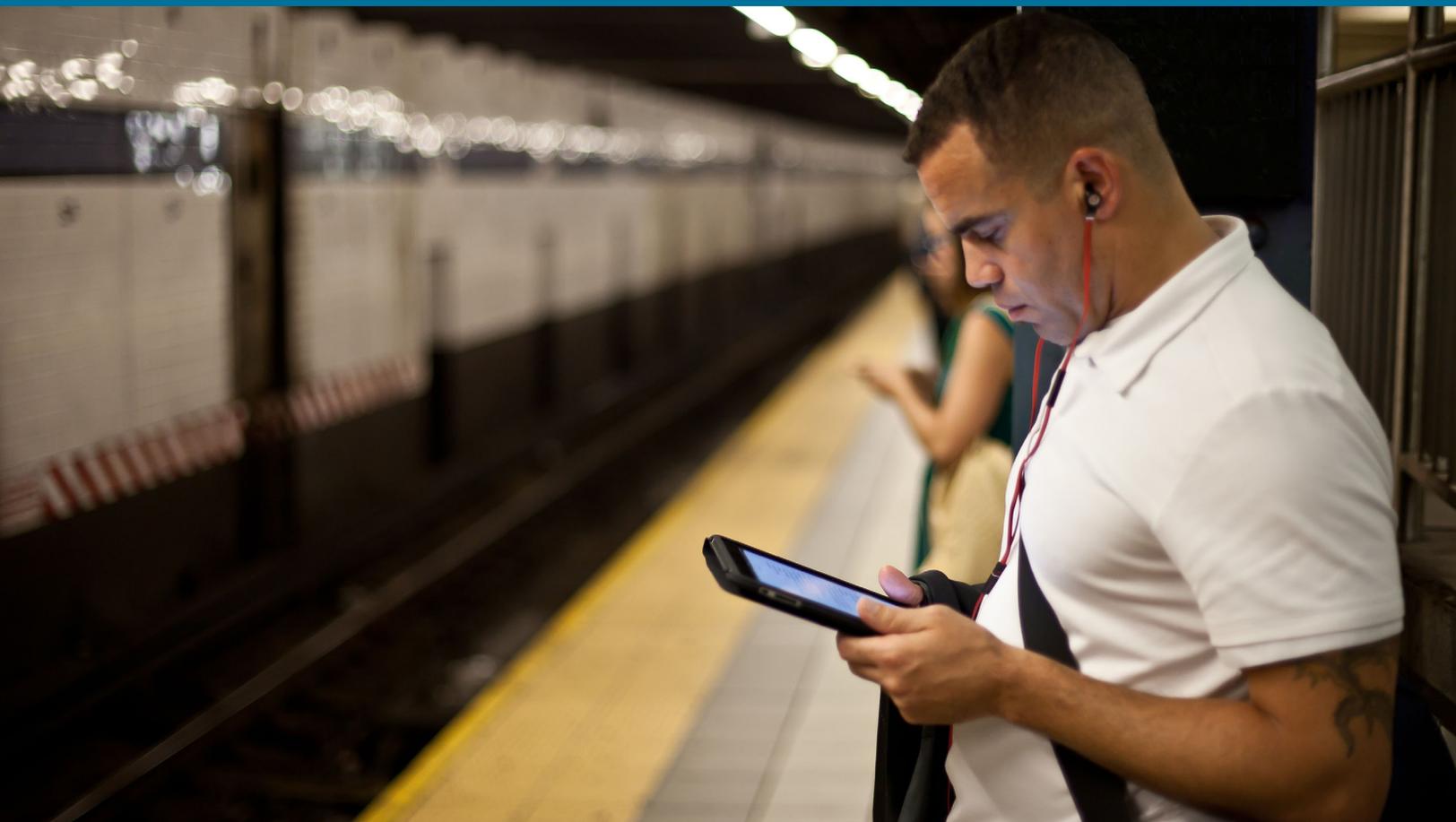


Leveraging Technology to Increase Economic Opportunity for Adults

Field Testing Tools That Break Barriers to Learning and Employment



Priyanka Sharma, Jen Vanek, Alison Ascher Webber | March 2019



Gratitude

This report was produced by the EdTech Center @ World Education in partnership with the Employment Technology Fund (ETF) @ JFFLabs, the seven funded tool developers, and the community field testing partners. It is the result of national field testing supported by Technology Testing for Adult Learning and Employment (TTALE) grants from Walmart and the Walmart Foundation.

We appreciate the support of the adult learners, tool developers, employers, and community partners who supported this field testing with candid feedback, insights, and access to information.

Employment Technology Fund

The Employment Technology Fund (ETF) @ JFFLabs is the first social impact fund to invest in technology solutions that improve employment opportunity for lower skilled, low-wage earning adults in the United States. Since launching in August 2017, the ETF has made investments in seven ventures: Cell-Ed, Northstar, SkillSmart, Nepris, Signal Vine, CareAcademy, and PAIRIN. The ETF's investors include the Walmart Foundation, The Rockefeller Foundation, the Joyce Foundation, the W.K. Kellogg Foundation, and the ECMC Foundation.

ETF @ JFFLabs seeks partnerships with funders, employers, trade associations, advocacy organizations, workforce development boards, community colleges, training providers, and other community-based organizations working to meet the needs of low-wage, lower skilled adults. Learn more at www.jff.org/what-we-do/impact-stories/etfjfflabs.

EdTech Center @ World Education

The EdTech Center @ World Education leverages technology to increase the reach and impact of education, workforce, and health initiatives and to enable everyone to thrive and be active, informed citizens in the new digital world. Housed at World Education in Boston, the EdTech Center collaborates with diverse partners to accelerate learning, digital literacy, college and career readiness, and economic mobility of adults with lower skills in the United States, as well as of youth and adults internationally. With active projects in Asia, Africa, and the United States, the EdTech Center is one of few organizations promoting learning exchange and partnership between edtech leaders in the United States and international experts. Together they are catalyzing an edtech movement that puts the needs of learners and instructors first.

About Philanthropy at Walmart

By using our strengths to help others, Walmart and the Walmart Foundation create opportunities for people to live better every day. Walmart has stores in 27 countries, employing more than 2.2 million associates and doing business with thousands of suppliers who, in turn, employ millions of people. Our philanthropy helps people live better by supporting upward job mobility and economic development for the retail workforce; addressing hunger and making healthier, more sustainably-grown food a reality; and building strong communities where Walmart operates and inspiring our associates to give back.



The Technology Testing for Adult Learning and Employment (TTALE) initiative was supported by grants from Walmart and the Walmart Foundation. The opinions and ideas expressed in this report are those of the authors alone and do not necessarily reflect the opinions of Walmart or the Walmart Foundation.



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LEVERAGING TECHNOLOGY TO INCREASE ECONOMIC OPPORTUNITY FOR ADULTS

Field Testing Tools That Break Barriers to Learning and Employment

Authors: Priyanka Sharma, Jen Vanek, Alison Ascher Webber

BACKGROUND AND FINDINGS

Challenge: The Employment Opportunity Gap

An employment opportunity gap affects some 103 million adults in the United States who lack in-demand skills and connections to advance in their careers or earn higher wages.

Few are able to access formal upskilling opportunities—with barriers such as limited literacy, time, or support systems. And those who do find a way to upskill still need a bridge between education and employment. Some worry that the future of work may be driven by AI, automation, and other technologies that will put humans out of work.

But what if we turn that conversation around? What if more people started building and using technologies to improve access and build—not threaten—learning and employment opportunity?

Who Is Facing The Employment Opportunity Gap?

Includes Women, Minorities and Immigrants

103M

Adults in the U.S. (41% of the adult population)

50M

Are unemployed

53M

Earn less than \$42.5K a year

Lower Education Levels:

21M

Have less than high school diploma

53M

Have only a high school diploma

28M

Have some college, but lack a degree

Many have fundamental skills gaps – literacy, numeracy, digital literacy, English fluency, and soft skills.



“At ETF@JFFLabs, we aim to increase both the quantity and quality of tech tools made available to underserved adults. Testing these tools with our partners at the EdTech center is an important step in understanding which technologies are effective and why.”

Yigal Kerszenbaum

Managing Director, Employment Technology Fund

Solution: Employment Education Technology

By harnessing digital technologies, we can remove barriers preventing adults from growing their talent and connecting to meaningful work and economic opportunity. Innovators are finding ways to use the following:

- **Mobile phones** to teach high-demand career skills and English and enable industry certification, wage gains, and career advancement
- Experience-based assessments with **algorithms** to improve how workers and jobs (and necessary training) are matched, increasing retention, earnings potential, and equity in hiring
- **Online competency-based assessments** to measure (and credential) millions of adults' digital literacy skills and to screen them in for work
- **The cloud** to connect adult learners to role models, industry connections, and potential career options
- **Texting** to more easily nudge adult students toward better learning and employment outcomes
- Data from **personalized assessments** to increase the impact of in-person coaching and instruction, helping underserved populations close employability skill gaps and find and succeed at higher paid work

Testing Our Vision: Using the Technology

The EdTech Center at World Education, in partnership with the Employment Technology Fund and with the support of Walmart and the Walmart Foundation, has spent the last year field testing seven employment and education technologies with over 1,500 working learners and job seekers – **CareAcademy, Cell-Ed, Nepris, Northstar, PAIRIN, Skillsmart, and Signal Vine.**



Field tested technologies with > 1,500 low-income adults with education or skills gaps



At least 500 were English language learners working on linguistic, economic and civic integration.



