

THE HIRE-TRAIN-DEPLOY MODEL

RETHINKING ENTRY-LEVEL WORKFORCE DEVELOPMENT IN THE AGE OF AI

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ACHIEVE PARTNERS

INTRODUCTION

While affordability and student loan debt continue to grab the higher education headlines, an important fact is being overlooked: If every student graduated into a job with a salary of \$60,000, the average level of student loan debt would be affordable. So, the dark, seamy underbelly of the student debt crisis is underemployment.

According to Strada Education Foundation's updated report on underemployment, 52% of college graduates are underemployed a year after they graduate even though millions of good jobs claim to be entry level and accessible to career launchers.⁸¹

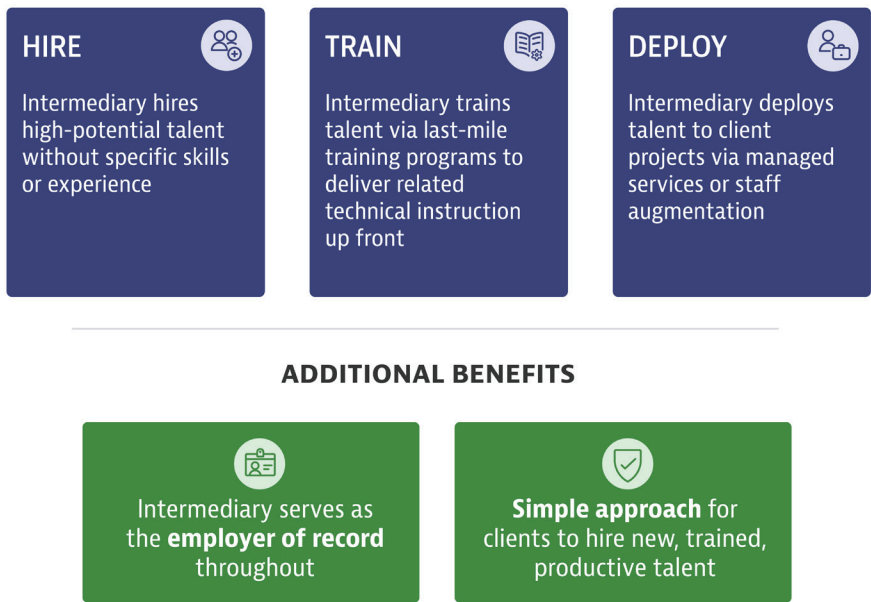
Further, those with less than a college degree also struggle with employment. According to the Bureau of Labor Statistics, in 2023, the unemployment rate for those with some college but no degree was 3.3% — 1.5 times higher than the rate for graduates with a bachelor's degree (2.2%).⁸² For adults with only a high school diploma, the unemployment rate was 3.9% — 1.8 times greater than that of their

81 "Talent Disrupted: College Graduates, Underemployment, and the Way Forward," Burning Glass Institute / Strada Education Foundation, February 2024, stradaeducation.org/report/talent-disrupted/.

82 U.S. Bureau of Labor Statistics, "Table 5.1 Unemployment Rates and Earnings by Educational Attainment, 2023," <https://www.bls.gov/emp/tables/unemployment-earnings-education.htm>.

counterparts holding a bachelor’s degree. And for adults with less than a high school diploma, the unemployment rate was 5.6%, which is 2.5 times greater.

/ FIGURE 1 /
HTD MODEL



So, having a college degree is no longer enough to ensure employment, and those without a college degree struggle with unemployment even more significantly. Unfortunately, the bar is even higher than before⁸³ to break into the good entry-level jobs that pay a living wage and provide clear career paths for economic advancement. Today’s good entry-level jobs ask for specific digital and business skills that are much harder to learn in a classroom than they are through experience. As an example, an open entry-level job in IT listed among the required skills: iSeries programming languages (e.g., Java, SQL, RPG, CL) and experience performing technology audits.⁸⁴ Similarly, those who want to become an entry-level Salesforce developer would need to demonstrate experience with JSON, .NET, Java, XML, and related languages, as well

83 Younger US Workers Struggle for Jobs as Entry-level Posts Disappear.” 2025. S&P Global Market Intelligence. January 17, 2025. <https://www.spglobal.com/market-intelligence/en/news-insights/articles/2024/12/younger-us-workers-struggle-for-jobs-as-entry-level-posts-disappear-86796454>.

