

"Apprentice Nation sees Ryan Craig tackle a crucial—but too often overlooked—model of education and training with his signature wit and incisiveness. It should be required reading for policymakers on both sides of the aisle."

—JEB BUSH

APPRENTICE NATION

How the "Earn and Learn"
Alternative to Higher Education
Will Create a Stronger
and Fairer America

RYAN CRAIG

Foreword by Tim Ryan
Former Member of Congress (D-Ohio)

Song of the Summer (2023)



I've been sellin' my soul, workin' all day
Overtime hours for bullshit pay
Young men are puttin' themselves six
feet in the ground
'Cause all this damn country does is
keep on kickin' them down

billboard	
HOT 100	
SONG	ARTIST
1 Rich Men North Of Richmond	Oliver Anthony Music
2 Fast Car	Luke Combs
3 Last Night	Morgan Wallen
4 Cruel Summer	Taylor Swift
5 Calm Down	Rema & Selena Gomez

Crisis of Employability

52% of new graduates “underemployed”:

- Earn \$10K less a year
- 2/3 underemployed after 5 years, half after 10 years

The Washington Post

New college grads are more likely to be unemployed in today’s job market

The unemployment rate for recent college graduates is higher than for the general population in an unusual shift

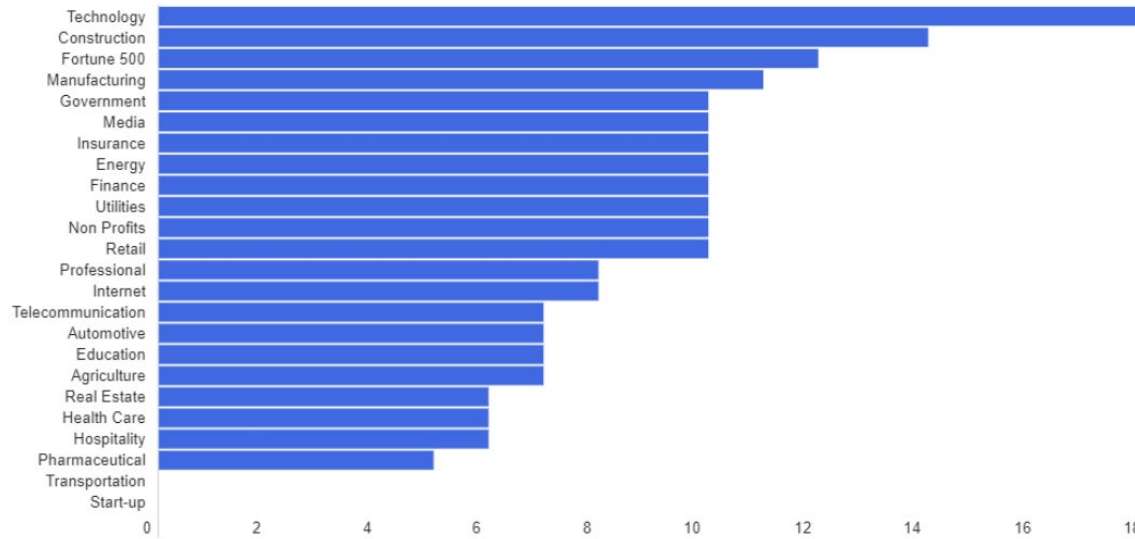


By [Abha Bhattarai](#)