Majority were older job seekers & incumbent service workers and younger apprentices and job seekers



A few sites reported serving veterans but most did not include a count.

We field tested seven digital tools that are helping adults enhance their skills and achieve greater workforce mobility, across four segments: Learning and Training, Mentoring and Support, Job Search and Placement, and Assessment and Matching.

The field testing helped the tool developers improve their products through direct feedback from the staff of our field test partners—workforce development government agencies and community-based organizations, as well as adult education and community-based nonprofits and employers. It also provided them with feedback from the ultimate end users—frontline service workers, English language learners, diverse adults in employment training programs, jobseekers, and community college students.

Our testing partners' contributions, through user testing, ideas for improvements, and, in some cases, co-design of new product features, help position these technologies to increase opportunity in the future of work—especially for a segment of our population most in need of increased access to learning, sustainable employment, and career advancement.

The Community Advocates & Partners:

Community Organizations:

National Domestic Workers Alliance, World Education, Minnesota Literacy Council, Orange County Asian Pacific Islander Community Alliance, Providence Housing Authority, Rhode Island Family Literacy Initiative, Guadalupe Alternative Program of St. Paul, CrossPurpose, Chelsea Collaborative, New England Farm Workers Council, GPS Education Partners, St. Paul Neighborhood Network

Workforce Development Enterprises & Colleges:

C2 Global Professional Services. Activate Workforce Solutions, Northshore Community College

Employers in Diverse Industries:

United HomeCare, Seaport Hotel, MGM Resorts International, Home Depot, Best of Care, Accessible Home Healthcare, Allis Roller



Key Learnings and Outcomes of Field Testing:

Effective tools have five things in common: mobility, accessible onboarding, personal connections, screening-in, and rich media.

Mobility:

Effective tools leverage mobile technologies to increase access to learning and critical employment opportunities for millions who are otherwise not served.

The best tools provide users with multiple ways to access content. For example, **Cell-Ed**, a mobile learning tool that teaches literacy, language, and job skills via three-minute micro lessons, provides learners several ways to access content anytime, anywhere, including text and recorded audio lessons through a basic cell phone without Internet access.



Using **Cell-Ed**, **ANEISY**, a recent immigrant and single mother from Cuba, studied English on her cell phone in between caring for senior patients as a home health aide. After learning specific English required to care for some of her patients, she qualified for a 10 percent wage increase. More than 95 percent of her fellow field testers in hospitality work used Cell-Ed to effectively study outside of a workplace ESL classroom, demonstrating positive gains on the TABE and Best-Plus English assessments.

The best tools are designed to offer multiple communication options, in terms of platforms and modality, for the end users. **Signal Vine**, **SkillSmart**, and **Cell-Ed** use texting to encourage adults with lower skills toward action or opportunity. We saw workforce development teams use Signal Vine to produce higher levels of engagement and impact, including job placement, with program participants.



NATASHA believes that text nudges, supported by **Signal Vine**, helped her stay on track with workforce development program requirements and encouraged her to go to a job fair, eventually leading to a new job. When a community agency used texting to share a job recruitment event at Home Depot, 25 job seekers attended the information session. Normal attendance, recruited via email and flyers, would have been less than half that number

Accessible Onboarding:

Effective tools limit barriers to use through simple onboarding, leading to larger scale of use.

Effective tools limit unnecessary registration requirements for initial use of a tool by adults with lower digital literacy or basic skills. For example, **Northstar's** no-registration option and free open access has led to over 3,000,000 assessments of digital literacy, as well as valuable credentials for employment.



AHMED, an immigrant from Somalia, frequented a Goodwill Easter Seals computer lab to work with digital skills tutors and earn **Northstar** Digital Literacy certificates. He used those credentials to write a resume, conduct an online job search, and prove he had the right skills to obtain a job as a building security guard.

Personal Connections:

Tools that support establishing personal connections resonate well with adult working learners and have high utility.

The best tools integrate personal connections to support engagement in technology. For example, **PAIRIN** and **Cell-Ed's** use of human coaching supports users' persistence and effort.

Nepris' use of industry chats and access to industry experts helps job seekers and learners build personal connections that support career exploration. For many, it is the first time they are able to have a direct conversation with someone in the line of work into which they would like to shift. In some cases, the use of **Nepris** built personal connections that led to actual employment.



JOE, a construction worker, used **Nepris'** virtual industry chats and videos to plan a transition to a career in information technology. A student who learned about the use of drafting and design in a live chat with a naval architect went on to gain employment with the presenter.

On the flip side, the best tools use technology to maximize the value of in-person interactions and learning. For example, **CareAcademy**, **Cell-Ed**, **Northstar**, and **PAIRIN** all use technology to make in-person learning and coaching more impactful.

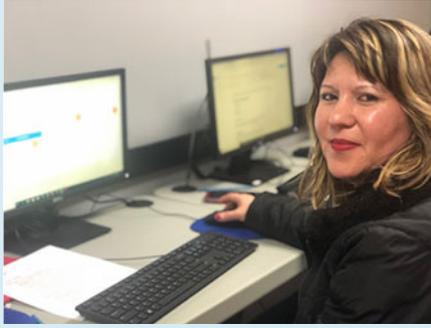
The **Nepris**, **PAIRIN**, and **SkillSmart** tools give adult learners social capital that can lend confidence and support success in job search and workforce development programs.

Screening-In:

Online assessments can be a powerful tool for screening-in overlooked populations, matching them to training and employment opportunities.

Screening-in solutions—in the form of competency, experience, and attribute-based assessments—bring opportunities for overlooked populations, match them to opportunities for which they are ready, and provide actionable signals to employers.

The best tools ensure that content is highly relevant to the learners. **SkillSmart**, for example, uses skills as a consistent measure of candidate proficiency for a specific job and provides opportunities for targeted upskilling. Learners appreciated finding new professions in which they could apply earned skills from previous work, education, or other life experiences.



Using **SkillSmart**, **MARISSA**, a restaurant dishwasher who thought she was only qualified for similar work, used a skills matching tool to discover several different career paths for which she is well suited, including serving as a Casino Porter at the new Encore resort opening in Boston. Similarly, a community-based organization in Springfield, MA, was able to use the skills-matching approach to prepare 150 underserved, unemployed adults for employment with MGM Springfield.

Effective tools also employ competency-area experts to assist in the development and vetting of content to ensure relevance and validity—for example, **PAIRIN** uses social scientists and research to develop attribute-based assessments.



HEATHER, a mother who needed to increase her earning potential after her child was diagnosed with diabetes, used **PAIRIN** to uncover how her strengths and coachable behaviors for improvement could help her advance professionally. As a result of her assessment, Heather is now a Certified Water Manager with a pathway for growth and much higher earning potential.

Rich Media:

Rich and diverse media support engagement and comprehension.

Impactful tools incorporate diverse media supports effectively to make using them easier for adults with lower literacy, lack of prior education, and not much experience using computers.

For example, **Northstar's** Digital Literacy Assessment uses video, audio, photos, and other instructive graphics to convey meaning more quickly than text for users with limited literacy proficiency. This approach allows users who lack strong literacy, including English language learners, or prior education the ability to complete assessments and demonstrate computer skills, earning a valuable credential for employment.

Additionally, rich media support persistence and impact. **CareAcademy**, for example, uses a rich multimedia experience in a mobile format to upskill learners for certification, combining professionally acted and produced videos, readings, graphics, and short interactive assessment activities.



Through **CareAcademy**, **TERI** qualified for her Home Health Aide (HHA) credential with 60 hours of mobile learning and 20 hours of classroom instruction, upskilling to one of the most in-demand career pathways in the country, qualifying for a 5 percent raise with certification, and finding a meaningful use of her skills to give comfort to patients in hospice. Teri's colleagues in the field test also persisted and succeeded in completing the necessary program requirements for the HHA credential at a rate of 85 percent.

This report outlines the most effective practices seen in the field and in tool-specific reports. It is our hope that entrepreneurs will use these findings to build more impactful products; that adult educators and workforce development professionals will improve their ability to implement powerful tools; and that employers will find ways to increase access to learning and opportunity for both current and future employees.

Finally, it is our hope that 103 million adults in the United States will find more equity in opportunity and reach their fullest potential.

