, guided reflection, and equitable access.

↗ What is coming

AI-powered simulations & learning coaches.

XR classrooms & immersive experiences.

Stackable micro-credentials linking school & work.

Tighter workforce alignment & lifelong pathways.

! What to watch

Access & equity — who gets the best experiences.

Quality & rigor beyond novelty.

Assessment that credibly captures skill.

Cost, capacity & educator support.

For schools

- Build experiences into the core, not the edges
- Partner with employers & community
- Close the access gap deliberately

For educators

- Design for reflection, not just activity
- Assess with portfolios & credentials
- Use immersive tech to widen reach

For families & employers

- Value skills & evidence, not just grades
- Open doors to paid experiences
- Mentor the next generation

DATA & METHODOLOGY

Methodology & sources

This report synthesizes the most recent publicly available research on experiential learning, current as of publication in 2026 — a data-driven analysis.

Data sources

- Freeman et al. — active-learning meta-analysis (PNAS)
- AAC&U / Kuh — high-impact practices
- Strada Education Foundation — work-based learning
- U.S. DOL / Apprenticeship.gov & JFF — apprenticeships
- EdResearch for Action & PBL meta-analyses
- Dataintelo / market research — CTE market
- K12 Academics directory & program listings

A data-driven analysis. Effect sizes & outcomes vary by study, model & setting; market & participation figures come from published sources with differing definitions; figures reflect the most recent data available at publication in 2026 & are rounded.

Contact K12 Academics

Offer an experiential program, or want to be featured in this report? We'd love to hear from you.

k12@k12academics.com · www.k12academics.com

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