



CareerWise
Colorado

PROGRAM LEARNING REPORT

CAREERWISE COLORADO

2022

TABLE OF CONTENTS

INTRODUCTION.....	3-5
HIRING.....	6-10
SPRING 2022 APPLICANTS.....	11
SPRING 2022 HIRES.....	12
RETENTION.....	13
SATISFACTION.....	14
RELEVANCE AND VALUE.....	15-16
ON-THE-JOB LEARNING.....	17
APPRENTICE CHALLENGES.....	18
SUPERVISOR CHALLENGES.....	19
SUPPORTS FOR APPRENTICES.....	20
SUPPORTS FOR SUPERVISORS.....	21
EMPLOYER PROFILE.....	22
EMPLOYER IMPACT.....	23
ATTRITION.....	24-25
LEARNING.....	26
CREDENTIALS.....	27
COURSEWORK.....	28
COMPLETER PERCEPTIONS OF COURSES AND CREDENTIALS.....	29
COMPLETION.....	30
2019 COMPLETER OUTCOMES.....	31
WHO ARE THE COMPLETERS?.....	32
2019 HIRED COHORT OUTCOMES.....	33
VALUE OF APPRENTICESHIP.....	34
SOCIAL CAPITAL.....	35
NEXT STEPS.....	36

INTRODUCTION

CareerWise Colorado is a learning organization. The ability to ask questions, question assumptions, analyze and re-think are steadfast allies in our relentless effort to enable scale.

The ways in which we learn as an organization have evolved alongside changes and growth in the program. As we mature and adapt, we amass more data and more questions to answer. Building useful evidence about “what works” and gaining insights that inform the bearings we set are, therefore, as much about clear learning priorities as they are about data, analytics or visualization.

This year, we are piloting the use of a learning agenda to frame the stories we tell and insights we highlight through our data. This approach is a step away from reporting out on specific data collection efforts (e.g. competency evaluation or survey). This report summarizes evidence built in relation to those questions for the 2021-2022 program year. This fall, we will refine this annual learning and evaluation process to create a more refined and targeted learning agenda for 2022-2023.

The following learning questions were developed with CareerWise Colorado (CWC) leadership. The intent is for the answers to these questions to be of high strategic and tactical value to leaders implementing the program. Unsurprisingly, though, they are also high priority questions for the broader CareerWise network and national field. Many new programs are experiencing early successes and growing pains. Sharing relevant insights will, ideally, catalyze collective growth.

The first two questions below relate to performance over a specific program year and to the quality of program implementation. The latter three questions relate to program outcomes. In both cases, the time period within which we restrict analysis is key to generalization. In this report, we describe observations based on program data from 2022. As we hone our learning agenda, we will focus more on identifying relationships between data and on sharing trends across multiple program years.

- **Are we serving intended populations for the Core Program and Equity First?**
- **Are our key stakeholders deriving satisfaction and value from participation/partnership?**
- **What are the drivers of apprentice retention and how do they differ by demographic?**
- **How much/to what extent are apprentices learning? How do learning outcomes differ by demographic?**
- **Who is completing and what are they going on to do? How do completion outcomes differ by demographic?**

Are we serving intended populations?

- **Students of color are slightly over-represented within CWC relative to state demographics.** Within school districts, the picture is more complicated. **Students of color are not overrepresented among CWC apprentices relative to the demographics of our two biggest school district partners. However, some sub-groups are.** Outside Denver Public Schools and Cherry Creek School District, no district sent more than 25 students to the program in July 2022. These small sample sizes make it difficult to assess representativeness.
- **Occupational segregation is a threat CWC must take seriously in order to ensure program outcomes are equitable.** Gender equity has not been a focus of recruitment or programming, but there is evidence of gendered occupational segregation forming in the make up of our pathways. **Women are overrepresented in some pathways for which there is less evidence of a clear path to economic mobility.** We did not look at race and gender together for this analysis, but the critical interplay of the two means that working to maximize outcomes only around race/ethnicity ignores the role gender plays in creating additional barriers for women of color.

Are our key stakeholders deriving satisfaction and value from partnership?

Overall satisfaction among apprentices and employers is strong, with the greatest room for improvement with employers and newer apprentices.

- Apprentices generally feel their **work environments are comfortable, supportive and inclusive**, but for some, **less structured by a clear training and related instruction plan and consistent supervisor interaction** and feedback than would be optimal.
- Apprentices generally report that **CWC provides an effective resource** when they have questions or are experiencing a challenge.
- **Employers are much less racially/ethnically diverse than CareerWise apprentices.** This may have implications on mentorship and relationship building, inclusion and belonging.
- Employers are, for the most part, **impressed with the preparedness and rate of upskilling of their apprentices** but are still **struggling to meaningfully integrate them** into their workplaces, both personally/culturally and with regard to work.
- The **benefits employers thought they would receive from YA generally match up with those employers perceive** they are receiving. Some of the impacts we have hypothesized as highly beneficial appear to be less important to our business partners.

What are the drivers of apprentice retention and how do they differ by demographic?

- **In this report, we don't conduct analysis to directly answer this broad question.** However, the recently published Harvard Project on Workforce Report (<https://www.pw.hks.harvard.edu/post/careerwise>) does address this question by relating elements of past satisfaction surveys as well as pathway and demographic characteristics to retention and completion.
- Looking at the flip side of retention, attrition, we observe **the risk to exit for the 2020 and 2021 cohorts was highest in the first year and summer**, a finding that has been substantiated in earlier cohorts, as well. This pattern may be disrupted by the larger number of senior starters in the 2022 cohort, who it's been hypothesized may have more targeted motivation and awareness of their goals going into the programs.

How much/to what extent are apprentices learning? How do learning outcomes differ by demographic?

- **This report will be updated with analysis of competency evaluation data from both evaluation cycles this year.** Competency evaluation data is our main source of information on what, when and how apprentices are learning.
- **Learning from related instruction is hard to measure.** We should explore the assumption that it is captured in competency evaluation, which theoretically measures application of learning gained both on-the-job and in the classroom.
- There is room for improvement in ensuring **apprentices understand coursework and credentials as components of a holistic training plan** and know how and when they will be incorporated into their apprenticeship.

Who is completing and what are they going on to do? How do completion outcomes differ by demographic?

- **2019 cohort completers are employed in their training pathway at a high rate (71%).** Many (40%) are also enrolled in full or part-time postsecondary education.
- **Women are underrepresented among completers and Hispanic/Latinx apprentices are overrepresented among completers** relative to the non-completers of the 2019 cohort.
- Completing apprentices report valuing the acquisition of **hands-on work experience ahead of their peers, building skills, developing professional relationships and becoming more self-confident and self-assured.**

With finite resources, we must ensure we are serving the students for whom the opportunity of youth apprenticeship will be most impactful.

Who are we serving?

In the Core Program, CWC aims to represent or over-represent students of color and low-income youth relative to the demographics of partnering districts and the broader demographics of our communities. We analyzed the demographic makeup of Denver Public Schools (DPS)¹ and Cherry Creek School District (CCSD)² apprentices from the 2020-2022 cohorts, depicted below. (DPS and CCSD are the districts that CWC apprentices, by a significant margin, most frequently attend school in).

- **Black, American Indian/Alaskan Native, and Native Hawaiian or other Pacific Islander apprentices are overrepresented relative to CCSD and DPS demographics.**
- **Asian apprentices are on par or overrepresented.**
- **Hispanic students are underrepresented.**

Cherry Creek School District						
	Black	White	Asian	American Indian/Alaskan Native	Native Hawaiian or other Pacific Islander	Hispanic/Latinx
CareerWise	14%	66%	8%	3%	1%	6%
District	11.8%	49.6%	9%	.5%	.4%	20.9%

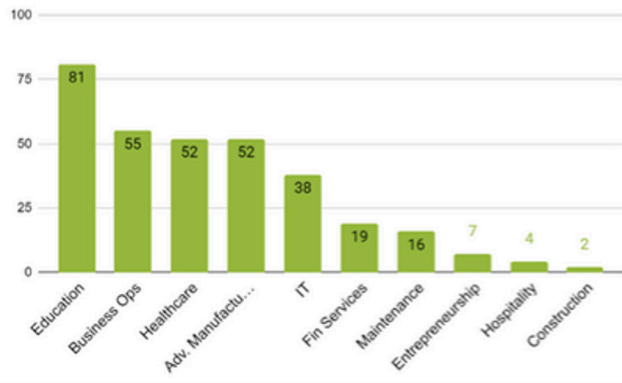
Denver Public Schools						
	Black	White	Asian	American Indian/Alaskan Native	Native Hawaiian or other Pacific Islander	Hispanic/Latinx
CareerWise	29%	18%	6%	3%	1%	12%
District	13.7%	25.3%	3%	.6%	.6%	51.7%

¹ Source: Cherry Creek School District <https://www.cherrycreekschools.org/Page/4134>

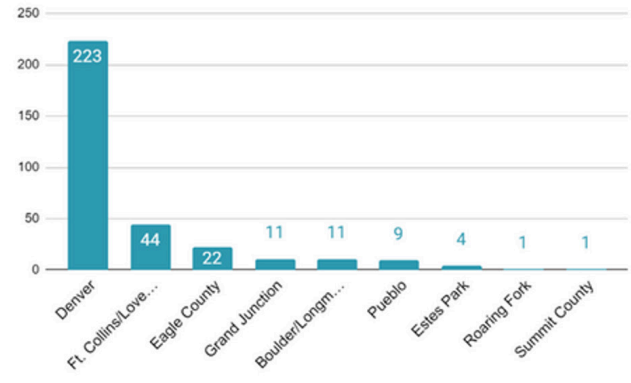
² Source: Denver Public Schools <https://www.dpsk12.org/about/facts-figures/#students>

We also looked, more broadly, at a snapshot of active apprentices after the conclusion of the 2021-2022 program year (July 2022). There were **326 active apprentices** at the time. They are **predominantly based in the Denver metro**, with Ft. Collins/Loveland standing out as the community outside Denver with the most apprentices. **Education is currently the pathway with the most apprentices**, by a notable margin, and there are **more female-identifying apprentices** than male-identifying.