Breaking Barriers to Learning and Advancement:

Many adults struggle to acquire the learning or credentials needed for higher wage jobs. Here are a few of the technology-based strategies for breaking down the barriers working learners have traditionally faced:

	Traditional Barriers	Effective Strategies	Example Tools
	Lack of time	Mobile learning and training	Cell-Ed CareAcademy PAIRIN Northstar
	Access to transportation	Anytime, anywhere learning and training	Cell-Ed CareAcademy Northstar
	Competing demands of work, family, and education	Mobile nudging to encourage desired behavior	Signal Vine SkillSmart
	Lack of a career pathway for advancement	Screening-in for opportunities through competencies, personal attributes, or prior life experiences	Northstar PAIRIN SkillSmart
	Limited information about potential career options	Virtual coaching/mentoring Matching based on skills, experiences	Nepris SkillSmart
	Lack of a support system, network, or role models	Virtual learning coaches Mobile nudging to encourage desired behavior	Cell-Ed Nepris Signal Vine Skillsmart
	Difficulty in finding valuable educational opportunities	Virtual referrals to further training, jobs or resources in the local area	SkillSmart Nepris
	Difficulty in proving job readiness	Assessment certificates, credentials, and hiring for skills/mindsets	PAIRIN SkillSmart
	Job-limiting skills (literacy, numeracy, digital literacy, English fluency, essential skills)	Online curriculum to address assessed gaps	PAIRIN Northstar Cell-Ed

CLOSING THE GAP

The opportunity to extend resources to reach more worker learners is promising and is shifting the economic and life trajectory for these workers—and our country. With the right implementation, it can be transformative.

What can you do to develop, adopt, and scale the most effective employment technology tools? Here are a few ideas, learned from our field testing:

Technology Developers:

- **Design and adapt technology tools to serve a less digitally savvy demographic:** Don't assume existing K-12 or higher ed products will meet the unique needs and interests of adults with lower skills.
- **Get to know your end user:** Use a human-centered design process and user testing to better understand and meet the unique learning and employment needs of this population. Be sure the personas you create to support development include a character with limited schooling and lack of access to broadband or a large mobile data plan.
- **Keep the user interface simple:** Make sure that adults with lower digital literacy skills can easily navigate the tool; be aware that every bell or whistle you add may make user navigation more complicated.
- **Make it easy to get started:** Don't add barriers to onboarding; for example, don't require registration unless it's absolutely needed. If it is, simplify it by not requiring email. Can you use a phone number or user name instead? Provide access to onboarding support materials (especially videos).
- **Go mobile:** Leverage mobile strategies, including mobile optimization of tools for use on cell phones; mobile apps that enable online and offline access to content; and texting, messaging, and mobile coaching to engage, communicate with, and support users.
- **Make content immediately relevant:** Adults with lower skills must immediately see themselves and their needs reflected, or they will disengage. If you get it right, they will become loyal users.
- **Use rich media and audio to support engagement and persistence:** The effective use of multimedia not only keeps adult learners or job seekers engaged, it also supports comprehension for adults with limited overall literacy or digital literacy.
- **Partner with experts:** Leverage the expertise of adult education and workforce development professionals as well as employers for the design and implementation of your products (and competency areas).
- **Complement technology with the human touch, when needed:** While technology increases access and scale, don't forget the human touch, where appropriate. Mobile coaches, community partners, and virtual mentors and connections are impactful to this group, which needs a wider support system.

Adult Educators and Workforce Development Professionals:

- **Try employment edtech tools:** Adopt technologies that improve outcomes for clients/employees related to education and training, employment, and career advancement. Begin with an experimental mindset and provide training and other resources to help staff become fluent with the tools you are adopting.

- **Continue to teach outside the classroom:** Offer online and mobile learning to increase access to education and training for busy adults with barriers to attending classes, as well as extend and accelerate learning for adults already within programs.
- **Nudge positive outcomes:** Use texting and messaging to nudge adults to engage in desired behaviors, whether that's taking time to study, attending a hiring event, or submitting their FAFSA application.
- **Go beyond the resume to screen-in adults for opportunity:** Online assessments and surveys and complete job applications that are competency-based, measure aptitudes, and consider prior experience (including informal) can screen-in qualified applicants who might be overlooked in a hiring approach that relies on traditional resumes. Partner with local employers and help learners and program participants to frame these skills and attributes.
- **Help adults see new pathways:** Leverage mobile and virtual coaching and mentorship solutions, as well as skills-based assessments, to help adult learners find well-suited pathways with which they might be unfamiliar.
- **Collaborate toward building in-demand skills:** Partner with employers filling high-demand jobs to make learning more relevant and increase near-term advancement opportunities for adult learners.
- **Visit WorkforceEdTech.org:** Visit the EdTech Center's new WorkforceEdTech.org website and tools repository to learn about best tools and practices for implementation.

Employers:

- **Leverage technology to hire, upskill, and advance your workforce:** Adopt proven products for learning and training, skills assessment, mentoring and career planning, and job search and placement.
- **Embrace mobile learning:** Upskill employees through anytime, anywhere online and mobile learning solutions that can differentiate and accelerate learning and advancement.
- **Text to improve learning and employment outcomes:** Consider texting and messaging solutions to improve communication with your employees and nudge desired behaviors.
- **Look beyond the traditional resume:** Increase diversity in your hiring through digital assessments that are competency-based, measure aptitudes, and consider prior experience (including informal) to screen in qualified applicants who might be overlooked by a hiring approach that relies on traditional resumes. Partner with local workforce development programs that help job seekers frame these skills and attributes.
- **Hire for skills or mindsets:** Reconsider if traditional proxies—like degree credentials—are actually needed for every job. In many cases they ineffectively evaluate talent and artificially cull the candidate pool.
- **Inspire working adults toward your industry:** Share information on in-demand jobs in your industry on digital career mentorship tools to help lower-skilled adults learn about job positions they might otherwise not know about or consider.
- **Partner:** Look for partnerships with on-the-ground organizations that have experience working with the demographics of your employees so as to better support them.
- **Increase transparency:** Help current employees or job seekers more clearly understand requirements of jobs, their own personal skills gaps, and pathways to acquire the requisite skills for specific opportunities or careers.

THE TOOLS



CareAcademy

Digital tools training and certifying senior caregivers and home health aides—opening access to a rapidly growing profession.



Cell-Ed

A mobile learning tool that teaches literacy, language, and job skills, via three-minute micro lessons.



Nepris

A web-based platform virtually connecting industry experts every classroom to prepare learners for the future of work.



Northstar

An online, self-guided digital literacy assessment providing credentials for employment.



PAIRIN

An online suite of soft-skill assessment, development, and employment tools for people with barriers to employment.



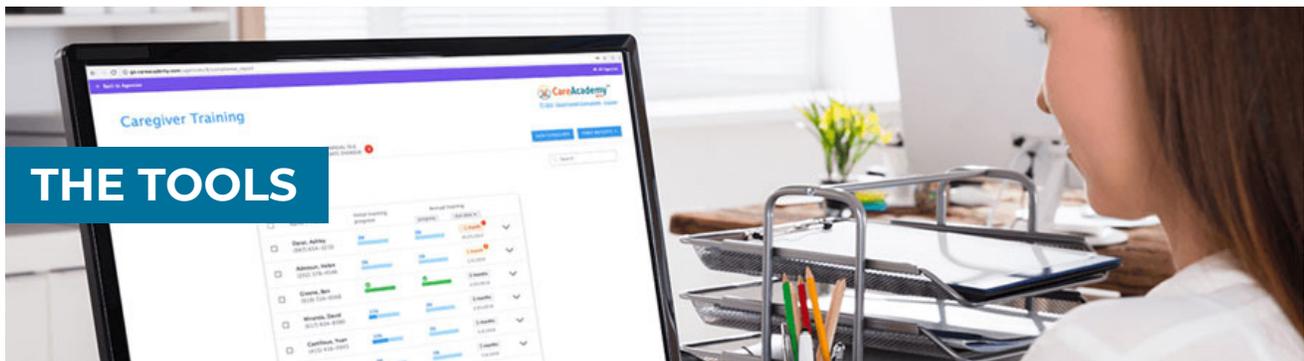
SkillSmart

A skill-matching platform connecting jobseekers, employers, and educators.



Signal Vine

An enterprise text messaging solution nudging individuals toward better behaviors and outcomes.



CareAcademy: Mobile Learning to Upskill and Certify Adults for In-Demand Career in Home Health

Senior care is one of the fastest growing segments of the American labor force, and certified home health aides (HHAs) are especially in demand. The field testing of CareAcademy proved that blended mobile learning can remove barriers to this promising career pathway. In only six weeks, while continuing to work, 85 percent of participating domestic caregivers received home health aide certification—along with a near-term raise and room for advancement. Here’s what we learned:

Key Learnings:

- Blended mobile learning increases access to in-demand career pathways:** Mobile learning, blended with some in-person instruction, can fast-track the training and certification of home health aides, saving the learners (and their employers) time and money.
- Collaboration with employers filling high-demand jobs increases relevancy of content and supports near-term advancement for adult learners:** Partnerships between employers and educators create highly relevant, work-focused scenarios that directly increase employment opportunity.
- The creative use of multimedia and video makes mobile learning more engaging and comprehensible.** CareAcademy offered a rich multimedia experience to prepare learners, with professionally acted and produced videos, readings, graphics, and short interactive assessment activities.
- The right pace for adult learners supports persistence:** Learners appreciated the more compact schedule, as it limited the amount of time they were both working and studying and kept them motivated toward gaining certification in only six weeks.

Field Testing CareAcademy:

The company’s newest curriculum fills a crucial knowledge gap with accessible mobile learning, certification, and career advancement opportunities for new home health aides. We partnered with Best of Care, a CareAcademy client, to field test a new six-week blended learning course to advance more of the company’s incumbent employees from domestic caregivers (supporting house, laundry, and grocery tasks) to certified Home Health Aides (providing more hands-on patient care, such as transferring, feeding, bathing, and taking vital signs). Each week, the domestic caregivers completed 10 hours of mobile instruction (and passed mobile quizzes) before attending a four-hour class for hands-on practice of the skills studied, instructed by a nurse.