84 David Rice, “Entry-Level, 3 Years’ Experience Required: Are You Blocking New Talent from Joining Your Business?” People Managing People, November 18, 2024, <https://peoplemanagingpeople.com/articles/entry-level-requirements/>.

as experience with integration technologies.⁸⁵ This mismatch between an employee's skills and the skills required for a certain position is called the "skills gap." In addition to the skills gap, employers also want experience:

▶ Today's good entry-level jobs ask for specific digital and business skills that are much harder to learn in a classroom than they are through experience.

One could become a Trailhead-certified Salesforce administrator in many ways, but not many employers are looking for a newly minted Salesforce administrator with no relevant work experience. This disparity between an employee's experience and the experience required by the employer is called the "experience gap." The data is piling up: Entry-level positions in engineering, cybersecurity, and health care now — surprisingly, depressingly — demand years of work experience.⁸⁶ This challenge is consistent for those with or without a college degree.

Unfortunately, the experience gap is about to turn into a chasm. The reason is artificial intelligence (AI). C-suite executives estimate that AI will eliminate 56% of entry-level roles by 2028.⁸⁷ Here's what one U.K.-based executive recruiter forecasts for the Big 4 accounting firms:

*Over the next five years, the Big 4 accounting firms will significantly reduce their graduate and school-leaver hiring intake as they begin to implement AI across various areas of their operations. ... A consensus is emerging that AI could automate many tasks currently performed by junior staff at the Big 4 ... leading to smaller overall organisational sizes. ... Historically, the Big 4 have hired substantial numbers of graduates, offering high-class training that benefits the broader economy. With fewer traditional roles available, it raises concerns about where new graduates will find comparable opportunities and training.*⁸⁸

85 "What Is an Entry Level Salesforce and How to Become One," ZipRecruiter, n.d., <https://www.ziprecruiter.com/career/Entry-Level-Salesforce/What-Is-How-to-Become#:~:text=To%20become%20an%20entry%2Dlevel,information%20technology%20or%20computer%20science>.

86 Abha Bhattarai, "New College Grads Are More Likely to Be Unemployed in Today's Job Market," Washington Post, November 19, 2023, <https://www.washingtonpost.com/business/2023/11/19/college-grads-unemployed-jobs/>; Tim W., chief information security officer and cybersecurity expert, LinkedIn post, 2021, <https://www.linkedin.com/posts/activity-6631568765173792770-U7F7/>; Joseph Pisani and Lindsay Ellis, "The Next Challenge for the Class of 2024: Finding a Job," Wall Street Journal, May 22, 2024, <https://www.achievethepartners.com/the-next-challenge-for-the-class-of-2024-finding-ajo.pdf>.

87 "Navigating the Workplace in the Age of AI," edX Enterprise, September 6, 2023, <https://business.edx.org/white-paper/navigating-the-workplace-in-the-age-of-ai>.

88 James O'Dowd, founder and managing partner at Patrick Morgan, LinkedIn post, 2024, <https://www.linkedin.com/feed/update/urn:li:activity:7191341296932814849/>.

AI is on the cusp of transforming entry-level work. From time immemorial, employers have made this implicit bargain with entry-level workers: You may not know the industry or role very well, but we'll hire and pay you while you learn the ropes; and as you're becoming productive, you'll spend your time on menial or mechanical work. Going forward, the Big 4 and other employers aren't going to want or need workers to spend hundreds of hours assembling financial reports, bidding on Google and Facebook ads, or drafting client pitch decks. AI will do that. Instead, employers will expect entry-level workers to leverage AI and spend the bulk of their time on higher-value client work and projects. But new employees won't be able to do higher-value work without relevant in-field experience — that is, tryouts that train.

The Wall Street Journal is already connecting the dots.⁸⁹ Employers plan to hire 5.6% fewer graduates than they did in 2023, and candidates with prior experience have a big advantage. According to the managing partner at a D.C.-based systems integrator, "AI right now is making ... entry-level positions — I don't want to say obsolete — but they're changing them."

AI isn't only displacing many entry-level roles; it's accelerating the ongoing "experience inflation" to hyperinflation. Receiving relevant, in-field, and hopefully paid work experience to best position themselves for a first good full-time job will become imperative for entry-level workers.