November 19, 2023 at 7:00 a.m. EST

Employers Are Adding Experience Requirements to Entry-Level Jobs

Average Amount Of Experience Needed For Entry Level Job



*In months, rounded to closest full month

The Washington Post

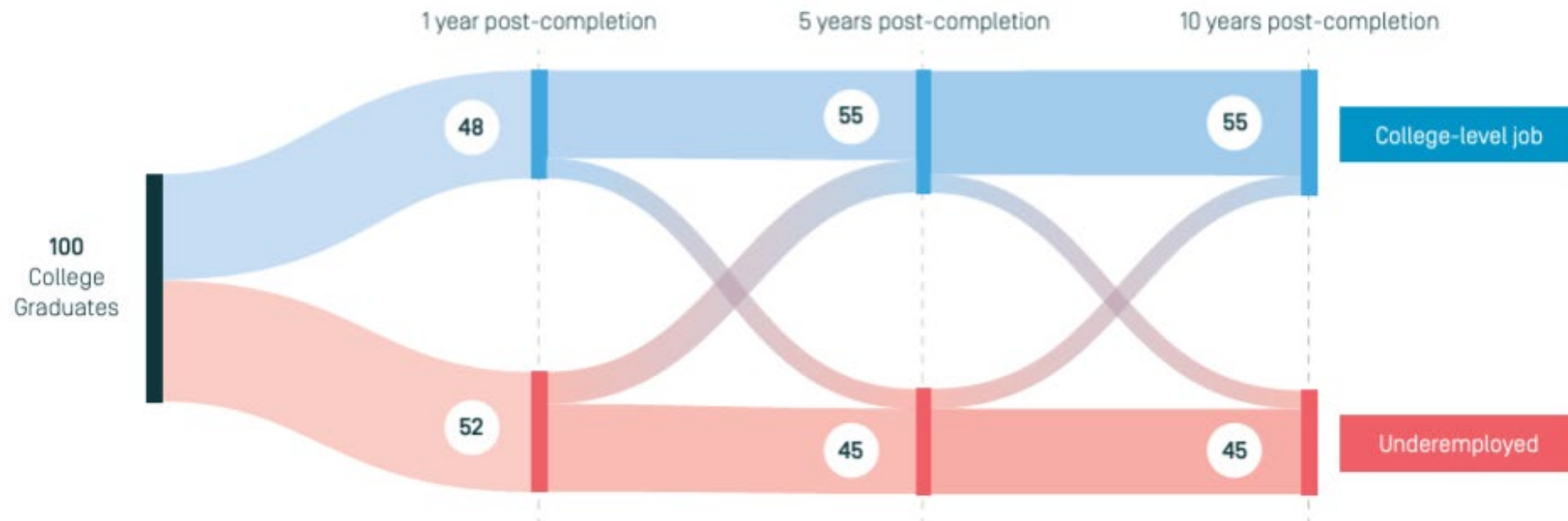
“It’s been really difficult,” said Christian Torres, 24, who graduated this spring with an electrical engineering degree from Arizona State University and is still looking for work. “Even the entry-level engineering jobs want four or five years of experience. There’s no way to compete, so I’m still living at home, still looking for work.”

38.4% of “entry-level” jobs require at least 3 years of experience.

Many “skills-based hiring” initiatives are simply replacing degree requirements with experience requirements.

Resulting in Underemployment for Majority of Colleges Grads

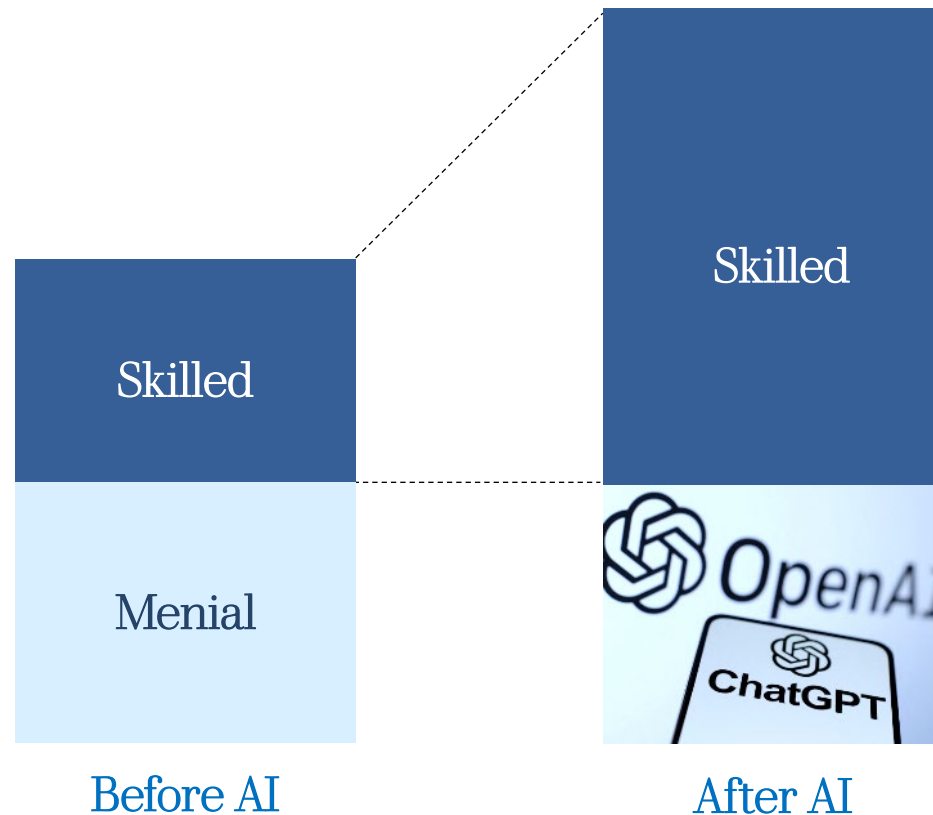
Employment Outcomes by Years after Graduation