How We Know That It Works:

- **Persistence:** Seven of eight learners persisted.
- **Success in certification:** Six passed the certification exam; one needed additional time because of language challenges.
- **Advancement:** After final certification, the employer expects that field testers will qualify for around a 5 percent raise and will be eligible for longer shifts and overall better job quality.

Why it Works for Working Adult Learners:



Learn on-the-go
anytime, anywhere
Use a smartphone, tablet, or computer.



Short
Study digestible lessons in short bursts, and pick up where you left off.



Blended learning appropriate for hands-on professions
Learners complete 60 hours of mobile learning and 20 hours of classroom instruction to participate in discussion and hands-on demonstration of the physical aspects of the jobs.



Rich media
Videos help students stay engaged and prepare for in-person demonstrations of patient care.

Field Testing Partners

- Best of Care, MA
- Accessible Health Care, MA

Field Testers:

Best of Care domestic caregivers seeking to advance to certified Home Health Aides (HHAs)



“CareAcademy’s solutions meet two major needs in the United States—a major shortage of certified senior caregivers for a growing senior population and a large number of lower-skilled adults struggling to find meaningful employment. By making training and education accessible, CareAcademy is giving workers in-demand skills to start and advance a career in healthcare.”

Yigal Kerszenbaum
Managing Director, Employment Technology Fund



“Quite simply, CareAcademy is at the forefront of on-demand caregiver education. While in-person training will always be valuable to our caregivers, the opportunity to provide our home care aides with high-quality training materials that can be consumed at their convenience is a real difference-maker. Helen and her team understand that caregiving is a 24/7 industry and caregivers struggle to sacrifice scheduled work-time to complete educational requirements.”

Kevin Smith

President and Chief Operating Officer, Best of Care

CareAcademy Stories:



TERI

Teri, one of Best of Care’s employees to earn her HHA credential during the field test, now applies her skills to the benefit of her patients. Just after completing CareAcademy’s course, she was supporting a patient in hospice with care providers from another agency and became uncomfortable with the manager’s communication style with the patient. In Teri’s words, “It seemed like she had missed the empathy class.” Meaning, it was clear that the manager had not been trained in empathy and communication for homebound older adults, especially those near end of life.

Teri saw value in what she learned and made a conscious effort to apply new skills and thinking in her work. She is now confident in situations that are commonly uncomfortable for caregivers, such as communicating with a person nearing the end of life.

Teri is also looking forward to longer, stabler work shifts and overall better job quality, including up to a 5 percent wage increase as a Home Health Aide.



Cell-Ed: Literacy, Language and Job Upskilling in the Palm of the Hand

Mobile learning is an effective means of extending instruction, offering anytime, anywhere educational opportunities to the millions of adults motivated to upskill but unable to attend in-person classes. After field testing Cell-Ed, a mobile learning tool that teaches literacy, language, and job skills via three-minute micro lessons, here's what we learned:

Key Learnings:

- **Mobile learning, with short, digestible lessons, helped learners make use of the time they have to study on the go:** Ninety-five percent of workers in the blended learning field test studied regularly outside of class, with a few studying over 130 hours during the course of the field testing.
- **Mobile learning supported by differentiation and complemented with a human connection increases persistence:** Cell-Ed provides learners a live coach who follows and supports each learner, using texting and even phone calls to nudge, motivate, and provide feedback and further instruction. The amount of in-person practice, individual coaching, and/or coaching support a learner received correlated with greater persistence.
- **Blended learning leads to independent learning:** Learners engaged in high-quality blended learning were more successful learning independently after classes than learners working independently from the start.
- **Mobile learning is not always on a smartphone:** Adults in lower wage jobs need learning that can happen on a simple cell phone without Internet access. Cell-Ed learners study through interactive text and audio voice lessons narrated by real teachers—whether using an app or simply calling in—no Internet or data plan required.
- **Learners desire learning that is specific to their jobs and daily lives to increase motivation and support advancement:** There is a real need for these workers to gain proficiency in both daily, general English that can support oral and written interaction on the job and domain-specific vocabulary that they need to communicate about their jobs.

Field Testing Cell-Ed:

We tested Cell-Ed in several workplace ESL scenarios with immigrant workers, including a blended learning setting for frontline hotel employees and an independent learning use case for homecare workers. Its range of use scenarios suggests that Cell-Ed is a valuable addition to an employers' instructional resources to help workers make positive gains in language, literacy, and job skills.

How We Know That It Works:

- **Advancement and wage gains:** We witnessed home care workers qualify to earn a 10 percent wage increase after studying on Cell-Ed to successfully pass English assessments.
- **Increased learning gains:** Seaport hotel employees who studied regularly on Cell-Ed showed ESL score gains on the TABE and Best-Plus assessments.
- **Persistence:** Ninety-five percent of hotel workers studied regularly outside of class, with a few studying over 130 hours.

Why it Works for Working Adult Learners:



Learn on-the-go

Mobile

Learners can learn on-the-go, anytime, anywhere.



Digestible

Interactive micro lessons in 5- to 10-minute bursts support retention.



Easy to use

The tool is accessible for learners with limited digital literacy.



Multi-platform

It works for learners on simple phones without Internet access, or on smart devices.



Human touch

Coaching and two-way messaging support user persistence and provide tailored learning.



Career-aligned

Relevant, job-specific learning supports engagement and career opportunity.

Field Testing Partners

- United HomeCare, Miami, FL
- National Domestic Workers Alliance, Miami, FL
- Seaport Hotel, Boston, MA
- Service Employees International Union, New York, NY

Field Testers:

150 immigrant service workers with Limited English Proficiency working as frontline hotel employees and as home health aides (HHA's)



“Our field tests are helping us better understand the needs of our users to continuously improve Cell-Ed’s products and services to increase access, engagement, and skill building. For example, pilots with hotel and healthcare workers sparked improvements such as wallet cards for onboarding workers at Seaport Hotel to blending Cell-Ed’s essential skills English with home healthcare training for Miami home care providers.”

Jessica Rothenberg-Aalami
CEO, Cell-Ed



“Field testing Cell-Ed showed us that mobile learning is a critical strategy for United HomeCare to continue to deploy. With the aging baby boomer demographic in Miami and the fierce competition between employers for talent, we will need to upskill hundreds of home care aides to provide care in English. Motivated employees such as Aneisy proved they could study on their phones and learn critical language skills to advance in their careers. We will continue to work with our partners to innovate on ways to make career advancement training available to all frontline health care workers in Miami.”

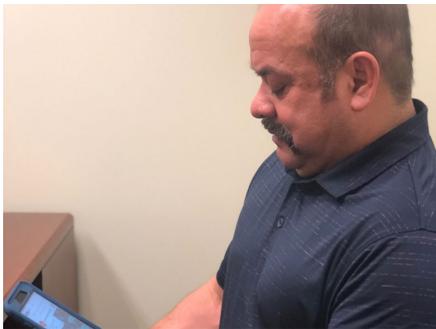
Jacqueline Torre
Vice President, Human Resources & Talent Development,
United HomeCare

Cell-Ed Stories:



ANEISY, United HomeCare

"I used to be bored at my kids' soccer practices and swim lessons, but now I study English on my phone." A recent immigrant from Cuba, Ana is a mother who juggles multiple clients she cares for as a home health aide with a regularly changing schedule. Ana studied on Cell-Ed for over 30 hours on breaks at work or late at night at home. "I learned new vocabulary words, like linens, pants, diapers, that I need to better communicate with my clients," she said. After studying on Cell-Ed, Ana demonstrated to her employer that she had learned the specific English she needed to care for English-speaking clients and thereby qualified for a 10 percent wage increase.



JULIO, Seaport Hotel

When recent immigrant Julio started workplace English classes at the Seaport Hotel that he cleans, teachers worried he might drop out of class, as his English was far below that of his coworkers. Fortunately, he was able to study both inside and outside of class on a Pre-ESL level of Cell-Ed that offers bilingual instruction. His teacher credits Cell-Ed for his stunning progress in learning new vocabulary and starting to speak confidently in just a few weeks with accurate pronunciation.



Nepris: Building Virtual Connections Between Job Seekers and Careers

Job seekers find it increasingly difficult to keep up with ever-evolving job types, the right social networks, and the skill requirements of the labor market. Nepris is a web-based platform that allows job seekers and learners to connect to industry experts through live, virtual interactions, providing real-time industry connections and career exploration (as well as a growing library of on-demand recorded sessions). We believe that Nepris can positively impact adult learning and career development in community college and workforce development environments. In field testing Nepris, here's what we learned:

Key Learnings:

- Learners said that Nepris provided access to knowledge about jobs and industry sectors that would otherwise not be possible to have and was extremely valuable: For some, it is the first time they are able to have a direct conversation with someone in the line of work into which they would like to shift.
- In some cases, the use of Nepris built personal connections that led to actual employment: Students who learned about the use of drafting and design by a naval architect went on to gain employment with the presenter.
- Workforce centers view Nepris as a valuable addition to their tool kit: Workforce boards and adult education organizations can use Nepris to offer job seekers live opportunities to connect with employers for virtual workplace experiences, mentorship, apprenticeships, resume preparation, mock interviews, and other career-focused functions. Job counselors said it was a valuable time saver—they couldn't accomplish the networking to physically bring in industry contacts to share the information.
- Career exploration shouldn't be limited to K-12 classrooms: Adults need ways to more deeply explore careers too (with the affordance of personal connections).
- Nepris provides valuable access to knowledge for adults working to reinvent their careers: It connects learners with industry experts who can answer candid questions about industry skills requirements, the job market, and job satisfaction.
- The Career Explorer video library is good for adult learners and job seekers who are truly in the exploratory phase of a career search: Nepris helps learners aspire toward career pathways. This library of 7000+ videos is now tied to Department of Labor O'NET data and provides career self-exploration opportunities for all learners and job seekers.