Various options are available to provide young people with work experience before they begin searching for their first full-time role, but apprenticeships stand out as a clear top option for many reasons. Apprenticeships are full-time jobs that don't require prior technical or business skills or experience; these are provided over the course of the apprenticeship. In many cases, apprenticeships also teach life skills like professionalism and communication. By turning to apprenticeships, candidates can develop the in-field work experience they need to jump into entry-level roles, bridge the skills and experience gaps widened by AI, and leverage AI on the job to create real impact from day one.

Apprenticeships meaningfully raise candidates' earning potential and save the government money.⁹⁰ A study by Washington state showed

89 Pisani, Joseph, and Lindsay Ellis. May 22, 2024. "The Next Challenge for the Class of 2024: Finding a Job." The Wall Street Journal. <https://www.wsj.com/lifestyle/careers/jobs-ai-disruption-2024-college-graduates-f72247ab>.

90 U.S. Department of Labor, "Earn While You Learn Today," Apprenticeship USA, accessed October 28, 2022, <https://www.apprenticeship.gov/sites/default/files/dol-industry-factsheet-careerseeker-v10.pdf>; Batia Katz et al., "Did Apprentices Achieve Faster Earnings Growth Than Comparable Workers? Findings from the American Apprenticeship Initiative Evaluation," Urban Institute, August 2022, https://wdr.doleta.gov/research/FullText_Documents/ETAOP2022-41_AAI_Brief-Earnings_Growth_Final_508_9-2022.pdf; Debbie Reed et al., "An Effectiveness Assessment and Cost-Benefit Analysis of Registered Apprenticeship in 10 States," Mathematica Policy Research, July 25, 2012, https://wdr.doleta.gov/research/fulltext_documents/etaop_2012_10.pdf.

that every \$1 invested in apprenticeships saves taxpayers \$7.80 over a period of 10 years.⁹¹

▶ ... employers will expect entry-level workers to leverage AI and spend the bulk of their time on higher-value client work and projects. But new employees won't be able to do higher-value work without relevant in-field experience — that is, tryouts that train.

Until now, apprenticeships have remained principally limited to the building and construction trades. But what's worked for construction may not work in a digital economy, which brings us to an innovative new model of apprenticeships and likely the fastest growing: Hire-Train-Deploy programs.

Hire-Train-Deploy programs are run by apprenticeship intermediaries. What are apprenticeship intermediaries? Michael Prebil at New America says:

*Apprenticeship intermediaries cut through the complexity of developing and delivering apprenticeships by taking on some of the tasks that an employer would perform if it ran a program all by itself.*⁹²

Urban Institute goes on to differentiate the types of activities intermediaries perform for companies:

*Low-intervention activities in which intermediaries engage within the apprenticeship ecosystem could include building awareness, convening and connecting relevant actors, and providing high-level advice. High-intervention activities could include active roles in designing and registering programs; recruiting, coaching, and monitoring apprentices' progress; providing training and instruction; and serving as the employer of record.*⁹³

The U.S. hasn't yet made a systematic effort to foster intermediaries. As Brookings Institution researcher Annelies Goger notes, "For occupations and industries that are new to apprenticeships and have low unionization (such as technology and health care), there is an institutional vacuum in the intermediary role that is often a barrier

91 "Workforce Training Results," Washington Workforce Training & Education Coordinating Board, accessed October 18, 2022, <https://www.wtb.wa.gov/research-resources/workforce-training-results/#open>.

92 Michael Prebil, "Community College Intermediaries Can Support Youth Apprenticeship and Work-Based Learning," New America (blog post), February 1, 2023, <https://www.newamerica.org/education-policy/edcentral/community-college-intermediaries-support-youth-apprenticeship-in-skilled-trades>.

93 Diana Elliott and Miriam Farnbauer, "Bridging German and U.S. Apprenticeship Models," Urban Institute, August 2021, <https://www.urban.org/sites/default/files/publication/104677/bridging-german-and-us-apprenticeship-models.pdf>.

to scaling apprenticeships.”⁹⁴ Partnering with apprenticeship service providers should be old hat for American companies; U.S. companies lead the world in outsourcing services to specialty providers.⁹⁵ American companies aren’t particularly interested in running apprenticeship programs⁹⁶ — it’s not core to their business. Partnering with intermediaries who are willing to do the heavy lifting until apprentices prove their ability to do the job makes good business sense.