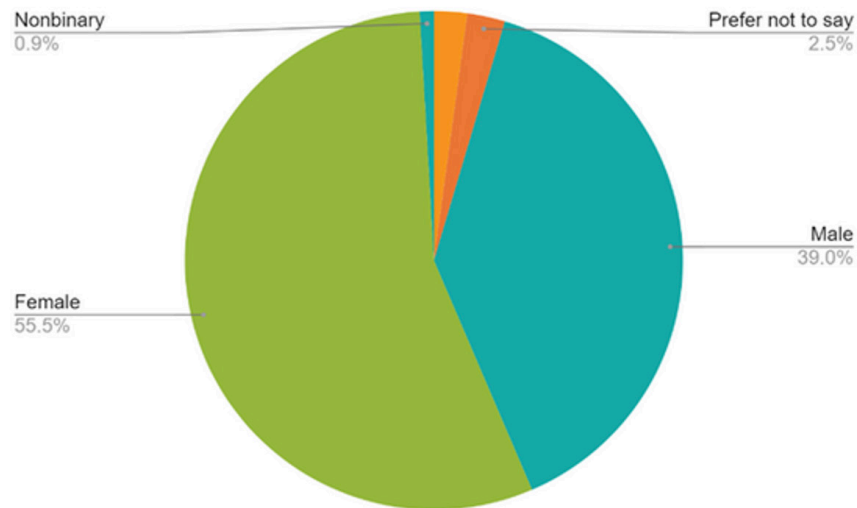
Active Apprentices by Pathway



Active Apprentices by Geography



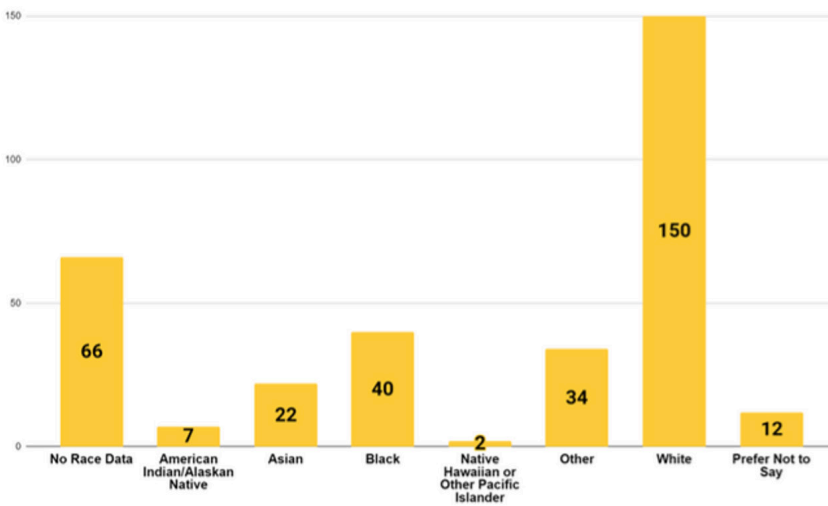
Active Apprentices by Gender



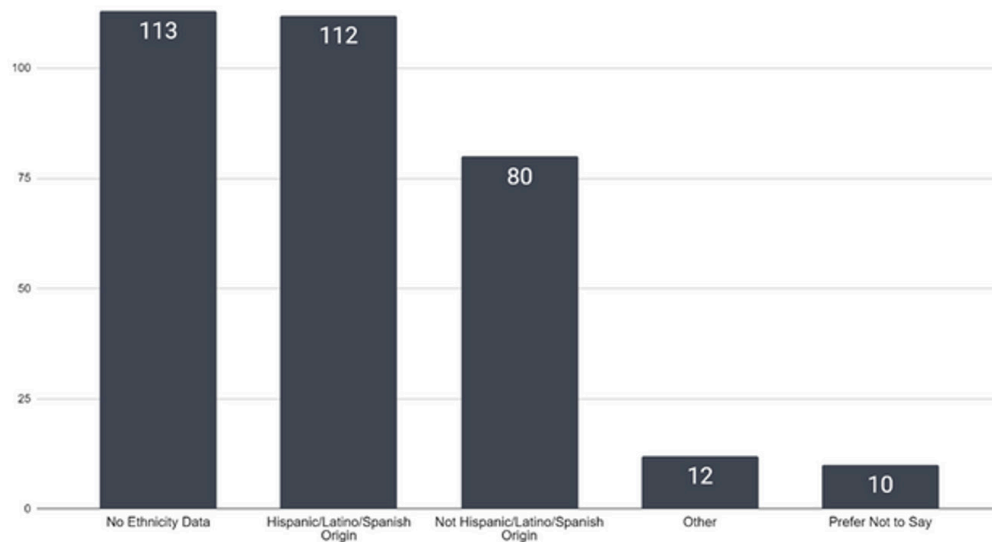
The statewide CWC apprentice population in July 2022 included a lower proportion of white individuals than residents at the state level, according to U.S. Census Bureau data. Proportions of minority apprentices generally exceed state-level demographics.

- White individuals made up 37% of apprentices and 86.5% of the state.
- Black individuals made up 10% of apprentices and 4.7% of the state.
- Asian individuals made up 6% of apprentices and 3.6% of the state.
- Hispanic individuals made up 28% of apprentices and 22.3% of the state.
- American Indian/Alaskan Native individuals made up 2% of apprentices and 1.7% of the state.

Active Apprentices by Race



Active Apprentices by Ethnicity

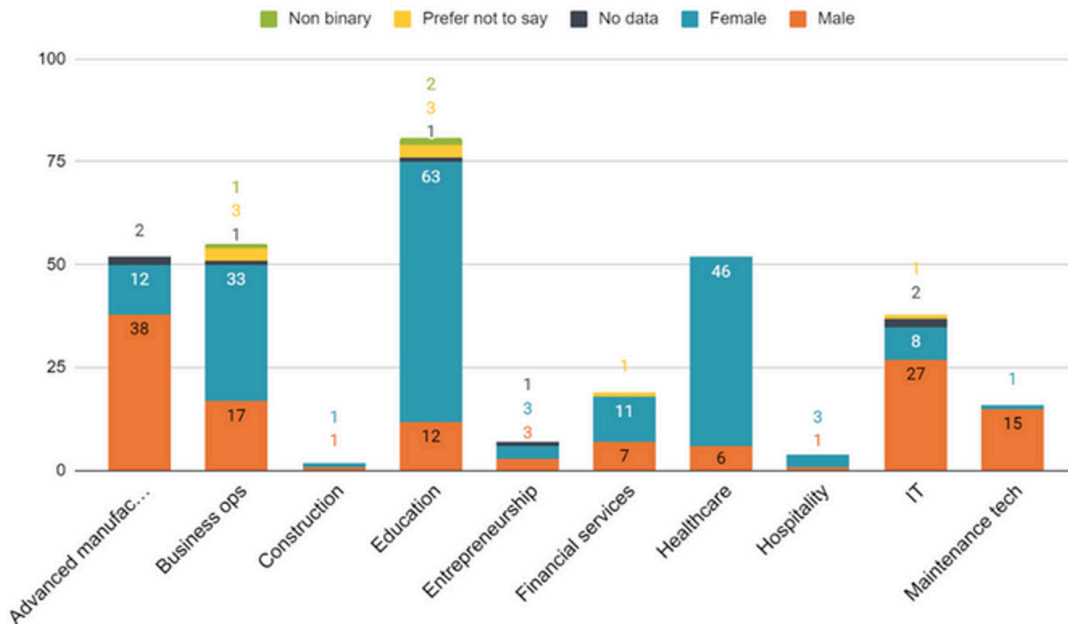


Please note that race/ethnicity categories are no longer mutually exclusive in our database and that apprentices can select more than one “race” category. We are, therefore, mid-stream in changing the way we report on race/ethnicity. In the future, race and ethnicity will always be broken out as separate and overlapping categories.

³Source: <https://www.census.gov/quickfacts/CO>; as of July 2022

CWC strives to ensure that race, ethnicity and gender are not predictors of pathway enrollment. Though all CareerWise occupations meet standards for projected opportunity, there remain significant differences in growth, wages, education requirements and ease of navigability. **Occupation and pathway choice are unignorable variables in the “outcomes equation.”** And, just as occupations and pathways are associated with differences in future potential, they are also highly associated with race, ethnicity and gender. Without careful attention to racial, ethnic and gendered patterns in occupation and pathway enrollment, **CWC risks replicating the occupational segregation gripping the national labor market**, which ensures that minorities and women have slower and more difficult journeys through career pathways and make less money, on average, in doing so.

Current Apprentice Pathway Breakdown – By Gender

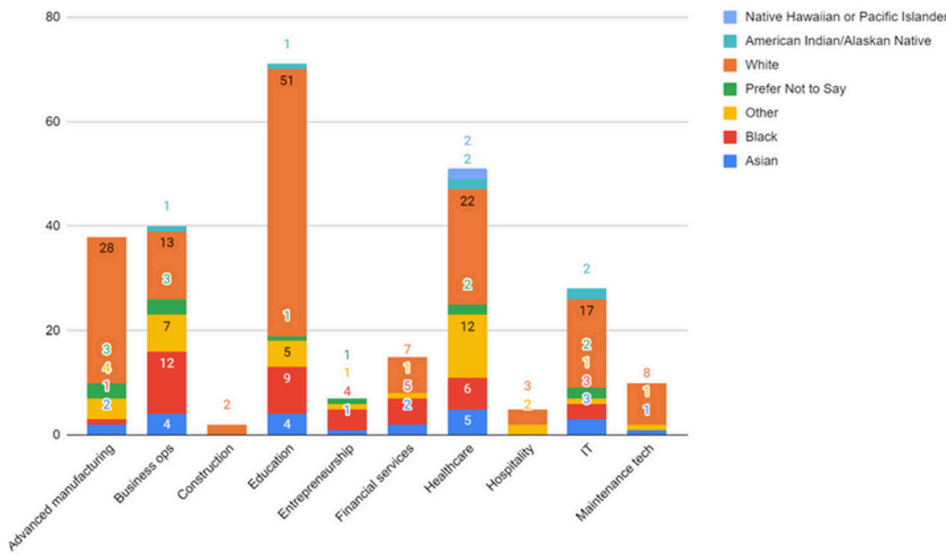


IT is made up mostly of apprentices who identify as men, and education is made up mostly of apprentices who identify as women, ratios reflected in national industry data.

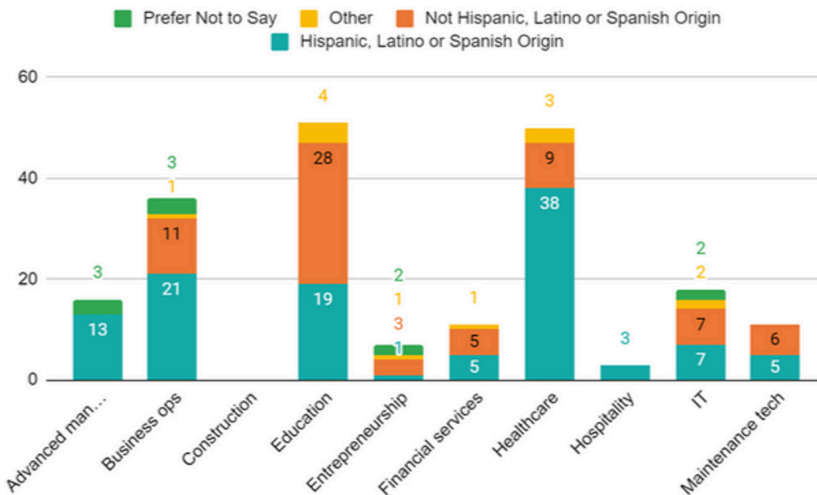
Comparison of Current Active to National Industry – By Gender

	CareerWise Colorado (current active as of July 2022)	National
Advanced Manufacturing	23% identify as female; 73% as male	30% identify as female (US Census Bureau via Department of Commerce: https://www.commerce.gov/news/blog/2021/03/making-place-women-manufacturing)
Education	78% identify as female; 15% as male	77% of <u>public school</u> teachers identify as female; 23% as male (National Center for Education Statistics: https://nces.ed.gov/programs/coe/indicator/ctr/public-school-teachers)
Financial Services	58% identify as female; 37% as male	52% identify as female at the entry level, but representation falls off at each higher level (McKinsey: https://www.mckinsey.com/industries/financial-services/our-insights/closing-the-gender-and-race-gaps-in-north-american-financial-services)
Healthcare	88% identify as female; 12% as male	88% of RNs identify as female (Bureau of Labor Statistics: https://www.bls.gov/cps/cpsaat11.htm)
IT	21% identify as female; 71% as male	Women comprise 25% of the “computing” workforce (Pew: https://www.pewresearch.org/short-reads/2021/04/14/6-facts-about-americas-stem-workforce-and-those-training-for-it/); 25% of “technical roles” in tech companies (Deloitte: https://www2.deloitte.com/us/en/insights/industry/technology/technology-media-and-telecom-predictions/2022/statistics-show-women-in-technology-are-facing-new-headwinds.html)

Current Apprentice Pathway Breakdown – By Race



Current Apprentice Pathway Breakdown – By Ethnicity



CWC apprentices are generally more diverse than national industry benchmarks. However, white apprentices are predominant in advanced manufacturing, education, IT and maintenance.

Comparison of Current Active to National Industry – By Race/Ethnicity

	CareerWise Colorado (active as of 7/2022)*	National
Advanced Manufacturing	54% white; 2% Black; 25% Hispanic/Latinx; 4% Asian	79% white; 11% Black, 17% Hispanic/Latinx; 7% Asian (Bureau of Labor Statistics: https://www.bls.gov/cps/cpsaat18.htm)
Education	63% white; 11% Black; 23% Hispanic/Latinx; 11% Asian	80% white; 6% Black; 9% Hispanic/Latinx; 2% Asian (National Center for Education Statistics: https://nces.ed.gov/programs/ipeds/data/indicator/cir/public-school-teachers)
Financial Services	37% white; 26% Black; 26% Hispanic/Latinx; 11% Asian;	61% white; 10% Black; 9% Hispanic/Latinx; 17% Asian; 3% Native Hawaiian/Pacific Islander (at entry level) (McKinsey: https://www.mckinsey.com/industries/financial-services/our-insights/racial-equity-in-financial-services)
Healthcare	42% white; 12% Black; 73% Hispanic/Latinx; 10% Asian; 4% American Indian/Alaskan Native; 4% Native Hawaiian/Pacific Islander	74% white; 15% Black; 8% Hispanic/Latinx; 9% Asian; (RNs - Bureau of Labor Statistics: https://www.bls.gov/cps/cpsaat11.htm)
IT	45% white; 8% Black; 13% Hispanic/Latinx; 8% Asian; 5% American Indian/Alaskan Native	70% white; 6% Black; 8% Hispanic/Latinx; 21% Asian (Computer programmers - Bureau of Labor Statistics: https://www.bls.gov/cps/cpsaat11.htm)

*Interpret these percentages as "X% of apprentices identify as X" – apprentices can select more than one, so numbers don't add up to 100%

SPRING 2022 APPLICANTS

63 companies* participated in CWC's spring 2022 hiring cycle, posting a total of 187 slots. On average, CWC secured approximately 3 slots per company.