Field Testing Nepris:

For field testing, Louisiana's Northshore Technical Community College used Nepris' live industry chats to connect students in the Drafting and Design Technology (D&DT) program with professionals who use drafting in their naval architecture and electrical engineering work. C2 Global, a contractor that supports workforce development boards, used Nepris' live industry chats to show job seekers information about local in-demand jobs. C2 Global's Alamo Workforce Solutions used Career Explorer with Texas-based clients.

How We Know That It Works:

- **Learner feedback:** Learners described how they valued personal stories from industry experts.
- **Jobs:** Job seekers participating in the field testing made real connections that led to employment.
- **Job counselors continue to use it:** They believe that it makes it easier to connect clients to potential career pathways.

Why it Works for Working Adult Learners:



Personal connections

Nepris features real people and gives job seekers real contacts, including access to and live chats with industry leaders.



Relevant and rich content

The rich video library, jobs database, O'NET data, and synchronous conversations make career exploration highly relevant.



Diverse professionals

With 25,985 professionals represented on the platform, learners and job seekers are able to see themselves in a variety of professions.



Accessibility

With an online presence in all 50 states, Nepris is uniquely valuable for learners in more remote locations lacking access to multiple industries.

Field Testing Partners

- C2 Global (Florida and Texas)
- Alamo Workforce Solutions
- Northshore Technical Community College

Field Testers:

- Clients at America's Job Centers across Texas and Florida
- 20 students in Northshore Technical Community College's Drafting and Design Technology (D&DT) program

“For job seekers who have only worked in one industry, we can let them explore other options and what is out there, learn about education requirements, what the pay can be. They may want to be a medical assistant but they don’t know what goes into it. In the videos, they describe what they do on a daily basis, and share how they got there—including the education they needed.”

Jessica

Job Counselor, Alamo Workforce

“We are proud to partner with Nepris for a pilot program that offers our Drafting and Design Technology students an opportunity to learn from industry experts. Having access to learn from a wealth of professionals in the field of drafting is an enormous advantage for our students.”

Jim Carlson

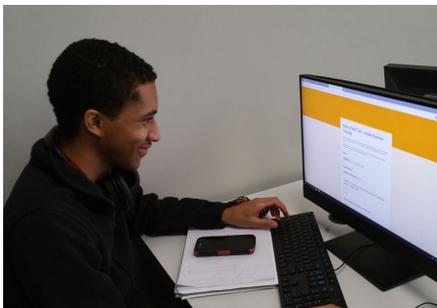
Vice Chancellor of Strategic Initiatives, Northshore Technical Community College

Nepris Stories:



JOE, Alamo Workforce Solutions, San Antonio

Joel is a construction worker who was at the workforce center to get support for a transition to work in information technology. Because he was hoping to move into a new field, he was excited about the information that was available in Nepris, especially the personalized nature of the industry chat videos. “It felt like a personal invitation; like they were serious about me. This spurred interest for me in careers and industry that I hadn’t thought about before.”



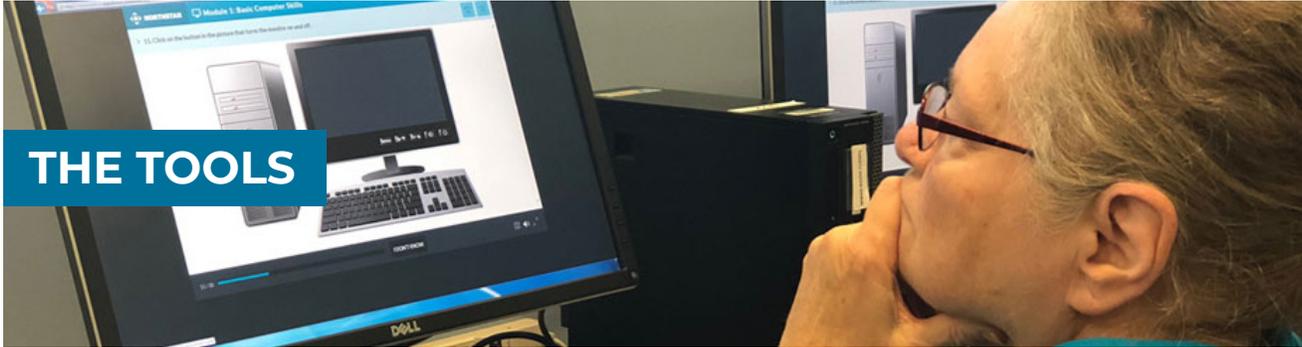
VIOREL FLOREA, a drafting instructor at Northshore Technical Community College

Viorel booked live Nepris chats for his classes aligned to curriculum and the job market in the area—including a chat with a naval architect. “The expert was fascinating, which made my students in awe of the profession. We don’t teach ship building, but some of the students said maybe they needed to look at the field. After the industry chat, I had a student apply and be hired as a naval drafter.”

Job Counselors:

Job counselors participating in the field testing used Nepris in a variety of ways, including the following:

- Helping a client who was an accountant better understand and start a new career in sales
- Connecting a client personally inspired by an industry chat on information technology with the CEO who led the chat Using Nepris recorded videos in a weekly “Career Maps” workshop to highlight interesting aspects of in-demand jobs in the San Antonio area
- Using Nepris videos to bring to life opportunities featured at a healthcare jobs fair at the workforce center



Northstar: Accessible Credentials for Employment in a Digital World

Northstar has proven potential to assess, certify, and train millions of adults in digital literacy, providing a credential leading to increased employment opportunity.

The Northstar Digital Literacy Assessment is a suite of free interactive online modules that assess one's ability to perform basic computer skills, like using the Internet, email, operating systems, Microsoft Office, and social media, as well as information literacy.

The goal of the assessment, and the standards it is based on, is to help job seekers identify skill needs and then demonstrate digital competencies that can help them to seek, obtain, and retain employment, as well as perform other tasks in daily life. In field testing Northstar, here's what we learned:

Key Learnings:

- **When people see themselves as capable, they set higher goals:** Assessments help adults better understand their skills, see themselves as capable, and set higher goals for work or learning.
- **Accessibility leads to scale:** Northstar's accessibility has supported its ability to widely scale. Not only is it free and online (and in testing centers in all 50 states), Northstar has limited barriers to onboarding. The tool offers either wide-open access (with a no-registration option) or a licensed version able to track learner progress. Since 2012, more than three million assessments have been taken.
- **Competency-based assessments and credentials are powerful motivators:** Northstar shaped a standards-aligned assessment that motivates adults to learn, resulting in them earning certificates—an important credential for employment. As Northstar says, "Learn It, Know It, Show It".
- **Assessments are more relevant when they are built by experts in both content and adult education:** Technology changes rapidly, and digital assessments need to keep up to stay relevant. Northstar is written, advised, field tested, and improved regularly, by both adult educators and partners with expertise in digital literacy who best know the content.
- **Using media and audio supports comprehension (focusing assessment on digital literacy skills, not English literacy skills):** Test takers with limited English language and literacy proficiency fare well in the new Northstar modules because test items employ simple language and creatively leverage visual media and audio to support comprehension. Now users who lack strong literacy or prior education can still complete the modules and demonstrate computer skills.
- **The benefit of multiple ways to answer questions:** Allowing users to answer questions in multiple ways that mirror actual computer use has mitigated "teaching to the test" and helped learners develop a range of means to accomplish digital tasks (increasing validity of assessment).

Field Testing Northstar:

In October of 2018, Northstar launched an updated version of its assessment modules characterized by the following:

- **Assessments for today's technologies:** The Northstar Standards were rewritten to accommodate changes in technology (particularly mobile technologies) and assess new digital literacy skills.
- **A fully mobile, more robust HTML5 platform:** This platform allows developers to regularly make updates to the assessments (and mitigates Flash requirements).
- **Flexible navigation through the assessment:** Flexibility allows test takers to go back and change their answer to a previous question, or skip it and come back to it later, per feedback from educators.

We designed a field test to assess how well the updated platform and three new modules support the needs of end users, educators, and volunteers in assessing and credentialing today's digital literacy skills.

How We Know That It Works:

- **Scale:** More than three million assessments have been taken, to date. In 2018, 208,931 assessments were taken onsite and 577,773 online.
- **Credentials:** Northstar has issued 63,450 credentials, and 21,509 were earned in 2018 (with an average annual pass rate of 50 percent).
- **Job placement:** During field testing, we witnessed participants use their Northstar credential to seek and obtain employment.
- **Usage:** It is widely used in Adult Education, colleges, nonprofits, and libraries, as well as workforce centers, government agencies, and businesses.