If you know anything about apprenticeship intermediaries, it’s probably nonprofits building pathways and providing new opportunities for at-risk populations. You may even have heard of some of them, along with personal stories from participants. What follows is an example of the best-known nonprofit apprenticeship intermediary and an apprentice who has benefited.

YEAR UP

Founded in 2000, Year Up pays weekly stipends to underprivileged young adults and starts them on six months of intensive classroom training in tech, business operations, financial operations, sales, and customer support. Beyond specific tech and sector knowledge, Year Up apprentices acquire the knowledge they need to be successful professionals (e.g., punctuality, personal conduct, communication) and are supported by Year Up social workers and advisers.

Apprentices who successfully complete classroom training are sent on six-month placements to corporate partners like Bank of America, Merck, and JPMorgan Chase. During placement, apprentices return to Year Up one-half day each week for workshops and career planning.

Year Up’s outcomes are terrific. Within four months of program completion, 80% of apprentices are employed full-time or enrolled in postsecondary programs. A 2022 study found that four years after the program, Year Up apprentices earned \$8,000 more than young adults who qualified but were assigned to a control group and sent to other programs.⁹⁷ Overall, 75% of Year Up apprentices are underrepresented minorities.

Because not every apprentice is hired by a partner, Year Up launched Year Up Professional Resources (YUPRO), a staffing firm that hires

94 Annelies Goger, “Desegregating Work and Learning through ‘Earn-and-Learn’ Models,” Brookings Institution, December 9, 2020, <https://www.brookings.edu/research/desegregating-work-and-learning>.

95 <https://www.statista.com/outlook/tmo/cybersecurity/security-services/professional-services/worldwide>
<https://www.statista.com/outlook/tmo/it-services/worldwide>

96 See Figure 1 in Chapter 1 of this volume, “Can Pay for Success Scale Apprenticeships in the US?”

97 David Fein and Samuel Dastrup, “Benefits That Last: Long-Term Impact and Cost-Benefit Findings for Year Up,” OPRE Report 2022-77, Pathways for Advancing Careers and Education (PACE), March 2022, https://www.acf.hhs.gov/sites/default/files/documents/opre/year%20up%20long-term%20impact%20report_apr2022.pdf.

Year Up graduates, serves as the employer of record, and staffs them out to clients.

The corollary of Year Up's outcomes is cost. All the wraparound services cost \$28,290 per participant. As no company is going to pay that amount to find entry-level tech, business, or customer service support workers, Year Up's engine has been fueled by philanthropy. In 2021, Year Up received \$114 million in charitable contributions and grants to subsidize the \$76 million it received from corporate partners paying Year Up for apprentice time.⁹⁸ Year Up receives minimal government support.⁹⁹

I knew I wanted to get into human resources, but no company wanted to hire me without the experience . . . So when the opportunity for the apprenticeship came, I knew I had to take it.

— Reason Bennett

Reason Bennett grew up in the Bronx. After graduating, she started college but dropped out and took a job in a nursing home. The nursing home job lasted five years before Reason switched to working in cell phone stores. But she always wanted more than a frontline job.

Reason started an apprenticeship with Year Up in 2017. She spent the first six months of the program learning about anti-money laundering before landing a place at JPMorgan Chase. She was eventually hired full-time at JPMorgan in 2018 and went on to work there for two years before a corporate restructuring cost Reason her job.

Reason had nearly given up on a great job at a great company. But Year Up hadn't given up on Reason. In 2021, YUPRO reached out to Reason and asked if she'd be interested in a new placement, this time in HR. Thanks to YUPRO, Reason is now an analyst in HR at a Fortune 500 financial services company where she supports emerging talent programs. "Working with Year Up was the best decision I have made," she says. "I knew Year Up would be my foot in the door to corporate America. Now I'm working at one of the best places to work, in the department I've been dreaming of."

While Year Up and other nonprofit apprenticeship intermediaries have been around for decades, a newer, higher-intervention model has emerged in recent years that's even more attractive to employers:

98 Department of the Treasury, Internal Revenue Service, Form 990, "Return of Organization Exempt from Income Tax," Year Up, Inc., 2021, accessed October 18, 2022, <https://www.yearup.org/sites/default/files/2022-07/Year%20Up%2C%20Inc.%202021%20Form%20990%20-%20Open%20to%20Public%20Inspection.PDF>.