- 115 slots were committed to by new companies, which translated into 112 slots posted and 93 hires.
- 82 slots were committed to by renewing companies, translating into 77 slots posted and 66 hires.



Profiles vs. Applicants

556 students completed profiles this cycle. 324 of those who completed profiles, or 58%, actually submitted an application to an apprenticeship.



Lack of candidates

15% of jobs posted were canceled due to the company's stated inability to find a suitable candidate (7% of total slots).



Canceled posts

29% of jobs posted were canceled due to a company decision or lack of responsiveness (20% of total slots). Reasons for these cancellations, when available, include anything from change in company circumstances to lack of bandwidth to implement youth apprenticeship.



Gender Breakdown

Women created more profiles and applications than male students. Women created 310 profiles, while men created 221. 195 women, or 35% of profile creators, applied to one or more positions, while 119 men, or 21% of total profile creators, applied to one or more positions.

*Among companies who progressed to 'verbal commit' and who did not cancel their postings or disengage

SPRING 2022 HIRES

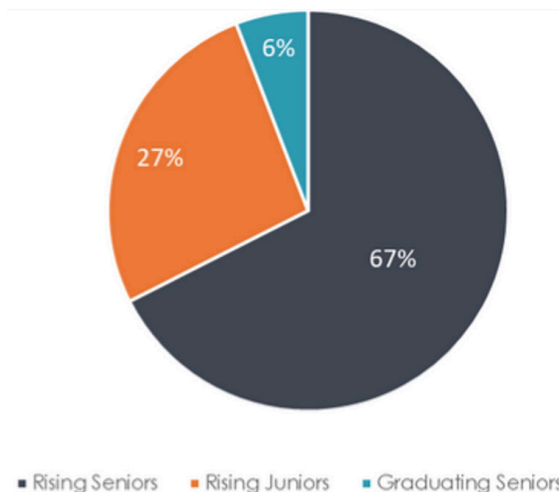
Advanced manufacturing, IT and entrepreneurship were the three pathways that filled 100% or more of their slots. Education and healthcare filled 87-90% of their slots. Business operations, financial services, hospitality and maintenance technology filled 57-62% of their slots.

Equity First slots continue to comprise a minority share of total CWC apprenticeship opportunities. There were 56 initial Equity First slot commitments, translating to 51 slots to post and 48 hires (a fill rate of 94%, approximately 10% higher than average).

However, while 40% of individual slots were designated Equity First, a majority of companies who posted one or more roles (approximately 63%) were Equity First-engaged.

2022 Hired Cohort Race, Ethnicity and Gender

	FEMALE	MALE	NON-BINARY	Total
Hispanic/Latinx	60	17		77
BLACK	1			1
INDIGENOUS	4	1		5
N/A	3			3
OTHER	24	10		34
PACIFIC ISLANDER	2			2
WHITE	26	6		32
Not Hispanic/Latinx	35	22	3	60
ASIAN	6	2		8
BLACK	7	6		13
INDIGENOUS	1	1		2
WHITE	21	13	3	37
No Ethnicity Reported	11	6		23
ASIAN	2			2
BLACK	4	4		8
N/A	2			8
OTHER		2		2
WHITE	3			3
Grand Total	106	45	3	160



Grade Levels of Spring 2022 Hires

Apprentices who begin their apprenticeship in senior year may complete in two years rather than the standard three. The selection of a higher proportion of rising seniors than juniors suggests employers' interest in the newly offered two-year model. However, this information is not sufficient to determine whether employers truly prefer a two-year model or whether they preferred the specific rising seniors who happened to apply to their positions. Two hypotheses of the two-year model are that a) employers desire a shorter commitment and b) they would appreciate the relatively higher maturity and career awareness of a rising senior than a rising junior.

RETENTION

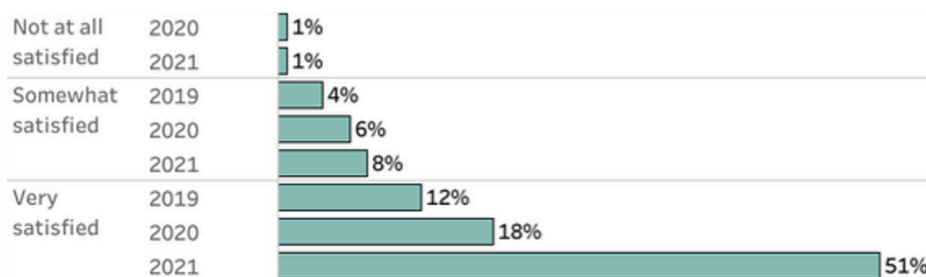
Are key stakeholders deriving satisfaction and value from participation? What are the drivers of retention?

CWC surveys active and completing apprentices and employers at the conclusion of the school year (2020 and 2021 employer surveys were cancelled due to the pandemic). The survey helps us gauge stakeholders' perceptions of program satisfaction and value. This information is useful for making immediate tweaks to tactics. It can also be an opportunity to learn more about the factors that inform retention. In the following pages, we share observed results, from which we can make informed guesses about how apprentice experience might encourage persistence. In the future, and in new research from the Harvard Project on Workforce, we aim to relate feedback on specific factors of apprentice experience to retention and completion.

Apprentice satisfaction is generally higher than employer satisfaction

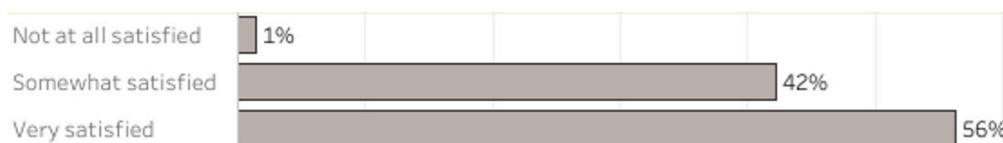


Apprentice satisfaction by cohort



Apprentice survey responses:
Total sample= 228
Responses= 136
(includes partial responses)
Response rate= 60%

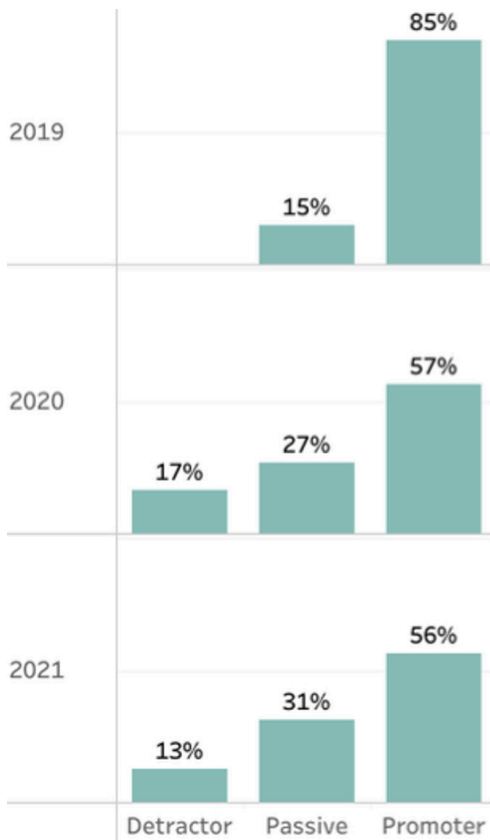
Employer satisfaction



Supervisor survey responses:
Total sample= 238 Responses= 79
(includes partial responses)
Response rate= 33%

SATISFACTION

Distribution of NPS Within Cohorts



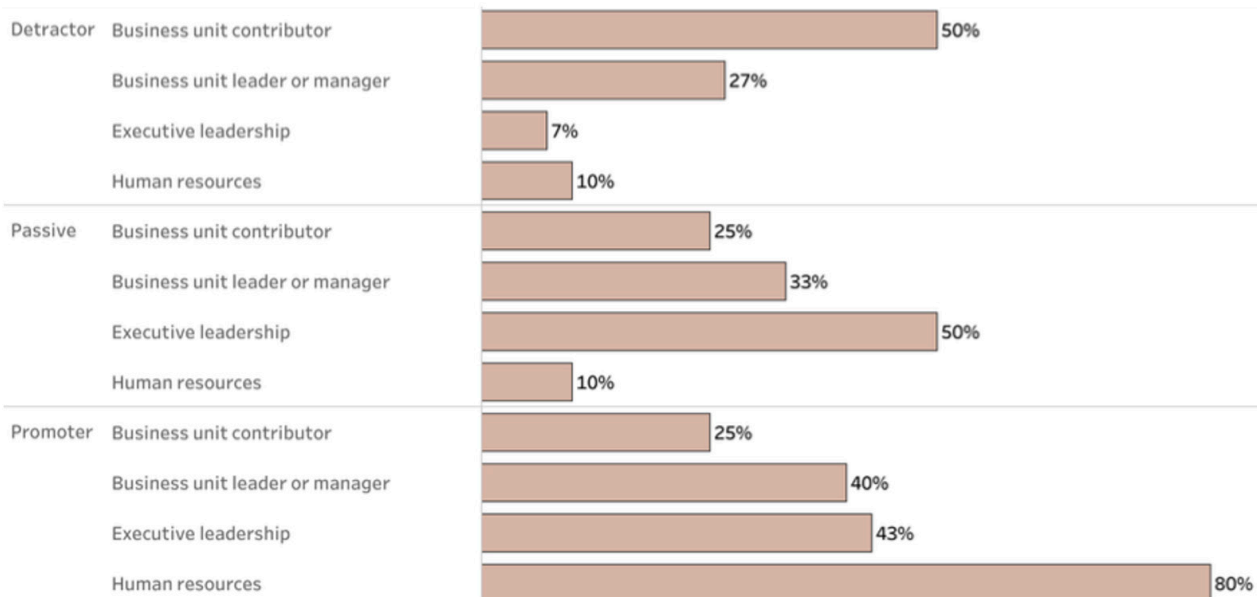
As in past years, the **share of promoters in each cohort tends to go up as tenure in apprenticeship increases**. Those apprentices who remain in the final year are, essentially, self-selected for high satisfaction.

Among employer survey respondents, **promoters were more likely to be in HR roles**. Passive respondents were driven by executive leadership, while business unit contributors are predominant among detractors.

“This experience has been an opportunity that continues to change and shape how I think about my future.”