Why it Works for Working Adult Learners:



Free

Assessments and supports are offered at no cost to the learner.



A valued credential

Test takers value the certificate or badge to prove knowledge to educational institutions or employers.



Accessible

More than 655 active licensed Northstar test sites (in seven countries and all 50 states), as well as online tests, are available.



Human support

Test centers are supported with volunteer tutors to help learners grasp more difficult skills.

Field Testing Partners

- Providence Public Library, RI
- Community Technology Empowerment Project of the St. Paul Neighborhood Network, St. Paul, MN
- Online feedback from licensed Northstar assessment sites across the United States

Field Testers:

Low-income adults with low digital skills, including refugees, veterans, and older opportunity youth; Support staff and volunteers who facilitate the online assessments

“Field testing gave us concrete examples through iterative testing that helped us improve the usability and effectiveness of modules. Direct feedback from staff using modules, as well as test takers, helped us refine various features, identify potential areas of confusion, and make the modules, overall, more responsive to test takers’ capacity.”

Tom Cytron-Hysom
Manager, Northstar

“Learners were in the best position to help strengthen the test. Other digital assessments can be incredibly complicated and really out of touch with where a lot of people’s skills are. The strength of Northstar is a testament to being embedded in communities and really understanding the people who are going to be using your learning tool.”

Lisa Peterson de la Cueva
St. Paul Neighborhood Network

Northstar Stories:



PAW SHER, Guadalupe Alternative Programs (GAP)

Paw Sher, a refugee of Korean origin, is a student in the adult education program at the GAP School. For her, Northstar’s assessments will help her persist and succeed in both her education and career. Northstar will help her gain the digital literacy skills needed to succeed in online coursework in IT Essentials, with the goal of graduation and industry-recognized certification. Northstar will also aid in her job search as she researches career opportunities and completes online applications.



YESIKA, Providence Housing Authority Computer Lab

Yesika works as a Certified Nursing Assistant (CNA) at a healthcare facility and attends digital literacy classes between shifts. “We are just starting to change to electronic records at my job. I realized I needed to improve my computer skills or I would be left behind,” she said. Yesika hopes to get her laptop and free Internet access for a year after she passes all four Northstar modules, an incentive offered by the Providence Housing Authority. She says that will be a big help to her and her family.

Northstar Stories:



MIGUEL, Providence Housing Authority Computer Lab

Miguel Soto is out of work with a physical disability. After achieving high scores on Northstar modules 1-3, he realized he likes computers and wants to start an Internet business. He also now enjoys helping his daughter with her computer needs for school. “I am confident and comfortable using a computer and am learning so much. I see the computer in a different way now. Before I only saw it as a way to use Facebook and YouTube, and now I know how to use email, pay my bills online, and make it work for me. I plan to start an online business in the near future.”



AHMED, Goodwill Easter Seals Computer Lab

In the summer of 2018, Ahmed began working with digital skills tutors at Goodwill Easter Seals in St. Paul, a new Minnesota Literacy Council instructional site. After several sessions working with tutors, Ahmed has passed his Windows Operating System assessment. He has told many of his friends from Somalia about Northstar because he wants them to feel the same success he has felt after passing the assessments.

He leveraged his digital skills and certificates earned to obtain a job as a building security guard. In addition to his job-related skills, he valued using his new skills to write a resume and organize his online job search.

“This is a success. This is the thing I needed. This is my second certificate. When I get ten of them, I can show them and get a new job, like at a front desk that needs to use a computer. They always ask about experience with desktop. So this thing is my lifeline to my success.”



PAIRIN: Using Data to Break Down Soft Skill Barriers to Employment

PAIRIN is an online suite of tools that personalizes soft-skill development, career exploration and job matching. By eliminating unconscious bias and focusing on competency-based hiring, the tool helps break down barriers to employment for disadvantaged populations. Workforce development programs use PAIRIN products to measure clients soft-skills, match to optimal job profiles and develop the career readiness skills to become well prepared, gainfully employed, and self-sufficient. PAIRIN's data helps coaches better assess and support growth of adult learners' skills and mindsets as they prepare to enter more meaningful careers with family-sustaining wages. Here's what we learned:

Key Learnings:

- **Soft skills and mindsets can be validated, measured, and developed.** The PAIRIN Survey measures over 100 coachable and changeable behaviors and is based on extensive psychological research.
- **PAIRIN provides a common language around soft skill development:** Employers, workforce development program providers, educators, and adult learners/job seekers need a common language to identify essential skill gaps and support goal setting. PAIRIN found a way to take psychological data and make it accessible to all.
- **Coaching makes the assessment data relevant and actionable:** Self-assessment data alone can be daunting to adult learners. While learners who understand the purpose of the assessment can gain basic insights to their mindsets when reviewing their results independently, reviewing with someone who has a coaching background/training is optimal for translating the data into actionable goals.

Field Testing PAIRIN:

For field testing, we wanted to learn how workforce development professionals can use PAIRIN tools to better serve adult working learners earning low wages by measuring and developing the soft-skills critical to persisting and advancing in education and employment. We partnered with Activate Workforce Solutions and CrossPurpose, two organizations providing services for Denver's adult job seekers who are ready to start a new career path, improve their financial situation, or become more self-sufficient. We also partnered with GPS Education Partners to explore the use of PAIRIN tools with students in a high school manufacturing apprenticeship program in Wisconsin.

How We Know That It Works:

- **Learners said that assessment data was spot-on:** It accurately depicted personal skills and mindsets related to employability.
- **Supports screening-in:** Ten percent of participants were assessed as ready to move into key programs to fast-track into advancement.
- **Wage increases:** Activate Workforce Solution's job placement data demonstrated that 22 participants experienced an average monthly wage increase of \$1600 following completion of a 6-week training program. The PAIRIN curriculum forms the core of this personal development and coaching program.

Why it Works for Working Adult Learners:



Shared language

This tool defines clear language around skills needed for workplace success, giving employers, program providers, and participants common language to identify skill gaps and support goal setting.



Data-driven wraparound services

PAIRIN provides valid and objective data as a foundation on which to build supportive services, coaching, and educational/developmental/learning opportunities.



Career matching

It connects jobseekers to careers that are a fit based on mindset and behavior.



Only requires basic literacy skills

The test is designed to be simple, using accessible vocabulary.

Field Testing Partners

- CrossPurpose
- Activate Workforce Solutions
- GPS Education Partners, Wisconsin High School Apprenticeship Program

Field Testers:

- 50 unemployed or underemployed individuals in Denver's CrossPurpose program
- 24 high school students in a GPS manufacturing apprenticeship program

“What I have found to be very true is that for people who don’t have counseling degrees, people who aren’t psychologists, PAIRIN actually makes the best and most valid psychological research digestible for laypeople.”

Dan Kaskubar

Activate Workforce Solutions

“Field testing really allowed us to see the entire scope of where PAIRIN can be used to make an impact, which spans from workforce programs and individual job seekers to the businesses doing the hiring. After a business works with an organization like Activate, they can see the power of how soft skills are such a key component of the success of an employee.”

Allison Grenney

PAIRIN

“PAIRIN is helping adults struggling to succeed in our nation’s labor market better develop the essential skills—like problem solving, creativity, grit, and interpersonal skills—that are needed for long-term success. This tool helps employers evaluate job candidates based on their abilities and mindsets, rather than just their histories.”

Yigal Kerszenbaum

Director, Employment Technology Fund

PAIRIN Stories:



HEATHER BARTON, CrossPurpose Graduate

Heather Barton turned to CrossPurpose to help her find a more financially stable profession after doctors diagnosed her son with Type 1 diabetes. “We were doing OK, and then with all the medical bills we were no longer doing OK,” she said.

During the CrossPurpose programs, Heather took The PAIRIN Survey to learn more about her strengths, as well as her coachable behaviors for improvement. “PAIRIN showed me that my drive for success is really high, and I’ll do what I need to do to be successful, and my persistence is high; I don’t let things get in my way.” Through CrossPurpose, Heather had the support of a coach to help her understand the data and put a roadmap together to advance professionally. “It’s really beneficial to have a coach dig in and help you apply it to your life,” she said. The coaching also helped her to understand the importance of making informed decisions quickly, which is critical in the work of water management.

As a result of her survey and a local demand for talent, Heather is now a Certified Water Manager with a pathway for increased growth and much higher earning potential. Because of her region’s shortage of skilled water management professionals, she was the first Certified Water Manager hired by her employer directly from a community college program. Her PAIRIN assessment validated that she was ready to take on the responsibility. “Back in Spring 2017, I didn’t feel like I could provide for my family... at all. I felt like I was barely keeping my son alive. Now, in my household I’m the breadwinner.... I’m learning, and I’m growing, and I have so much potential for growth....it’s only up from here.”