- 52% of college graduates are underemployed one year after completing; 10 years after completing, 45% are still underemployed
- **The first job is critically important** – graduates who start out in a college-level job typically remain in a college-level job, while those who start out underemployed are 3 x more likely to stay underemployed

AI is About to Turn Experience Gap Into a Chasm

Composition of work in good entry-level jobs

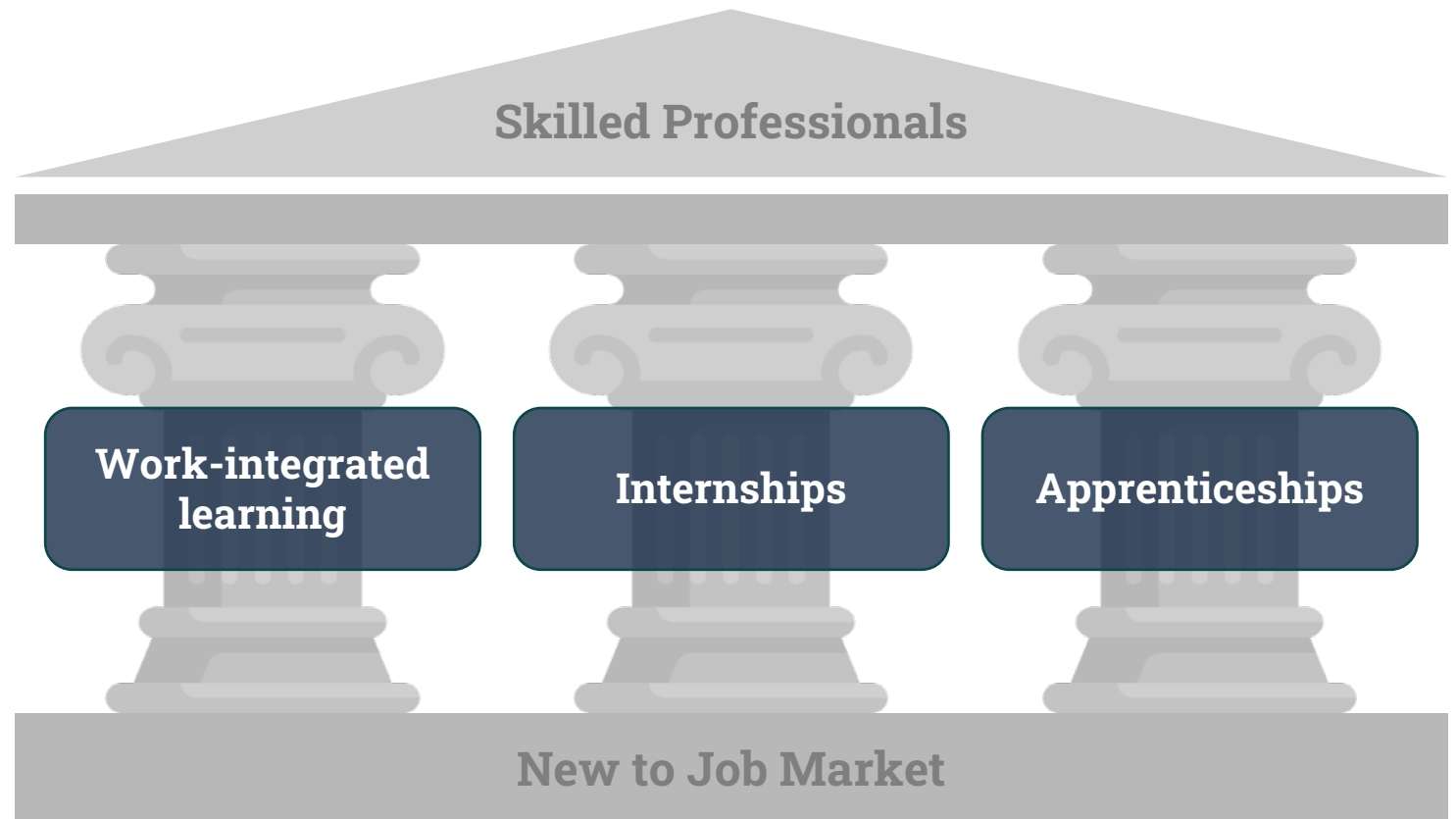


Transforming millions of entry-level positions into jobs requiring years of work experience