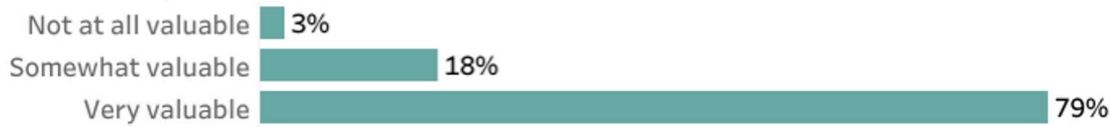
- CWC youth apprentice

Employer NPS by job role

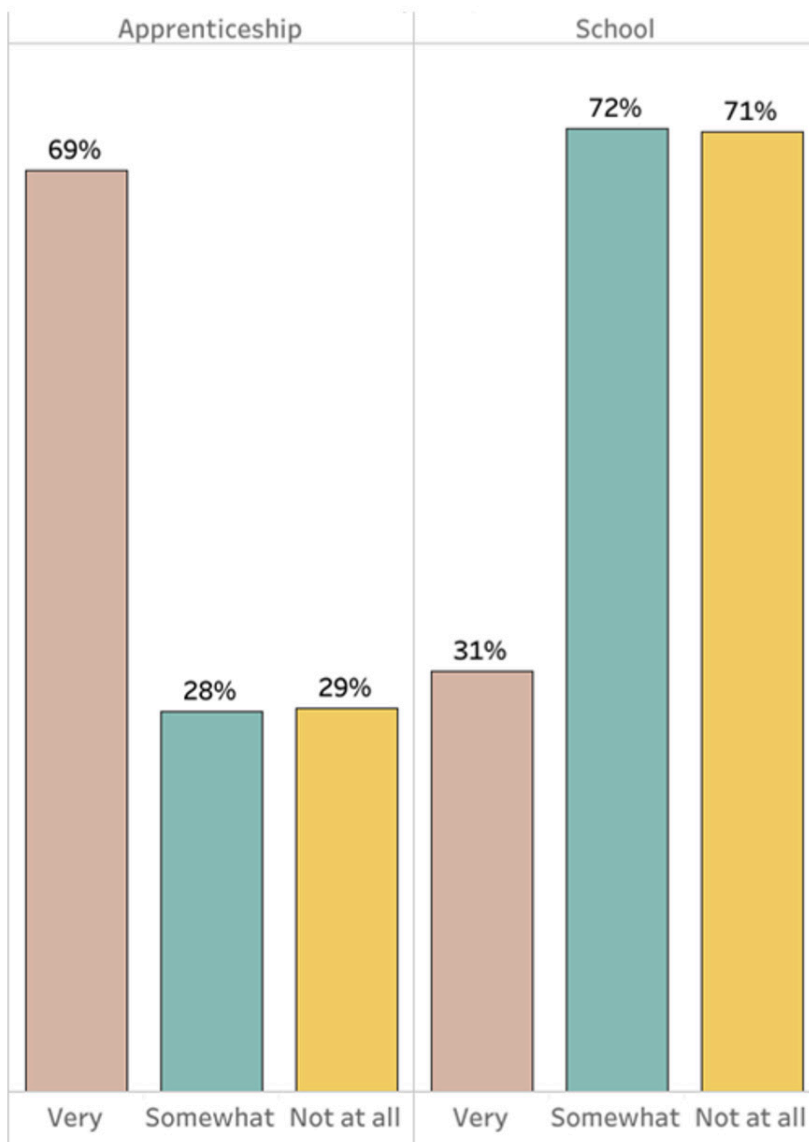


VALUE AND RELEVANCE

How valuable do you think your apprenticeship will be to your future career?



How relevant do you think what you have learned at school/apprenticeship is to your future career?



Nearly all apprentices who responded to the survey **believe the apprenticeship holds value to their future career.**

As in prior survey years, **apprentices tend to believe their apprenticeship is more relevant to their future career than school is.**

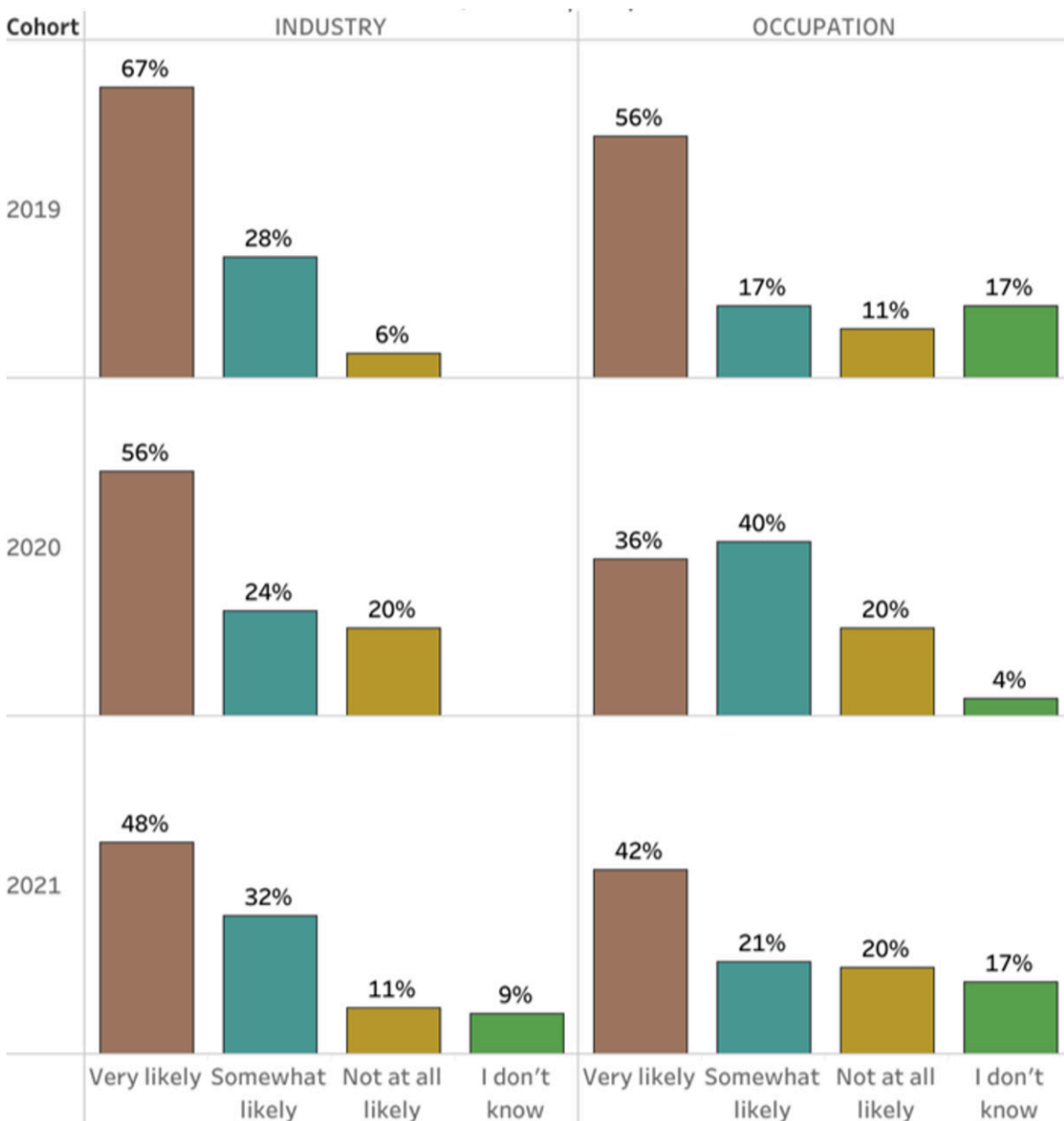
“This job has allowed me to grow in so many ways. I have been able to mature and learn.”

- CWC youth apprentice

Most apprentices who responded to the survey believe it is **at least somewhat likely that they will continue to work in the same industry and occupation after their apprenticeship**. Apprentices seem to be **more certain about their industry than they are about their specific occupation**.

If our intention is for apprenticeship to enable students to gain knowledge of career interests and goals, low likelihoods of continuation can be seen as equally “positive” as high likelihoods. However, the more tactical emphasis CWC places on facilitating strong matches during hiring, the more we should expect to see apprentices report higher levels of interest in continuation.

How likely is it that you will continue to work in the same industry/occupation after your apprenticeship?



ON-THE-JOB LEARNING

Apprentice perception of their work experience is largely positive among survey respondents. **Two areas of experience that hold room for improvement include a) following a designated plan for training and b) ensuring receipt of adequate feedback.**

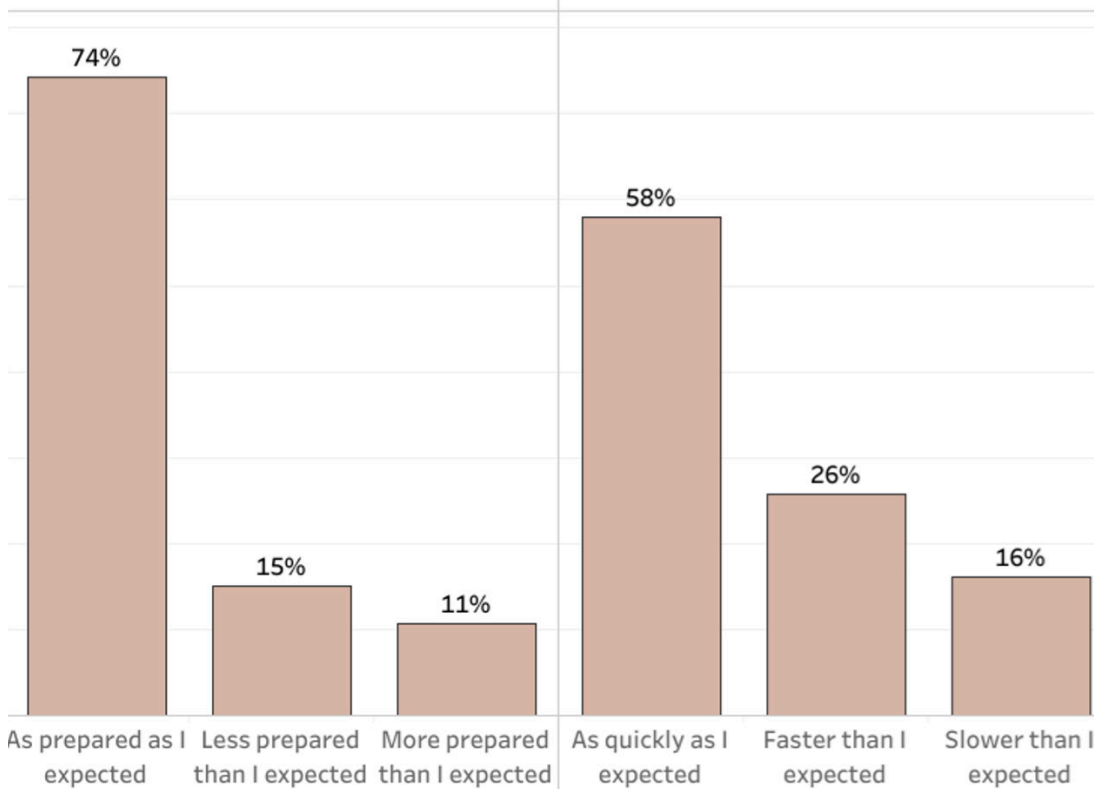
Apprentice perception of work experience

Responses	My supervisor cares about my learning and progression	My supervisor and I follow a plan for my training	I work on projects that make a difference to my team	I receive feedback that helps me learn and grow	I feel welcomed and included in my workplace	I am treated respectfully and fairly at my workplace	I interact w/ my supervisor once a week or more
Strongly agree	79%	45%	63%	58%	76%	74%	61%
Somewhat agree	14%	36%	29%	26%	17%	18%	22%
Strongly disagree	5%	9%	7%	10%	3%	2%	8%
Somewhat disagree	2%	9%	2%	6%	5%	6%	8%

Employer perception of apprentice readiness

How prepared for the first month of work was your apprentice(s) relative to your expectations?

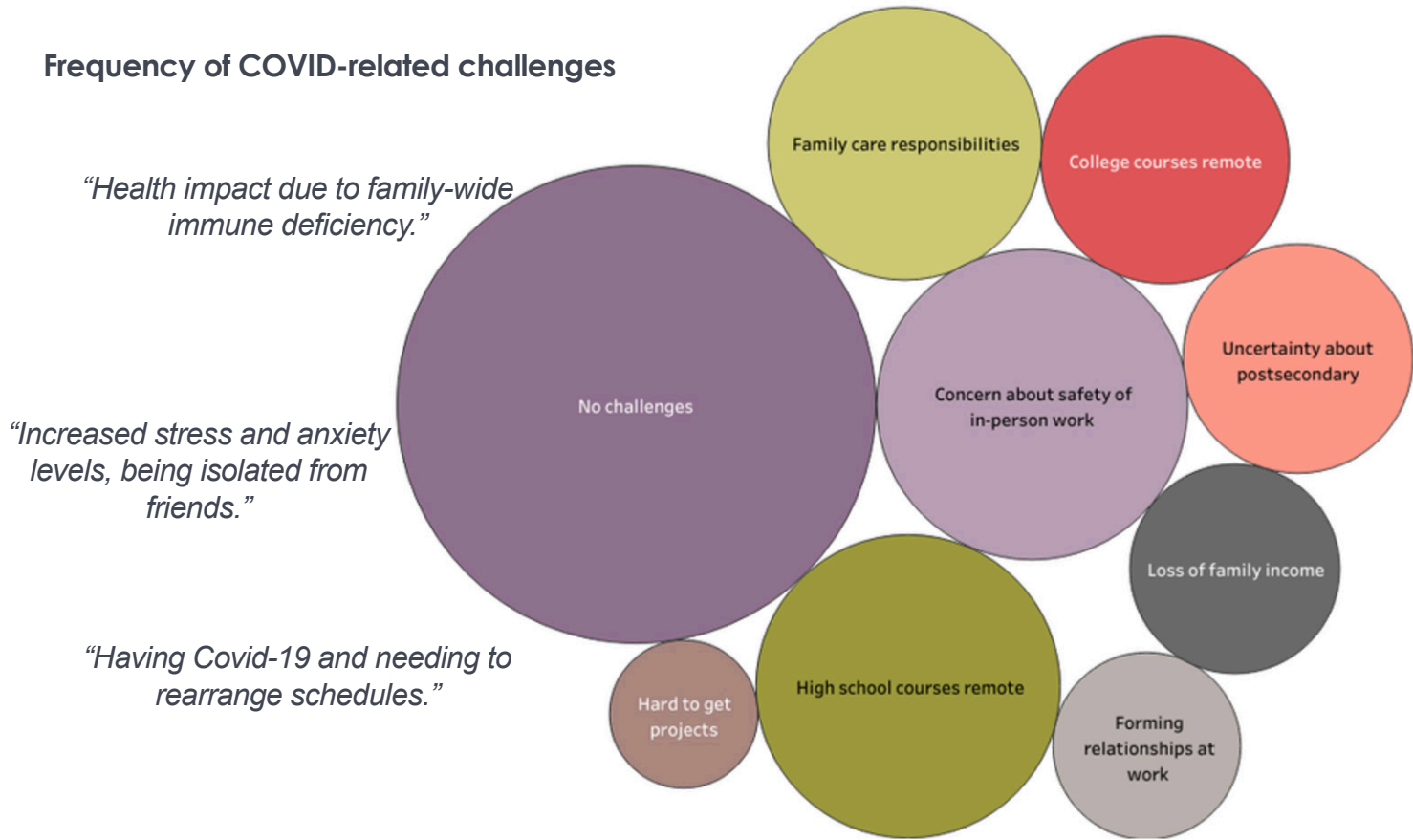
How quickly has your apprentice(s) accelerated productivity relative to your expectations?