99 David Fein, Samuel Dastrup, and Kimberly Burnett, "Still Bridging the Opportunity Divide for Low-Income Youth: Year Up's Longer-Term Impacts," OPRE Report 2021-56, Pathways for Advancing Careers and Education (PACE), April 2021, <https://www.acf.hhs.gov/sites/default/files/documents/opre/year-up-report-april-2021.pdf>.

Hire-Train-Deploy providers (or HTD). HTD programs: (1) hire high-potential talent without specific skills or experience; (2) deliver related technical instruction (RTI) up front (which they call last-mile training or LMT); (3) provide relevant work experience through deployments on client projects, via managed services for clients, or through staff augmentation (i.e., staffing talent fresh out of RTI directly at clients); (4) serve as the employer of record throughout; and (5) make it simple for clients to hire new, trained, productive talent.

HTD is a form of unregistered apprenticeship, and it's unregistered for good reason: HTD companies don't have to deal with the large barriers to registering their apprenticeship, and they have very little incentive to do so. Instead of being driven by government policy, HTD apprenticeships are market driven.

Apprenticeship is great. But HTD is the apotheosis of apprenticeship, allowing clients to "try before they buy." That matters a great deal to skittish companies in the U.S. and globally. Due to this "try before you buy" model, HTD companies and their clients can be more nimble than traditional apprenticeship programs at large organizations. HTD companies often train candidates in distinct cohorts (e.g., 10–15 candidates at a time). The instructional material and focus of these cohorts can be modified over time, so the latest, most relevant material is being taught, and the skills candidates learn are complementary to AI. Importantly, market pressure ensures that this happens; if a cohort is trained in skills easily replaceable by AI, the HTD company won't be able to sell that cohort to a client. So, while apprenticeship does a great job of giving candidates the relevant experience needed to spring past an expanding skills and experience gap, HTD goes a step further by promoting greater adaptability in the subjects being taught and remaining complementary to AI.

What follows are several examples of apprenticeship and HTD in action.

REVATURE

Revature began life as a staffing company for software developers. About a decade ago, due to the firm's inability to find enough developers to fill client orders, the company developed an early version of HTD. Revature gave applicants multiple ways to demonstrate aptitude: computer science degrees, relevant coursework, or completing online projects to ensure that applicants had some capability with Java before being hired as apprentices.

Revature apprentices went through three months of LMT on specific training. Then, Revature would staff out apprentices at bill rates

sufficiently more than pay rates to cover the costs and risks of recruiting, screening, hiring, training, and mentoring. One to two years later, clients were permitted to hire apprentices.

After fully committing to HTD in 2016, the high-intervention intermediary took flight. Revature launched dozens of partnerships with universities to source new graduates. In 2018, Revature placed 1,250 new software developers at clients. To broaden the business beyond software development, Revature built technology partnerships with platform companies like Salesforce, Appian, and ServiceNow. In 2022, Revature was the largest employer of entry-level tech talent in the country, placing approximately 3,000 apprentices at clients.

I'm living my best life. The only sad thing about my time with Revature is that it eventually ended.

— Ian Baker

Ian Baker grew up in challenging circumstances, and after his parents divorced, he and his mother moved to Florida. After high school, Ian enrolled in community college, began working part-time, and married a wonderful woman with two kids. After various retail jobs, Ian was hired to provide technical support for Apple. Ian rose rapidly but hit a pay ceiling and needed to make more to support his new family. When he learned about Revature's apprenticeship model, he applied immediately, although he was concerned that he didn't have a bachelor's degree. Revature evaluated his potential and, after Ian completed a four-week online class (one-hour sessions in the evening), hired him.

Ian's training took place at the University of South Florida, where Revature put up apprentices in subsidized apartments. Ian learned Java quickly from Revature's fast-paced curriculum. Some members of the cohort didn't make it, but that made Ian even more determined.

While Revature taught him software development, more important were the soft skills: "how to comport myself professionally, how to navigate company culture, how to interview, how to dress," and most of all, how to learn new tech skills. That was critical because Ian's first assignment was with a company that didn't use any of the languages he'd learned in training. Although he had to relocate to Baltimore with his family, the move was worth it. In his second year as a Revature consultant, he made two to three times more than he'd ever made before.

Ian's now working as a software engineer for Lowes and making more than \$200,000 annually between his full-time job and side projects.

He's able to provide for his family. From where he started, without any personal or family connections, he's certain there was no other way to launch a career in software development.