Example: Big 4

The image shows a screenshot of a LinkedIn profile and a post. On the left is the profile of Koh Teck Peng (许德平), an approved auditor and tax agent in the KTP Group of Companies. His bio mentions he is an ultra runner, ironman, mountaineer, golfer, and motorbiker, and talks about leadership, work-life, and adventures. On the right is a post by James O'Dowd (2nd), Founder & Managing Partner at Patrick Morgan | Sourcing elit... The post discusses the impact of AI on the Big 4 accounting firms, noting that they will significantly reduce graduate and school-leaver hiring intake over the next five years as they implement AI across various areas of their operations. This strategy aims to phase out many junior roles gradually, rather than reducing the overall headcount immediately, since full integration of the technology is still underway. A consensus is emerging that AI could automate many tasks currently performed by junior staff at the Big 4, such as data processing, audits, and legal work, leading to smaller overall organisational sizes, increased profitability for Partners, and more efficient solutions for clients. For graduates entering the job market, a period of uncertainty and nervousness is inevitable. As the landscape of available entry-level positions transforms, there will be a greater need for skills in technology and AI. Graduates will need to adapt quickly to remain competitive. Furthermore, the broader economic impact of this shift is significant. 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.

Three Options to Close Experience Gap



As AI takes hold, watch for states and possibly accreditors to begin requiring relevant, in-field work experiences before completion of postsecondary programs

Colleges Are Most Focused on Internships But There Are Two Problems



Employers

Today, internships tend to be haphazard, relationship-based, and highly inequitable

Few employers are willing to allocate time and resources to build a deep relationship with a single institution



Institutions

At only a handful of schools are internships systematic and integrated with academic programs

Few institutions are set up to interface with employers outside of the traditional “lite” career services functions

1

Access is inadequate and ineffective

2

Colleges have hard time doing themselves

Drexel is a clear leader here.

What's Missing? Apprenticeship

Only alternative that truly levels the playing field for all backgrounds

Strong ROI for workers, government, and employers

Why? Because first and foremost, an **apprenticeship is a full-time job** paying a living wage from day one and with

- Formal related-technical instruction (RTI)
- On-the-job training
- Pay increases as apprentice becomes more productive
- Clear career paths

Apprenticeship Now More Than Ever



- Digital Skills employers can't find are hard to learn in a classroom
- Much more easily learned by doing
- Experience gap becoming even more important than skills gap

The Problem

What You Think About When You Think About Apprenticeship



Apprenticeships in U.S.

500,000 apprentices

0.3% of workforce

70% in construction trades

VERSUS



10-15x per capita



8x per capita

Spread across the economy



Launching an Apprenticeship Program

Apprenticeships Take Work

Employers often see great benefits from apprenticeships. However, launching an apprenticeship program is a major investment for any employer and typically involves many new functions and costs, including:



Hiring or assigning someone to run the program



Paying for training



Recruiting and screening high-potential talent (including early-career workers with limited experience)



Assigning and paying mentors



Administering the apprenticeship program



Ensuring there's an on-the-job training (OJT) aspect to apprentices' work



Registering the program with the Department of Labor or their relevant State Apprenticeship Agency



Developing curriculum for related technical instruction (RTI)



Arranging for delivery of RTI



Hiring apprentices and paying wages as they ramp up to productivity

Are Most Employers Willing to Do This Themselves?



- Where apprenticeships flourish, intermediaries are doing most of the work of organizing and operating programs
- Including in U.S. construction trades (unions play this role)

What About Germany?



- Role of chambers of commerce and unions written into statute
- Funding
- Frameworks

What About UK and Australia?



- No comparable chambers of commerce and unions
- But (over)funded RTI
- And recently began providing additional funding per apprentice place

The Key: Robust Ecosystem of Intermediaries



1,200
intermediaries



National Apprentice
Employment Network

Represents
~50% of
Australia's 200+
group training
organizations

In UK and Aus, every large or mid-size company has been approached by multiple intermediaries seeking to set up and run an apprenticeship program for them

This doesn't happen in U.S.

Behind on Funding

Nations	Support for Apprenticeship (US\$)	Adjusted to US Per Capita
Australia	6,700,000,000	79,208,551,607
France	10,900,000,000	57,604,430,380
Canada	740,000,000	5,747,906,977
England	3,175,000,000	18,215,782,603
United States	300,000,000	300,000,000

What We Should Be Doing



Fully funding RTI like all our competitors



Shifting from grants to formula funding: pay per apprentice, which will naturally advantage higher-intervention intermediaries

**Formula funding is predictable
(it's what built America's imbalanced system)**

May be only education-workforce issue both parties agree on

After We Fix Funding

- 1 Establish occupational frameworks
- 2 Improve registration and make RAPIDS useful
 - 800 pages of proposed new regulations is wrong direction
 - “Consumer protection” ethos for apprentices is wrongheaded as today’s registered apprenticeships do a better job of protecting “consumer” than any other postsecondary pathway
- 3 Establish a federal system
- 4 Define youth apprenticeship
- 5 Marketing
- 6 Whither unions?