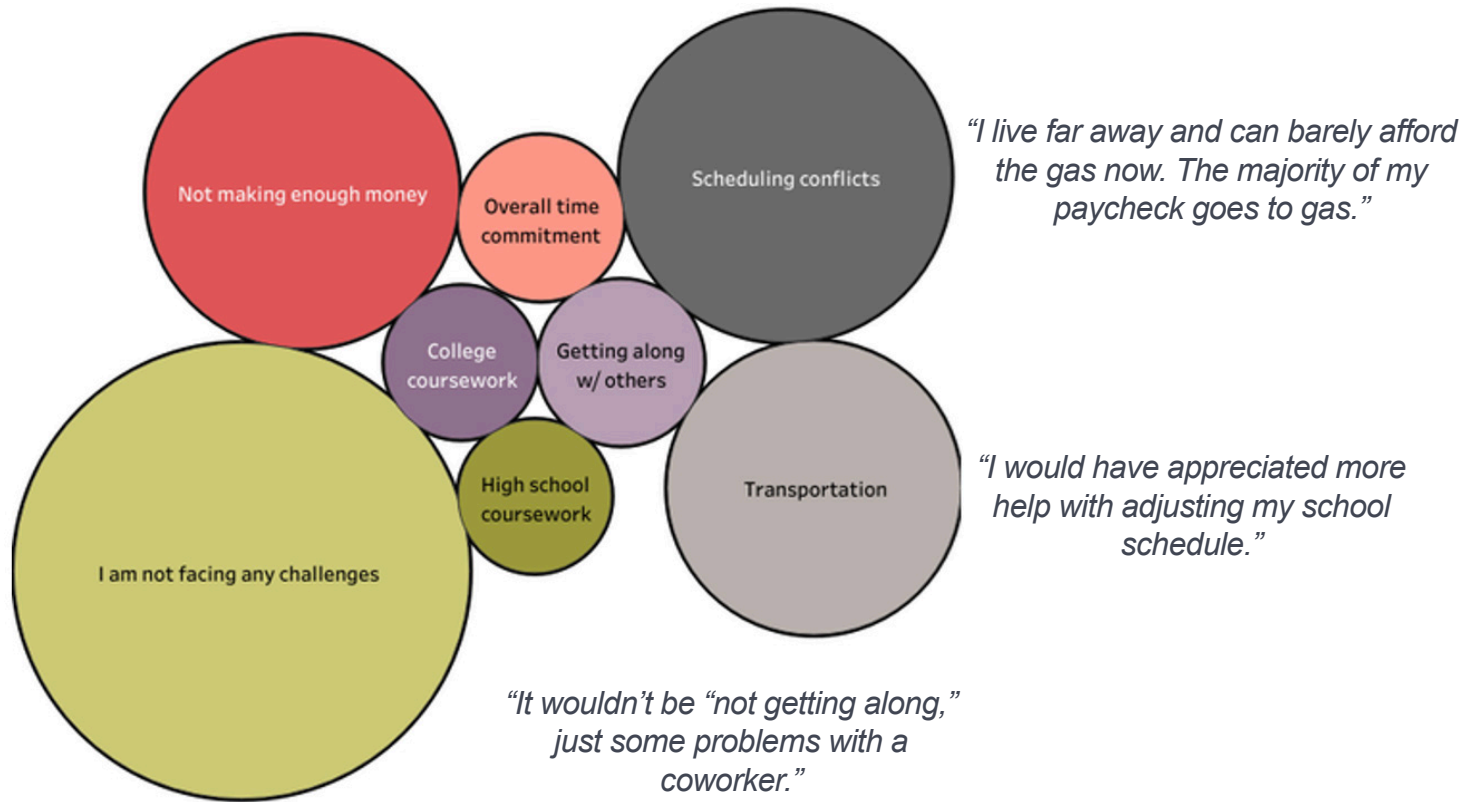
Employers who responded to the survey mostly felt their **apprentices were as prepared as expected**; the large majority of employer survey respondents' **apprentices accelerated productivity as fast or faster than they expected.**

APPRENTICE CHALLENGES

Frequency of COVID-related challenges



Frequency of non-COVID challenges



SUPERVISOR CHALLENGES

Though employers largely reported that apprentices are at least as prepared as expected and in many cases accelerate productivity faster than expected, **the challenge of apprentices' limited basic skills was still top of mind for survey respondents.** Even when apprentices meet or exceed expectations for preparation and getting up to speed, **the scope of training a young person in the workplace is not trivial.** Employers appear to be struggling, in particular, with **integrating their apprentices into their workplace culture and with identifying suitable tasks and projects.**

Frequency of employer challenges implementing youth apprenticeship



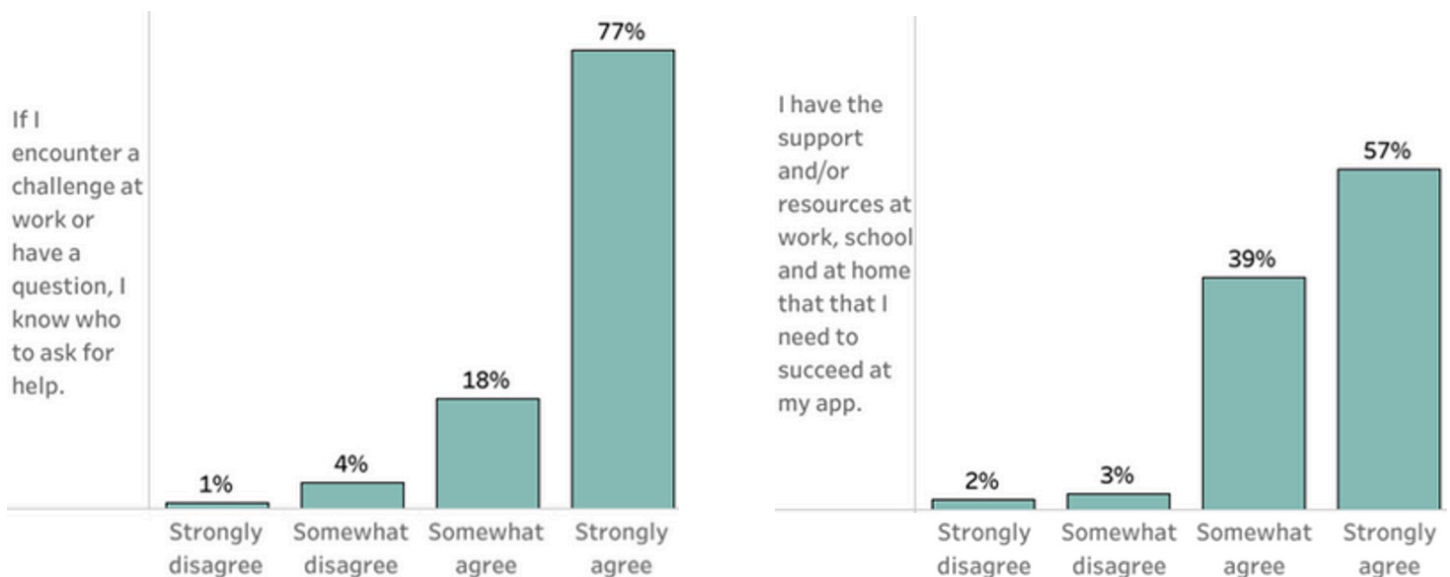
SUPPORTS FOR APPRENTICES

Please rate how valuable the following supports have been to you during your apprenticeship, if received.

Questions	Cohort	Very valuable	Somewhat valuable	Not at all valuable	Did not receive
Answering questions about program requirements	2020	46%	29%	4%	21%
	2021	40%	48%	1%	10%
	2019	82%	12%		6%
Helping me solve challenges at school or home	2020	18%	21%	4%	57%
	2021	19%	40%	3%	38%
	2019	33%	28%	6%	33%
Helping me solve challenges at work	2020	29%	29%	4%	39%
	2021	31%	34%	3%	32%
	2019	44%	6%		50%
Helping me/my supervisor build a training plan	2020	28%	21%	3%	48%
	2021	31%	37%	3%	29%
	2019	28%	50%		22%
Identifying a credential and plan to complete	2020	29%	21%	4%	46%
	2021	27%	33%	1%	39%
	2019	53%	24%		24%
Identifying college courses for me to take	2020	29%	14%	4%	54%
	2021	18%	18%	9%	55%
	2019	18%	24%	6%	53%
Review of my competency evaluations	2020	32%	21%	4%	43%
	2021	28%	37%	3%	32%
	2019	50%	33%	11%	6%

Apprentices were most unequivocal about **the value of CWC in answering questions about program requirements**. Supports that many apprentices seem not to have partaken in include identifying college coursework and credentials and solving challenges at home, school and work. Yet survey respondents **mostly know how to get the support they need and, in many cases, believe they already have it.**

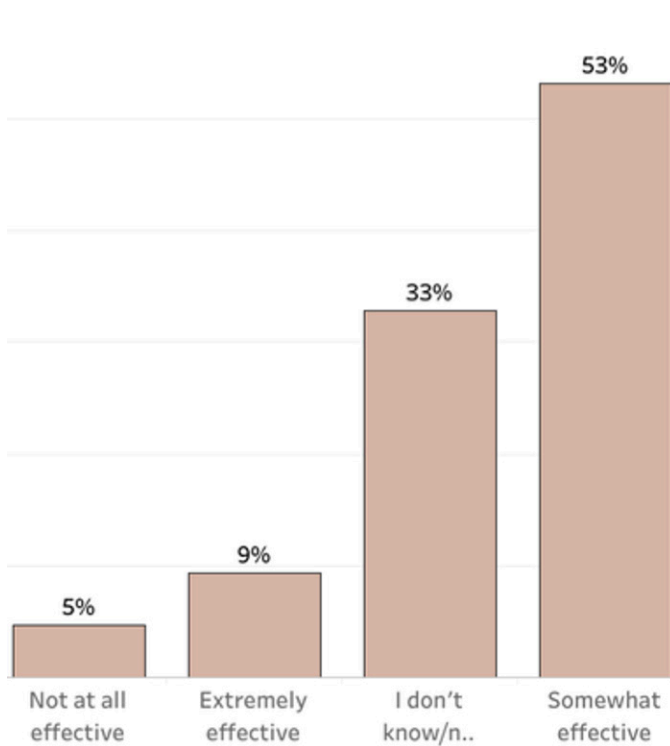
To what extent do you agree with the following statements about supports at your apprenticeship



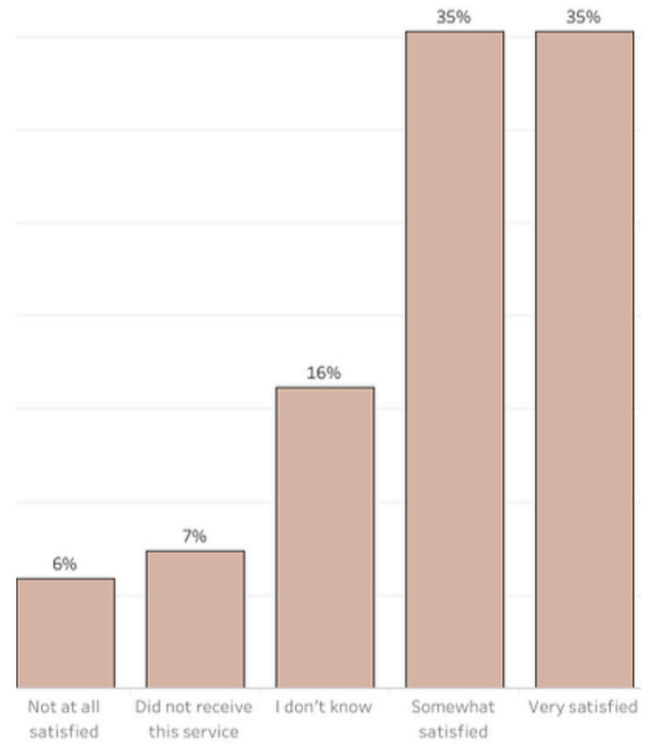
SUPPORTS FOR SUPERVISORS

Room for improvement in supervisor supports is most significant for competency evaluation, which is seen as extremely effective in helping supervisors train their apprentices among a only small minority of respondents.