SkillSmart: Using Skills to Create Pathways to Employment

SkillSmart is a robust skill-matching platform that connects jobseekers, employers, and educators to maximize their potential in today's labor market and drive growth in our economy. SkillSmart has great potential to increase equity in hiring and help adults find job or training opportunities based on all of the skills they've earned in life. In getting to know SkillSmart, here's what we learned:

Key Learnings:

- **Skills can serve as a consistent measure of candidate proficiency for jobs:** The SkillSmart platform, which uses skills as a consistent measure of candidate proficiency for a specific job, levels the playing field for applicants, which is especially valuable to underserved populations.
- **It is valuable for job seeking/matching tools to provide opportunities for targeted upskilling:** When job seekers use SkillSmart, they receive a quantifiable score related to how well they qualify for specific positions (giving them transparency into job responsibilities). Job seekers like seeing their scores increase as they add skills or training experiences.
- **Job seekers have important skill-building experiences that qualify them for work opportunities that don't often appear on a traditional resume:** SkillSmart helps employers and job seekers uncover how certain skills can be earned and validated through previous work, education, or other life experiences. For example, a mother going back to work after caring for a paraplegic son learned through the tool that she had gained the skills to work in health insurance customer service. A hotel employer learned that they sought candidates who had volunteered as ushers at places of worship for their innate hospitality skills.
- **Adults with lower skills benefit from personalized tools that help them understand well-suited career paths, as well as personal skills gaps they need to fill to get there:** Job seekers use the platform to explore job opportunities, understand exactly what skills those jobs require, better understand their own personal skills gaps, and learn about regional training opportunities to gain skills to become more competitive for a job opportunity. Often adults with less formal education believe they can do only the job they've had, and SkillSmart helps them see new pathways.
- **Skills can be used as a shared language:** Employers, community program providers, and job seekers can use skills as a shared language to identify skills gaps—both personal and regional—and support goal setting.
- **SkillSmart helps community organizations mediate employment with local employers:** SkillSmart's model helps employers, community-based organizations, and workforce development agencies work together to put more people into jobs with room for advancement and family-sustaining wages. It focuses efforts of organizations, leading to efficiency and greater success in placement.

Field Testing SkillSmart:

We field tested SkillSmart to find out what happens when employers start to look at a whole individual (and the actual skills required for a job), not just traditional education and work experience on a resume.

How We Know That It Works:

- **Job placement:** Understanding the skills needed for a job, applicants are able to highlight required skills and seek training to be eligible for job opportunities.
- **Better matches lead to retention:** Hires placed by SkillSmart are twice as likely to be retained after a year.
- **Employers have adopted the skills listing into hiring processes:** Translating jobs into skills requirements has been a transformational experience for employers like MGM Springfield. Now they encourage applicants to bring along their skills listing from SkillSmart to job interviews for positions at the resort.

Why it Works for Working Adult Learners:



Free

The tool is available at no cost to job seekers.



Objective and equitable

It provides objective criteria for employers to understand the skills of potential employees and can be used to screen-in qualified candidates.



Removes the reliance on degree requirements

Without a clear understanding of the skills required for an open position, employers rely on traditional—and often unnecessary—proxies like degree requirements, which arbitrarily reduce the pool of applicants and disproportionately impact underrepresented individuals.



Transparency into actual job requirements and upskilling opportunities

Job seekers can review the skill requirements of available jobs and seek training opportunities to upskill and qualify for a better job.

Field Testing Partners

- Chelsea Collaborative
- New England Farm Workers Council (NEFWC)
- MGM Resorts International
- Encore Boston

Field Testers:

Job seekers supported by workforce development professionals at community-based organizations; Chelsea Collaborative and New England Farm Workers Council.



“Job descriptions, the traditional ones, are just so large, and most people don’t even read through them, to be honest. We had positions people had never heard of before, and so there’s a fear that people would not apply for those roles. If you created a profile on SkillsSmart, the system could actually suggest jobs for you, based on the skills that you entered into your profile. You could look at that job now.”

Wanda Smith-Gispert
MGM Resorts International



“We invest in companies that use technology to remove barriers holding these workers back from growing their talent, connecting to meaningful work, and thriving in the economy. SkillsSmart’s model does all three—connecting job seekers to opportunities in which they are best fit, identifying clear pathways to upskill, and helping communities better solve their regional skills gaps.”

Yigal Kerszenbaum
Managing Director, Employment Technology Fund

SkillSmart Stories:

COLLABORATIVE MEMBER, Chelsea Collaborative

This participant at the Chelsea Collaborative, one of our partnering sites in Massachusetts, is currently working as a dishwasher at a restaurant and was looking for similar jobs to apply for at the Encore resort in Boston. After she completed her profile, this jobseeker was matched with several jobs that she did not think existed and would really be for someone with her experience. She is excited about the idea of working in a customer-facing environment and is looking forward to applying for this job in the coming weeks. “It is inspiring for me to see how many skills I actually have after years of working in restaurants. I feel proud every time my Skill Index number goes up.” “I was looking for jobs as a dishwasher but have been encouraged that the SkillsSmart system is matching me to jobs that I never even knew existed, like a Casino Porter.”

CLIENTS OF THE NEW ENGLAND FARM WORKERS COUNCIL

New England Farm Workers Council (NEFWC), a workforce development organization in Springfield, MA, used SkillsSmart’s hiring model to help migrant farm workers obtain stable, long-term employment at MGM International’s Springfield resort.

The NEFWC used the SkillsSmart platform to better understand for which positions their clients would be best suited, as well as identify training opportunities to remedy any skills gaps. Armed with that clearer understanding, the organization conducted internal training, put residents through MGM’s Gaming School (the casino’s pre-apprentice program in hospitality), and ran mock interviews so residents could get comfortable seeking a job. MGM employees also taught classes at NEFWC to prepare clients for service-oriented positions.

Here's what one NEFWC client says: "The person you see today is a completely new creation! I was a single teen mother struggling with childcare, transportation, and jumping from shelter to shelter. Then NEFWC staff and teachers gave me training and helped me gain my confidence back and realize that I am capable of achieving self-sufficiency. After I got my HiSET, the staff opened the doors for me to take different trainings to better my chances of not just getting a job, but a career. Now after completing and graduating from the Massachusetts Casino Career Training Institute, I have a job as a Table Games Dealer, where I work for one of the biggest companies in the world—MGM Springfield!"

According to Vanessa Otero, COO of NEFWC, "SkillSmart's model allowed us to clearly understand the skills required to work at MGM Springfield—helping us provide our clients access to the right training in order to become stronger applicants and, ultimately, get hired into good jobs."

The NEFWC has been able to place over 150 of their clients into jobs at MGM Springfield, and they continue to train and upskill clients as new job openings become available.



Signal Vine: Texting to Nudge Adults Toward Opportunity

Texting is a powerful tool to encourage adults with lower skills toward action or opportunity. Signal Vine is an enterprise text messaging solution that nudges individuals toward better behaviors and outcomes. Based on Nudge Theory, the idea that positive reinforcement and suggestions can influence behavior, Signal Vine relies on data analytics to cue and then send personalized and proactive text nudges. The goal of the nudges is to support positive behaviors that lead to employment, persistence, and program completion goals.

In field testing Signal Vine, we witnessed how workforce development teams can use Signal Vine to increase efficiency while producing higher levels of engagement with program participants. Here's what we learned:

Key Learnings:

- **Texting encouraged behaviors that increase opportunity:** Text-based nudges increased attendance for job fairs and on-time administrative actions significantly more than email notifications.
- **Texting is a preferred mode of reminders for adults:** Adult program participants in workforce development settings felt comfortable receiving and responding to the text nudges.
- **End users responded to text nudges at much higher rates than email or other media channels, especially nudges that were action oriented and relevant:** The nudges with the highest response rates were consistently about timecard submission, which had been a huge challenge in the past.
- **Signal Vine helped Orange County Asian and Pacific Islander Community Alliance (OCAPICA) program participants get exposure to local jobs:** With low attendance at Home Depot recruitment events, OCAPICA used Signal Vine nudges to remind and motivate 25 people to attend an event. Home Depot provided guided exposure to potential job opportunities to all participants.
- **Texting works best with clear communications goals and audiences:** Signal Vine works best when counselors have defined communications goals that align with the affordance of texting, such as discrete logistical actions, and have defined the audiences to which they need to communicate those actions.
- **Signal Vine allowed staff to reach more participants in less time, allowing staff to focus on other organizational goals:** Rather than individually emailing participants, sending batch nudges through Signal Vine saved up to two hours of staff time per nudge. OCAPICA estimated that 500 scheduled nudges over the course of a year would not only save 1,000 hours of staff time but also increase the effectiveness of communications.
- **Personalization with media and humor supported relationships with workers and boosted engagement:** OCAPICA counselors made use of GIFs, emojis, and humorous memes to make their payroll nudges more relevant and engaging.

Field Testing Signal Vine:

Signal Vine has been primarily used in high school and higher education settings to nudge students toward better outcomes. We wanted to field test how well texting increased positive outcomes for adult learners and job seekers. For example, how could it help job counselors send programmed and instantaneous nudges to move program participants toward the completion of tasks, like meeting program requirements or attending job events?

We engaged the Orange County Asian and Pacific Islander Community Alliance (OCAPICA) to test how well the tool supported employment and training services for community members with barriers to employment. With a small staff, OCAPICA needed easier ways to communicate with hundreds of program participants, drive attendance to recruitment events, and remind people about administrative requirements.