Fundamental Problem

Thinking of (and funding) apprenticeships like workforce development/training programs, which are largely unaccountable, ineffective, and underfunded.

Apprenticeships are not training programs.

They are jobs.

The Apprenticeship Ecosystem We Need

Intermediaries knocking on employer doors in every market, yielding tens of thousands of new apprenticeship programs in tech, healthcare, financial services, etc.

All registered



Useful federal database/directory of apprenticeship programs hiring apprentices

Relied on by students in high school, community college, college, grad and professional school as they consider first jobs and career launch

Meanwhile, Back in the UK



[Home](#) > [Education, training and skills](#) > [Further and higher education, skills and vocational training](#)
> [Apprenticeships, traineeships and internships](#)

Press release

Apprenticeships boosted under plans to broaden UCAS

Young people will soon be able to search and apply for apprenticeships on UCAS

Apprenticeship's New Cousin: Career Pathways



- Custom-built career pathways for frontline workers to prepare and qualify for “gateway” jobs

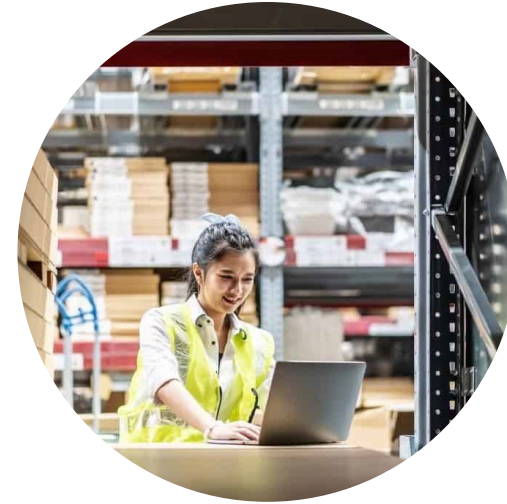


- Clear career trajectories
- Feed progression data to hiring managers so they can target near-grads with messaging about better jobs they should start applying to.

Apprentice Nation



As many large-scale apprenticeship programs as colleges and universities; as many apprentice jobs as frosh places



Expectation that frontline jobs (including retail and warehouses) will include internal career pathways

We Object!

- Discovery
- Too narrow (limiting future career choices)
- What about Liberal Arts?



- Apprenticeships as pathways for college grads
- Who's objecting?

Compare Median College Student to Apprentice Worst Case



- ~50% fail to complete
- Of those who complete, ~40% graduate into underemployment
- Median student underemployed, unable to repay loans



- After 2-3 years, apprentice decides she doesn't like the profession one bit
- But she's earned and learned about her interests and capabilities...
- Better positioned to make a more informed decision about postsecondary education

Apprentice Nation Also Solves Market Failure



Why is higher education suffering from crises of completion, affordability, and employability?



Information asymmetry

- Colleges know what programs are not producing returns for students (or ought to know)
- Students have no earthly idea
- Especially young, inexperienced, unemployed, and underemployed job seekers

Lemons



- Higher education is the 2020s version of the 1970s used car market
- Results of millions of bad decisions: unaffordable student loan debt, underemployment, impeded socioeconomic mobility, and social and political disorder
- Side effect is keeping bad colleges and programs in business
- Fix by making sure students have better information when they decide

Change Orthodoxy by Changing Order



Two good options for full-time work after high school:

1. Apprenticeships
2. Frontline jobs with career pathways

Gain:

- Work experience
- Confidence they're able to support themselves
- Soft skills
- Information and insight on their own interests and strengths

Will increase work during high school (which has fallen by half)

**More of a fair
information
fight**

What Can Colleges Do?

- Low-intervention intermediaries (RTI + registration)
- High-intervention intermediaries (path from here to there?)
- Apprenticeship degrees

Apprentice Nation Is Solution For Economic Mobility



Unique among education and workforce development models, apprenticeships have the potential to unify the country. There may be no other way to reach dislocated and disaffected young people who don't want a handout. They want work, but not dead-end work. They want work with an opportunity for advancement.



When apprenticeship programs are found in every region of the country providing paid points of entry into technology, healthcare, financial services and other fast-growing sectors, when we have as many large-scale apprenticeship programs as colleges, education will look different. It will be nation-altering and perhaps nation-saving.