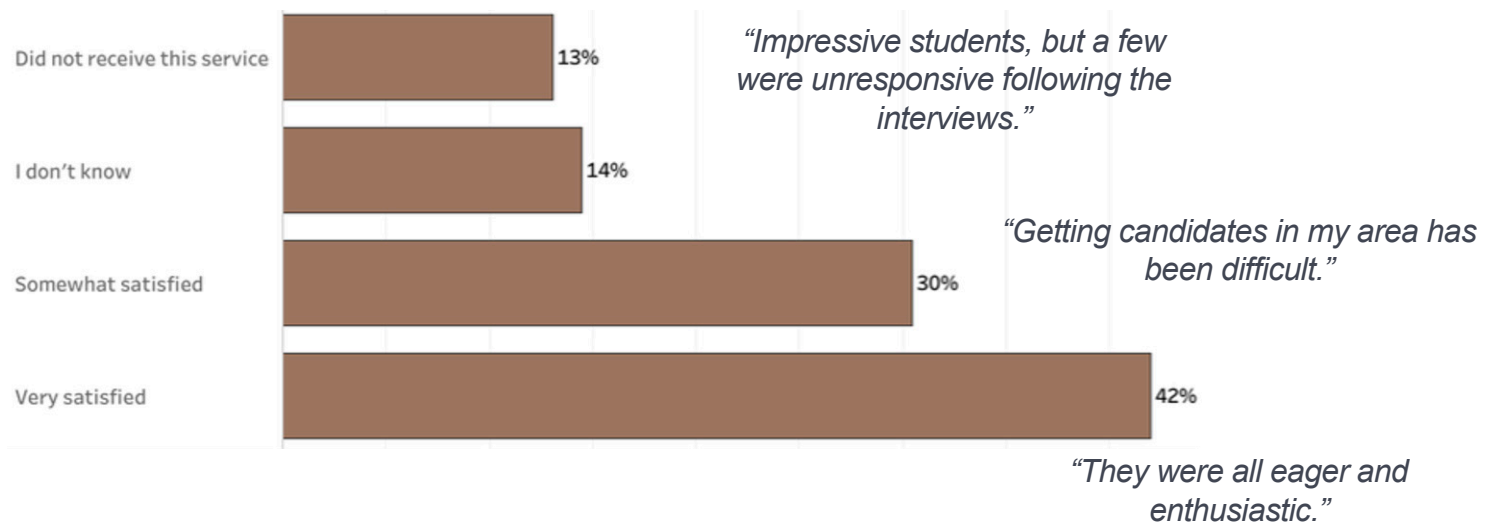
How effective is CareerWise's competency evaluation process in helping you train and upskill your apprentice?



How satisfied are you with the pool of candidates who applied to your position(s) during the most recent hiring cycle?



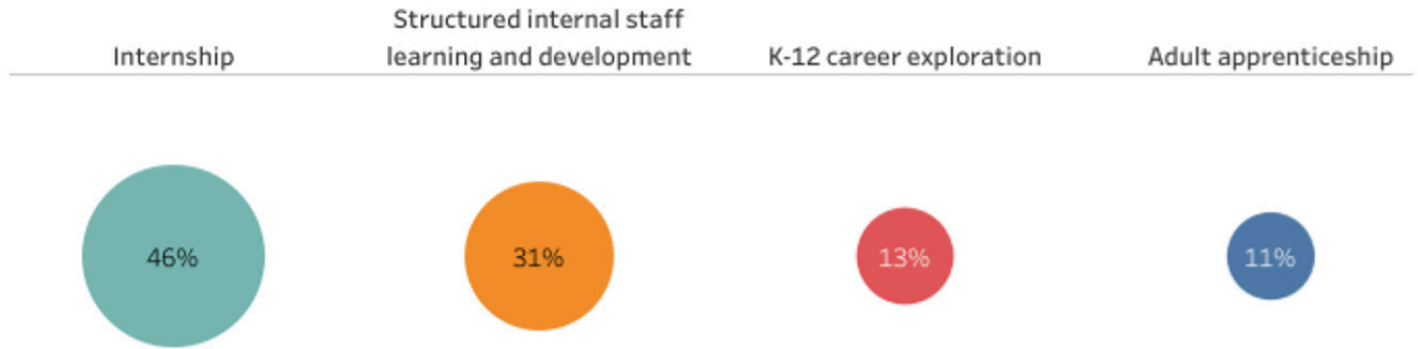
How satisfied were you with CareerWise's support during the most recent hiring cycle you participated in?



EMPLOYER PROFILE

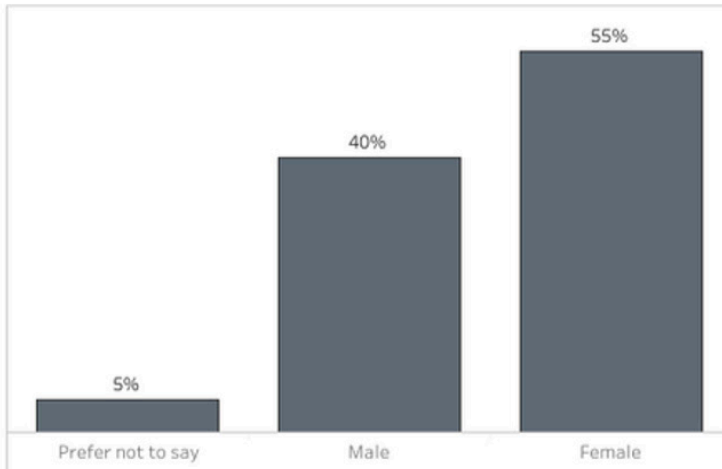
Survey results indicate that CWC is likely **many employers' first experience with apprenticeship**. Further, only approximately one third of survey responders have a structured learning and development program in their company. This may justify **higher levels of intervention/support for employers who are learning how to implement competency-based training and to grow staff capabilities through upskilling**.

Talent development programs (in addition to CW)

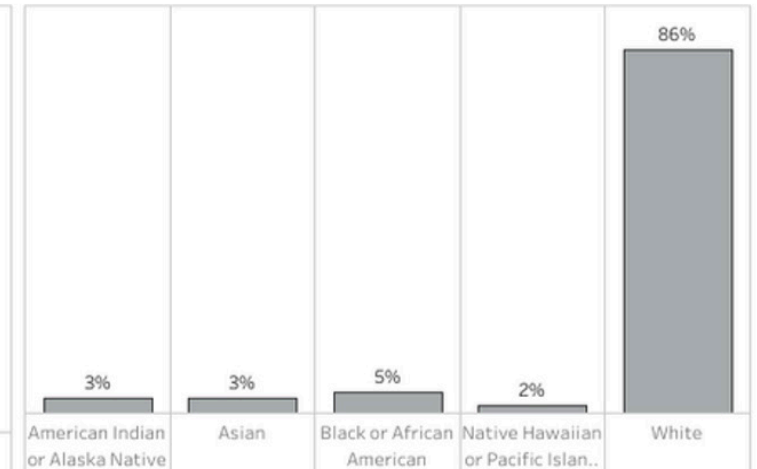


Employers who responded to the survey are less racially and ethnically diverse than the apprentices they employ. This finding should inform anti-bias and other supervisor trainings aimed at increasing employers' capacity to hire and retain apprentices whose life experiences differ from their own.

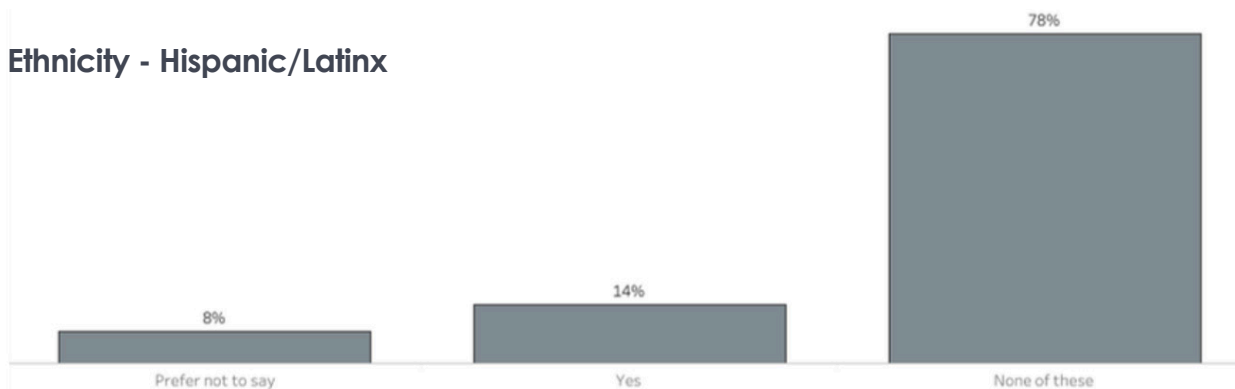
Gender Identity



Race



Ethnicity - Hispanic/Latinx



EMPLOYER IMPACT

There are many potential benefits to employers of adopting youth apprenticeship. Within CW, we hold a variety of hypotheses about the benefits that are most compelling to different types of business partners. Given how central employer adoption is to the expansion of the model and its impact, understanding employers' own perceptions about the value of youth apprenticeship is essential. In the survey results, we find that **some of the benefits we hypothesize as being valuable are not recognized as such (notably improving training capacity, reducing recruitment/training costs, and innovation); others are.**

What were the top 1-3 reasons your company launched CareerWise youth apprenticeship?

Company Type	Strategically developing a talent pipeline	Creating social impact in our community	Adding productive capacity	Increasing the diversity of company staff	Addressing a staffing shortage	Increasing innovation	Reducing recruitment or training costs	Improving capacity for training	Improving staff supervisory capabilities	Improving culture or morale
Advanced Manufacturing	11	4	6	2	4	2		2		1
Aerospace	3		1				2	1		
Automotive	2	1	2		1	1	1			
Business Services	3	2	1	2	1					
Creative Industries		1								
Education	4	3	1	3	3	1				
Electronics	1		1				1			
Energy & Natural Resources	1	1		1						
Financial Services	4	4	1	4		1	1			
Government	2	1								1
Healthcare & Wellness	3	4	2	6		2		1		
Non-Profit	2	1	5	2	2	1				1
Technology & Information	2	1	1		1	1	1	1	1	1

“Strategically developing a talent pipeline” was the most common reason employer survey respondents believe their company launched CW youth apprenticeship, by a notable margin. However, “adding productive capacity” was the actual impact most frequently noted. In terms of both potential and perceived impacts, the bottom and top five selections remain the same (though their position within the top or bottom five changes). Thus, the list of potential benefits narrows down to **five that are both desired and perceived (highlighted below).**

Has having an apprentice made a noticeable impact on any of those goals?