ULTRAVIOLET CYBERSECURITY

Cybersecurity may be America's clearest yet most dangerous talent gap. Whereas a decade ago, cybersecurity at most firms consisted of virus protection software, today it's a mission-critical function, and we're currently short by about 600,000 workers even though cybersecurity analyst positions are good jobs that average \$78,000 to start and serve as pathways to even more lucrative careers with impressive job security.¹⁰⁰

While cybersecurity programs pop up at colleges and universities, most are master's degrees that cost \$25,000+ and, as New America's Kevin Carey notes, "are heavily debt-financed."¹⁰¹ In addition, much of what passes for college cybersecurity coursework is out-of-date, out-of-touch, and disconnected from entry-level industry-recognized certifications like SSCP, CompTIA Security+, and GSEC. Industry experts agree you don't need a degree for cybersecurity; becoming a pen tester or incident response analyst requires months, not years, of training.¹⁰²

Compared to the other HTD models, cybersecurity is unique in one respect. While many companies manage software development or administer Salesforce or Workday internally, cybersecurity is primarily outsourced to managed security service providers (MSSPs): firms that are experts at identifying, targeting, and responding to threats.

So MSSPs are probably best positioned to know exactly what talent they need. The first MSSP to stand up an HTD model is Ultraviolet Cybersecurity. In 2022, Ultraviolet launched a 12-week paid cybersecurity analyst apprenticeship program including six weeks of RTI followed by six weeks of on-the-job training (OJT). For OJT, apprentices worked one-to-one with security operations center (SOC) analysts and transitioned to independent customer work. Check-ins with mentors and project leaders continued for the first six months to ensure successful integration.

100 "Entry Level Cyber Security Analyst Salary," ZipRecruiter, accessed October 18, 2022, <https://www.ziprecruiter.com/Salaries/Entry-Level-Cyber-Security-Analyst-Salary>; Cybercrime Magazine, "Robert Herjavec Cybercrime Magazine Podcast Video," posted on August 16, 2018, YouTube video, 8:26, https://www.youtube.com/watch?v=RE50JHQ_V80; Olivia Rockeman, "Hackers' Path Eased as 600,000 U.S. Cybersecurity Jobs Sit Empty," Bloomberg, March 30, 2022, <https://www.bloomberg.com/news/articles/2022-03-30/hackers-path-is-eased-as-600-000-cybersecurity-jobs-sit-empty>.

101 Jordan Weissman, "Master's Degrees Are the Second Biggest Scam in Higher Education," Slate, July 16, 2021, <https://slate.com/business/2021/07/masters-degrees-debt-loans-worth-it.html>.

102 Christian Espinosa, "Do You Have a Cybersecurity Talent Shortage? Don't Require a Four-Year Degree," Forbes, March 26, 2021, <https://www.forbes.com/sites/forbestechcouncil/2021/03/26/do-you-have-a-cybersecurity-talent-shortage-dont-require-a-four-year-degree>.

Everyone in IT knows it's kind of hard to get into cybersecurity. So I would definitely say to anyone trying to get into cyber that an apprenticeship is very helpful.

— Zestiny Simmons

Zestiny Simmons grew up in South Carolina and attended George Washington University (GWU), where she earned a bachelor's degree in business administration with a concentration in IT management. She found a job posting for the Ultraviolet apprenticeship program and applied.

Zestiny spent the first month of her SOC analyst program learning cybersecurity concepts and walking through the software platforms Ultraviolet uses. (Brand-new apprentices aren't allowed on Ultraviolet's systems right away; that practice would be too risky.) After Zestiny performed well during that first month, Ultraviolet made her a full-time offer. Zestiny's job is now to monitor threats across multiple clients and use Ultraviolet software platforms to analyze those threats. If she believes something needs to be done to address a threat, she escalates it. Zestiny's glad she pursued the Ultraviolet program. "My alternate path would have been to go to graduate school and try to find a job the traditional way."

RO HEALTH

Ro Health is a health care staffing company that places nurses and therapists in school districts. In 2022, Ro launched its own apprenticeship program, hiring high-potential workers and delivering RTI to enable them to pass the registered behavior technician (RBT) exam and attain certification. Newly minted RBTs are then staffed at client schools while continuing to receive training, mentoring, and support. Ro's apprenticeship program is a simple way to launch thousands of careers in behavioral health and a great way for schools to secure the talent they need to serve the growing number of students with autism.