For field testing, OCAPICA used Signal Vine to automatically send text message reminders to their program participants, large groups of clients (such as temporary and seasonal workers) as well as nudge workers about timesheet due dates and payroll follow-up so employees would be paid for their work.

How We Know That It Works:

- **Engagement:** Fifty-four percent of participants responded to text messages—much higher than previous engagement with email.
- **Speed of responses:** Most text nudges were responded to within 10 minutes, many within five minutes.
- **Increased attendance at events:** When OCAPICA used Signal Vine to share a job recruitment event at Home Depot, 25 job seekers attended (when previous events would attract 10 people on average).
- **Reduced effort for job counselors to communicate:** OCAPICA saved up to two hours of staff time per nudge (20), which equated to 40 saved hours of staff time in a four-month period.

Why it Works for Working Adult Learners:



Supports the supporters

It addresses two common challenges of organizations working in support of learner success: lack of ability to reach individuals and lack of sense of control over getting participants to complete tasks.



Preferred

Text is the preferred communications mode for short logistical messages.



Accessible

Ninety-seven percent of people have a cell phone.



Not limited by current skills

Short text messages use less cognitive load for people with limited overall literacy and work well for people with limited digital literacy.



Social personalization

Program participants received texts that appeared to be directly to them from a counselor at OCAPICA.

Field Testing Partners

- Orange County Asian and Pacific Islander Community Alliance (OCAPICA)

Field Testers:

- 247 people receiving support from OCAPICA



With a small staff, OCAPICA needed a more efficient way to communicate with hundreds of program participants, encouraging them to attend recruitment events and respond to administrative requirements. Josue Rodriguez, an OCAPICA advisor, said, “We used it to send out a message that needed to reach multiple people at once with a couple of strokes of keys on a keyboard, delivered to program participants in a technology that is more user-friendly for them.”

Josue Rodriguez
Advisor, OCAPICA

Signal Vine Story:

NATASHA, OCAPICA client

OCAPICA participant, Natasha, believed that the nudges helped her stay on track with program requirements and encouraged her to go to a job fair, eventually leading to a job with OCAPICA. “Text nudges are better than email; my inbox is so full they get lost. And the flyers that are posted around OCAPICA, I only see them when I’m there, but I look at texts all the time anywhere.”

METHODOLOGY

Through the Technology Testing for Adult Learning and Employment (TTALE) grants from Walmart and the Walmart Foundation, the EdTech Center at World Education sought to better understand how technology tools could close the employment opportunity gap for lower-skilled, low-income adult workers and jobseekers.

In partnership with the Employment Technology Fund (ETF), we field tested seven digital tools that help individuals to enhance their skills and achieve greater workforce mobility across four segments:

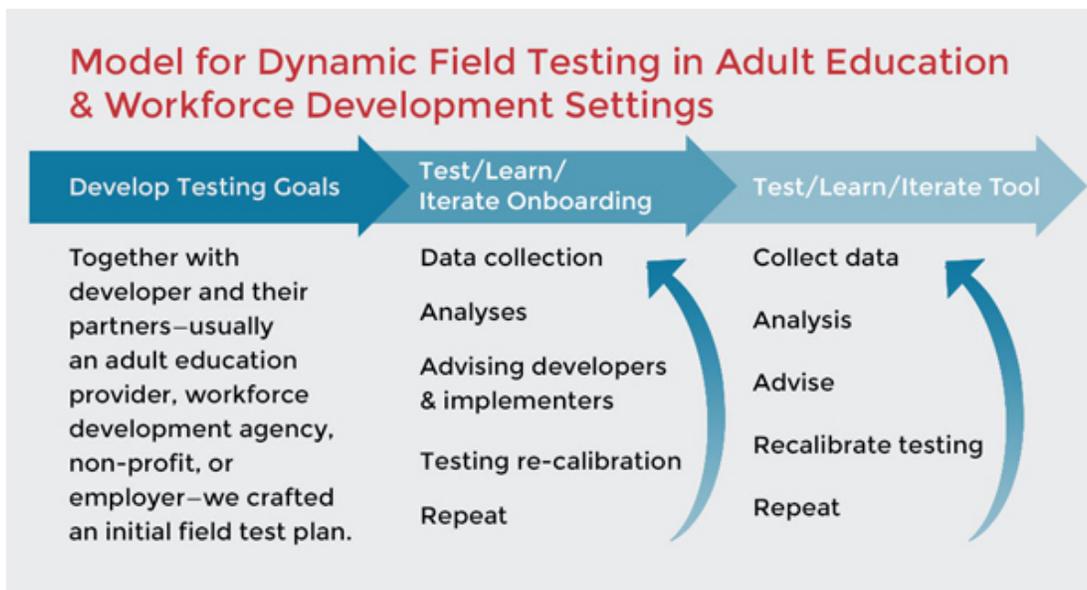
- Learning and Training
- Mentoring and Support
- Job Search and Placement
- Assessment and Matching

For each of the seven tools, we worked with the technology developers to identify an implementation partner and site—with the intention of looking at tool usage in geographically diverse areas and settings.

Together with the technology developer and their partners—usually an adult education provider, workforce development agency, nonprofit, or employer—we crafted an initial field test plan, shaped by shared goals, to help us do two things:

- Arrive at recommendations for software shifts required to support end-user engagement and persistence
- Define characteristics of each setting to inform use scenarios

Iteration was a defining characteristic of the TTALE field-testing process, both within the testing of an individual tool and across the testing of all tools. Because the tools were made ready for testing in spaced sequence, as each tool was deployed, we crafted a field-testing plan and process for implementation that benefited from the experience of testing previous tools.



Between January 2018 and February 2019, the EdTech Center research team conducted interviews with individuals across all of the sectors that support these working learners and job seekers, including the learners themselves, technology developers, educators of adults, workforce development professionals, nonprofit partners, and employers.

For each of the specific tools and implementation sites, we conducted site visits to gather data from a wide variety of sources, including the following:

- Engagement data and analytics reported within the technology tool itself
- Interviews with learners and job seekers
- Interviews with key staff at the implementation sites who either used the tool or mediated use of the tool for learner end users
- Resources and media from the field-test setting

We also used each of the tools ourselves to better understand how features played out as either barriers or affordances within the particular use scenario. As we explored each tool and interviewed the stakeholders using it, we evaluated several criteria:

- Ease of Use and Navigation
- Features and Design
- Content
- Assessment
- Standards
- Impact
- Accessibility
- Technical Aspects
- Data Security

We created a rubric (see below) adapted from widely used and research-based evaluation tools, including National Standards for Quality Online Courses, the Lea(R)n Grading Protocol, Quality Matters Rubric Standards, and the FLOE Inclusive Learning Design Handbook.

Because each tool and implementation site was unique, we did not design one data collection tool to use across the board. Instead, we designed customized data collection processes and resources to meet the intent of field testing at each site to minimize disruption to the implementation site and the adults it served.

Following our site visits, tool reviews, and interviews, we triangulated the data from these multiple sources, cross-verifying our findings from two or more sources.

Following analysis, we shared what we had learned and, as desired and needed, suggested development shifts to help each tool better support working learners. We also identified key learnings and effective practices to be more widely adopted as new technologies emerge to support adult learning and employment.

Components for Evaluation of Tech Tools

Ease of Use and Navigation

Navigation throughout the resource is logical, consistent, efficient, and predictable; Aptly uses text style, color, graphics, and icons to guide the learner; Resource includes a tutorial to help learners get started and provides access to support materials while underway.

Features and Design

Resource design reflects understanding of learners' needs and uses varied ways, including interaction, to engage learners and help them to learn and accomplish objectives; Employs relevant and easy to use media; Organized by logically sequenced units.

Content

The course content is accurate, and assignments are of sufficient rigor, depth, and breadth to teach the standards; Resource reflects appropriate reading level; Reflects cultural diversity and is bias-free; Free of adult content and distracting advertisements.

Assessment

Resource assessments measure stated objectives and are consistent across units; Includes adequate opportunities to assess and report learner mastery and progress; Includes opportunities for learner self-assessment.

Standards

Stated objectives/competencies are aligned with relevant state or national standards and are appropriate for the target learner audience; Learning objectives/competencies are measurable; Relationship between learning objectives and activities is evident or stated.

Impact

Resource promotes the achievement of the stated learning objectives/competencies; Includes activities that engage learners in active learning and/or provide them with multiple learning paths or alternative activities based on their needs.

Accessibility

Resource design and features facilitate readability for a broad group of learners; Resource is developed with universal design principles and accessibility guidelines in mind.

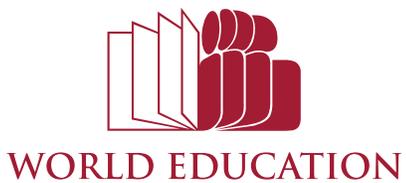
Technical Aspects

Resource functions as intended; All technology requirements (including hardware, browser, software, etc.) are specified; Prerequisite skills in the use of technology are identified.

Data Security

Resource describes privacy policies in terms of use; Utilizes effective security technology to protect learner privacy and the confidentiality of learner information.

*The components listed above are drawn and adapted from published and research-based evaluation tools, including National Standards for Quality Online Courses, the Lea(R)n Grading Protocol, Quality Matters Rubric Standards, and the FLOE Inclusive Learning Design Handbook.



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