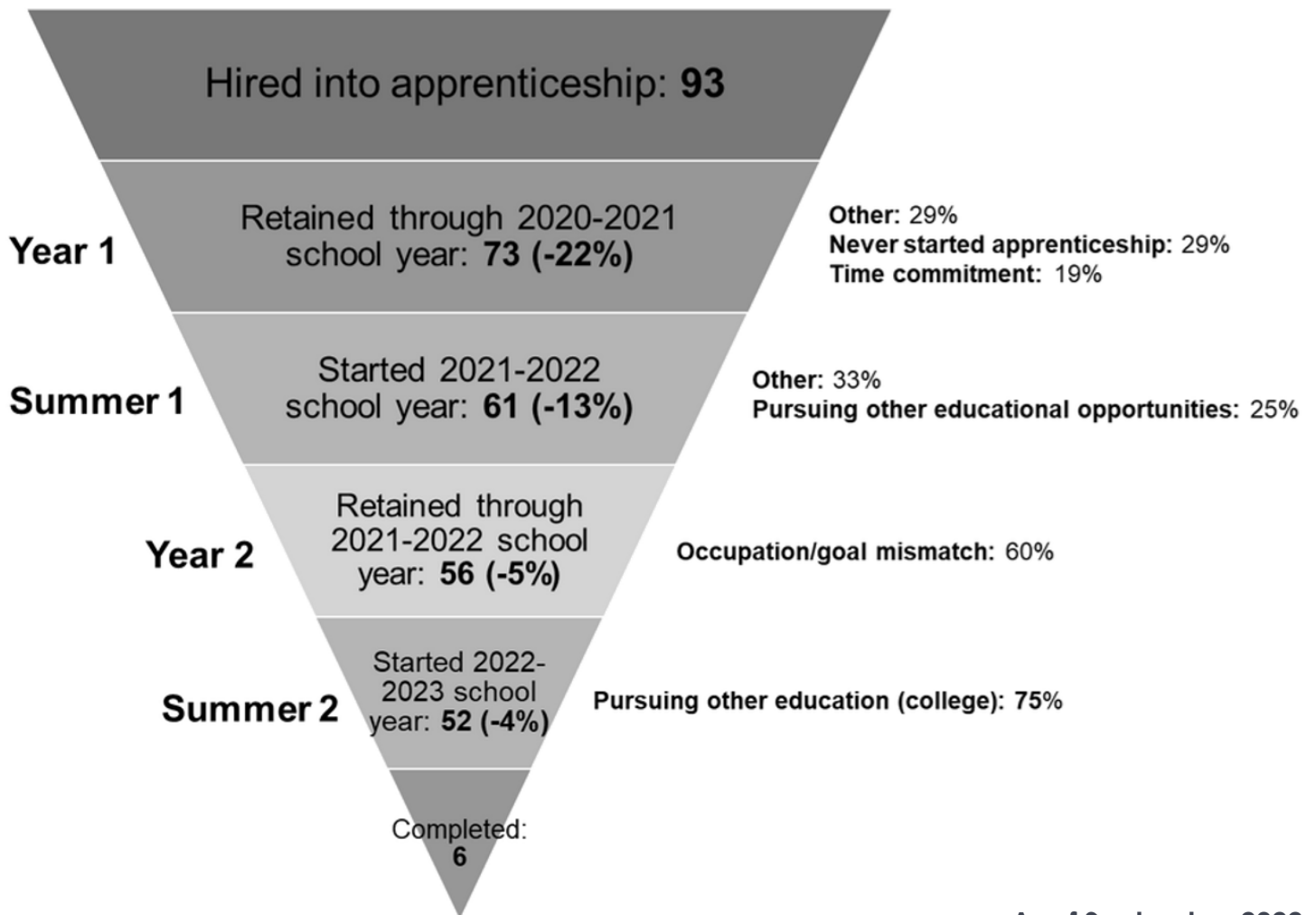
Company Type	Adding productive capacity	Strategically developing a talent pipeline	Increasing the diversity of company staff	Creating social impact in our community	Addressing a staffing shortage	Improving staff supervisory capabilities	Improving culture or morale	Improving capacity for training	Increasing innovation	Reducing recruitment or training costs
Advanced Manufacturing	9	7	6	3	5	3	4	2		
Financial Services	1	3	4	4	1	2	2	1	2	1
Education	2	3	3	3	2		2	1	1	
Non-Profit	3	1	4	1	2	1	1	1	1	
Healthcare & Wellness	4		3	2	3			1		
Technology & Information	1	3		3		2			2	
Government	1	3	1	2	1	1		1		
Business Services	1	1	2	1	1	2	1			1
Automotive	2	1			2	1	1			1
Electronics	1	1			1	1	1			1
Aerospace		1			1			1		

ATTRITION

The following pages follow the active cohorts through key chronological milestones. Treating retention through the school year and summers separately, we can see the continuation of several trends we have identified in the past:

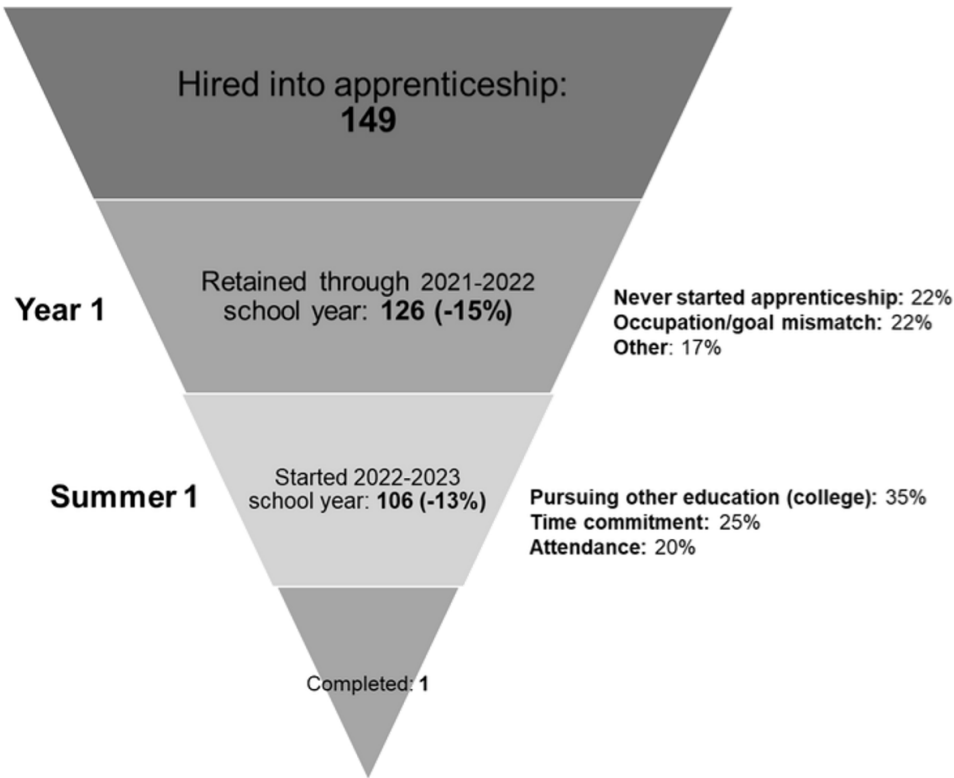
- Exits are highest in year one, tapering through the first summer and leveling off through year two (previous analysis showed exits in year three are less common).
- A significant portion of attrition in year one can be attributed to students who never started their apprenticeships.
- College exits make up a greater percentage of exits during the summer after most apprentices in these cohorts would have graduated from high school.
- Given the frequency with which “other” is selected as the primary exit reason, we need to dig into exit interviews to better understand these more complex factors at play.
- While data on just two cohorts isn’t conclusive, it is surprising to note that exits because of occupation/ goal mismatch can be predominant in either year 1 or year 2.

2020 Cohort

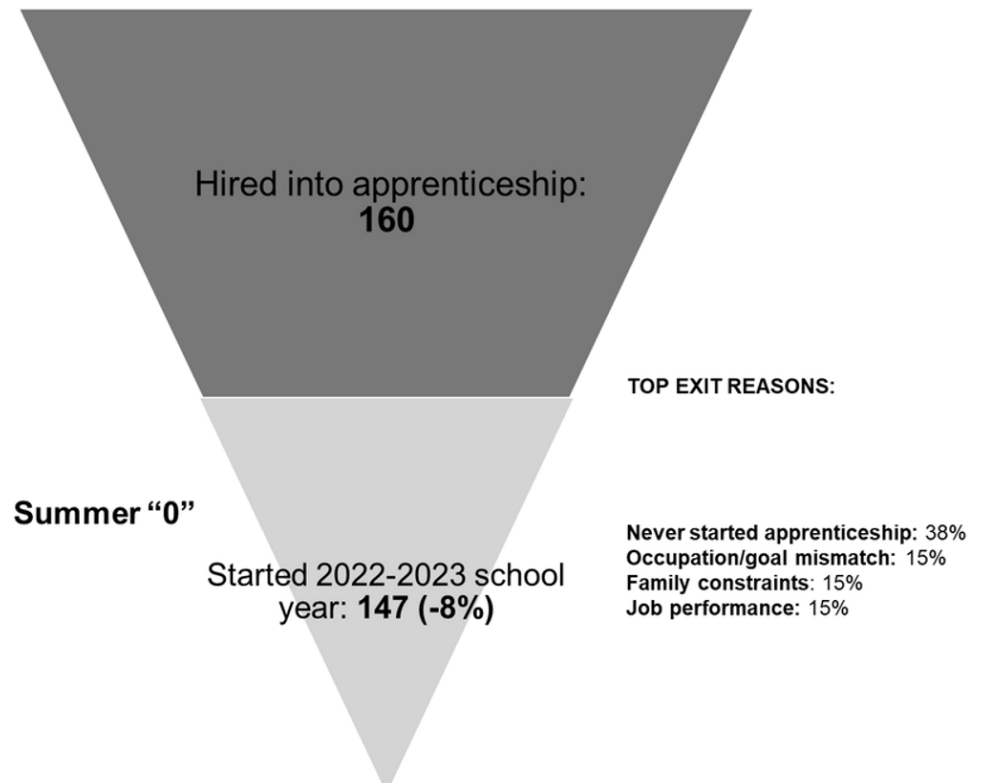


As of September 2022

2021 Cohort



2021 Cohort



As of September 2022

How much and to what extent are apprentices learning?

Apprenticeship is fundamentally a learning experience. The full spectrum of CWC's work in implementing YA directly or indirectly encourages youth to become proficient in career-ready and occupational competencies. Indeed, longer-term outcomes, such as post-secondary attainment and employment, are predicated on apprentices completing with demonstrable learning.

Measuring learning is both essential and challenging. Within CW youth apprenticeship, there are two primary components of learning we measure. The first, and most critical, is competency attainment, which assesses apprentices' application of on-the-job learning and related instruction. We can also measure learning gained solely through related instruction (coursework, credentials and CWC-provided training) separately.

Competency progression is measured through twice-annual supervisor evaluation and apprentice self-evaluation. Currently, learning from related instruction isn't consistently captured due to logistical challenges and capacity constraints. The focus of current data collection efforts is on improving documentation of enrollment in and completion of related instruction hours.

In the following pages, we share survey results that shed light on apprentices' experiences with accessing the coursework and credential components of the program. These results suggest the need for continued improvement of communication about how and when credentials and coursework can and should be added to an apprentice's schedule. However, instead of a clarification of program policies, what may be needed, both for communication and measurement, is a revised view of the role of courses and credentials. Instead of viewing courses and credentials as standalone "benefits" that apprentices and supervisors can select and slot in as they see fit, we must contextualize them as essential components of a holistic, occupation-specific training plan that consists both of on-the-job and "classroom" learning.