I finally feel appreciated for my abilities. My pay now reflects my experience and accomplishments.

— Janae Gautier

Janae Gautier is from Sacramento. Her mom was a nurse, her dad a police officer. Janae always assumed she would go to college and attended a two-year program in Sacramento before transferring to California Southern University, where she earned a bachelor's degree in psychology, attending school online.

Janae had various jobs while in school. She worked at a clothing store, then at a gas station. As she entered her final year of college, she began working with children at an after-school program. After she graduated, she got a job helping special needs students in a Sacramento school. But in this job, and others that followed, Janae was treated (and paid) as a caregiver rather than an educator or a member of a child's treatment team.

That's when she found Ro Health. Ro paid Janae to complete RBT training and certification. Today, Janae works in a K-3 independence and learning support (ILS) classroom for students with disabilities and adaptive functioning needs, reinforcing positive behaviors and maintaining the classroom environment. She loves the class and teaming up with the teacher and other aides. She's also making 30% more than she was making before she became an RBT. Janae is grateful to Ro Health for the opportunity to become an RBT and live comfortably while working in an environment that she truly enjoys.

CONCLUSION

What do all these HTD businesses have in common? First, they already have relationships with dozens or hundreds of talent-starved clients. They have or can easily develop a staffing business. HTD companies have the capability to sell talent because their technical and industry expertise allows them to talk to tech and business leaders on equal footing and propose and deliver talent solutions with customized training. The U.S. has tens of thousands of business services firms that fit this bill.

Another commonality: They've turned a bug in their business model into a feature. Especially in talent-starved sectors and ecosystems (such as cybersecurity and health care), a growing number of companies have taken to poaching talented workers from their competitors. Few companies feel this more acutely than tech service providers like Revature. These companies employ trained workers and put them to work for clients. Nowadays, however, talent-starved clients increasingly seek to take that talent themselves. While large service providers make it crystal clear to clients that poaching is verboten, smaller tech service providers often find themselves at the mercy of big clients in desperate need of their talent, regardless of what contracts might say.

HTD companies flip the switch and turn the bug of losing talent into a money-making feature. What's more, with AI shifting the types of tasks that are performed by entry-level talent, the HTD model preserves flexibility for the HTD companies and their clients to adapt more quickly and leverage AI, rather than be replaced by it.

In today's economy, recent college graduates are already facing an uphill battle against student loan debt, those without college degrees are facing an even greater burden of unemployment, and all entry-level talent is bearing the brunt of unattainable entry-level job requirements. Unfortunately, AI may be about to make things much worse. For the next generation of workers, prior work experience will become even more critical.

Apprenticeships and Hire-Train-Deploy are part of the solution. Candidates from all backgrounds are experiencing the benefits, irrespective of whether they have a college degree. Many candidates learn about the opportunities from friends or online job boards, and they are thrilled when they do. Across multiple industries, intermediaries are popping up to provide entry-level workers with a pathway to gain experience, get paid, and help clients all at the same time. In turn, the benefit is felt throughout the value chain: Apprentices bridge the skills and experience gaps while being paid; clients gain access to new, diverse, lower-cost talent in talent-starved sectors; and HTD companies like Revature, Ultraviolet, and Ro Health grow by solving the problem. Even the government and taxpayers save money.¹⁰³ If you're like us, perhaps the only remaining question is: How do I get involved?

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103 U.S. Department of Labor, "Earn While You Learn Today," Apprenticeship USA, accessed October 28, 2022, <https://www.apprenticeship.gov/sites/default/files/dol-industry-factsheet-careerseeker-v10.pdf>; Batia Katz et al., "Did Apprentices Achieve Faster Earnings Growth Than Comparable Workers? Findings from the American Apprenticeship Initiative Evaluation," Urban Institute, August 2022, https://wdr.doleta.gov/research/FullText_Documents/ETAOP2022-41_AAI_Brief-Earnings_Growth_Final_508_9-2022.pdf; Debbie Reed et al., "An Effectiveness Assessment and Cost-Benefit Analysis of Registered Apprenticeship in 10 States," Mathematica Policy Research, July 25, 2012, https://wdr.doleta.gov/research/fulltext_documents/etaop_2012_10.pdf; "Workforce Training Results," Washington Workforce Training & Education Coordinating Board, accessed October 18, 2022, <https://www.wtb.wa.gov/research-resources/workforce-training-results/#open>