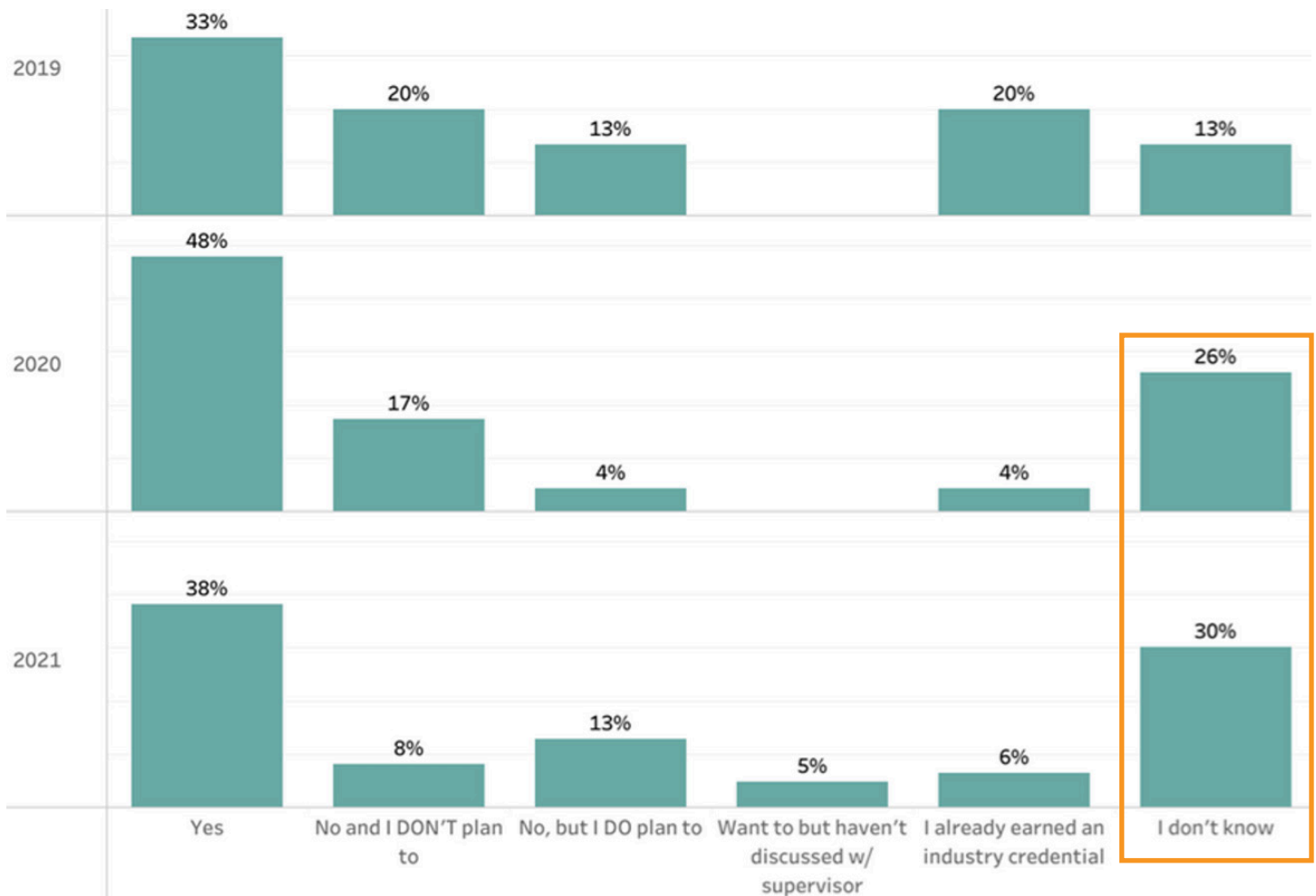
For measurement, this shift in perspective will require future survey questions that probe not simply whether apprentices were satisfied with their course and credential outcomes, but whether they are working through a high-quality training plan in which related instruction is providing learning that can actually be applied to on-the-job performance and competency progression.

A separate analysis of 2022 competency evaluation data will be completed later in the year.

CREDENTIALIALS

Survey data (below) suggests an opportunity to better communicate with the 2020 and 2021 cohorts about their credential options.

Are you currently working to earn an industry-relevant credential as part of your apprenticeship?



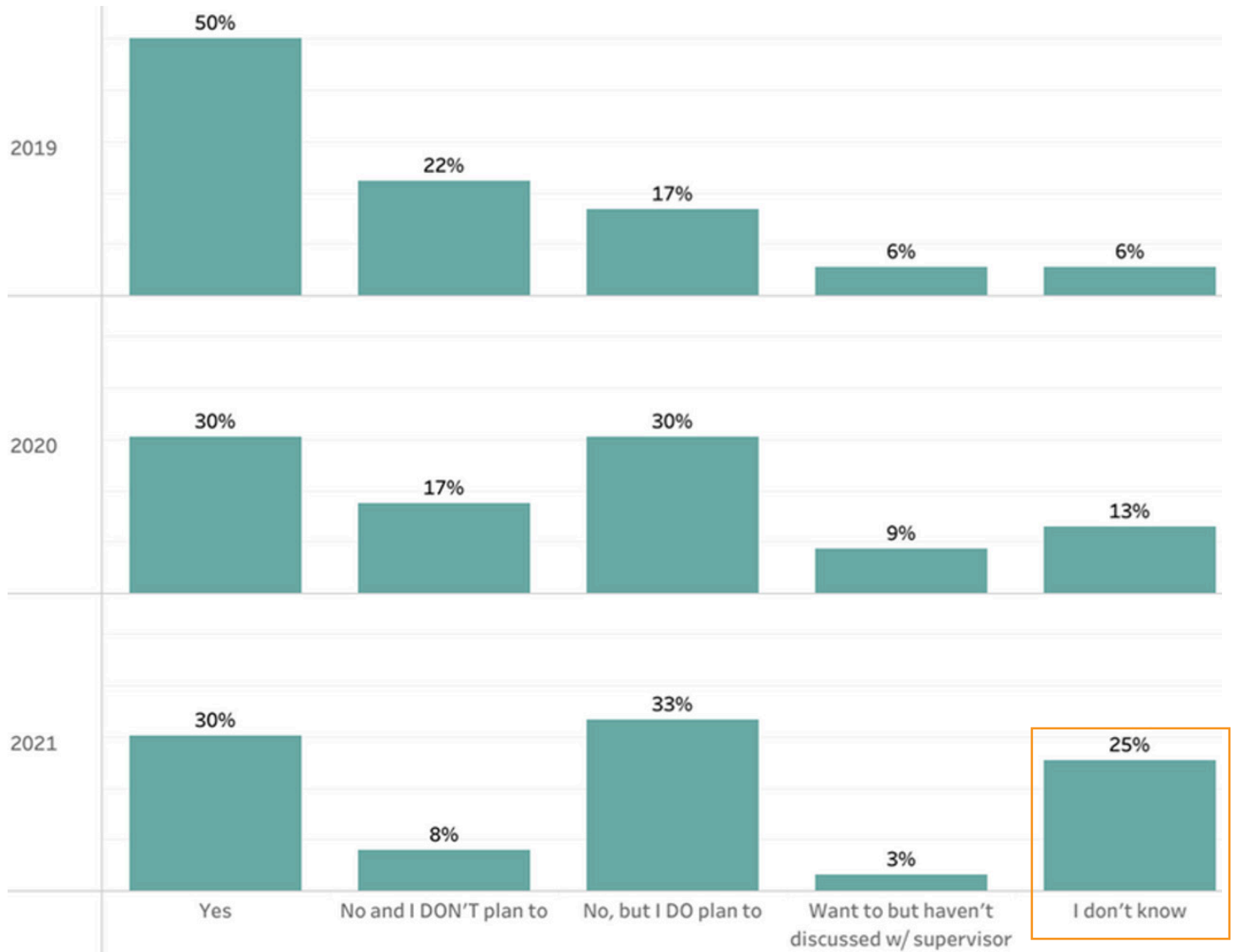
Apprentices shared narrative feedback about how credential support could be improved:

- *[I need] better training and realistic timeline for credential work.*
- *[CWC could share] more info [about] how you train for and receive credentials.*
- *Still waiting for approval but now my apprenticeship is over.*

COURSEWORK

Survey data (below) suggests apprentices take more college courses as they progress. Most apprentices are taking or want to take college courses. It also suggests the need to better communicate with the 2021 cohort about their options.

Are you currently or have you taken any college courses as part of your apprenticeship?



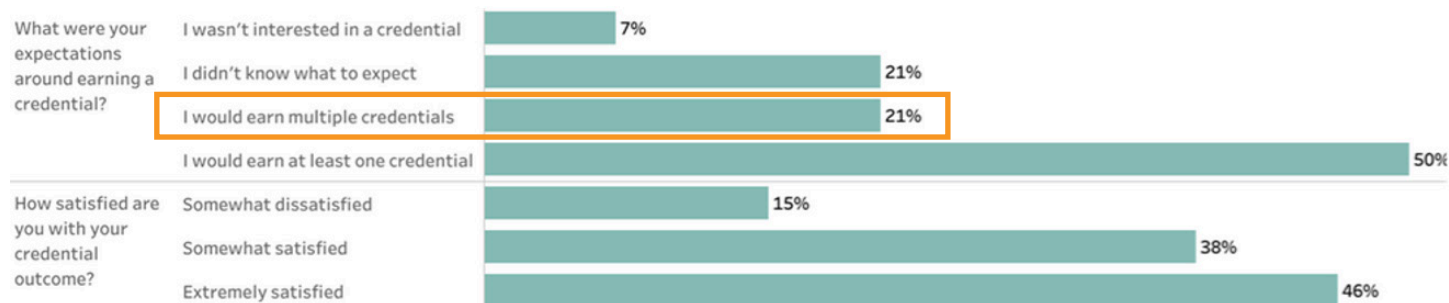
2019 completers shared mixed feedback on coursework during their apprenticeship:

- *I don't know if I have it or how to access it.*
- *They paid for courses that aligned with my associates and apprenticeship role.*
- *I am satisfied because [earning a] college degree has always been important to me and I am very close to getting an associates degree.*

COMPLETER PERCEPTIONS OF COURSES AND CREDENTIALS

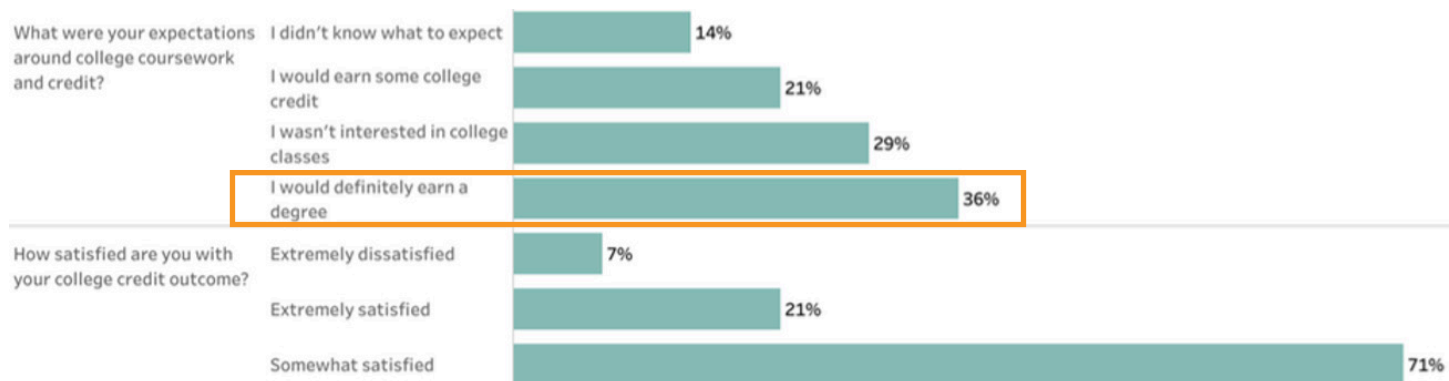
- The 2019 cohort completers held varied and potentially misinformed expectations about the credential outcomes of their apprenticeships.
- Narrative survey responses do not illuminate why a relatively high percentage of completers were less than extremely satisfied with their credential outcome; it's possible that these responses are driven by ongoing communication challenges.

Expectations and satisfaction around credential outcomes



- The 2019 cohort completers held varied and potentially misinformed expectations about the coursework outcomes of their apprenticeships.
- Satisfaction, as with credentials, above, is difficult to interpret here, given the diversity in apprentices' interests and expectations around coursework.

Expectations and satisfaction around coursework outcomes



COMPLETION

Who is completing and what are they going on to do? How do completion outcomes differ by demographic?

52

2019 Cohort Completers

Of the 179 apprentices who started apprenticeships in 2019, 29% completed the full term.

29

Offers Accepted

Over half of the 2019 cohort completers were offered full or part-time jobs with their apprenticeship employer.

21

Pursuing post-secondary

40% of the 2019 completers are pursuing further education, including two and four-year college in-state and out-of-state.

37

Employed in pathway

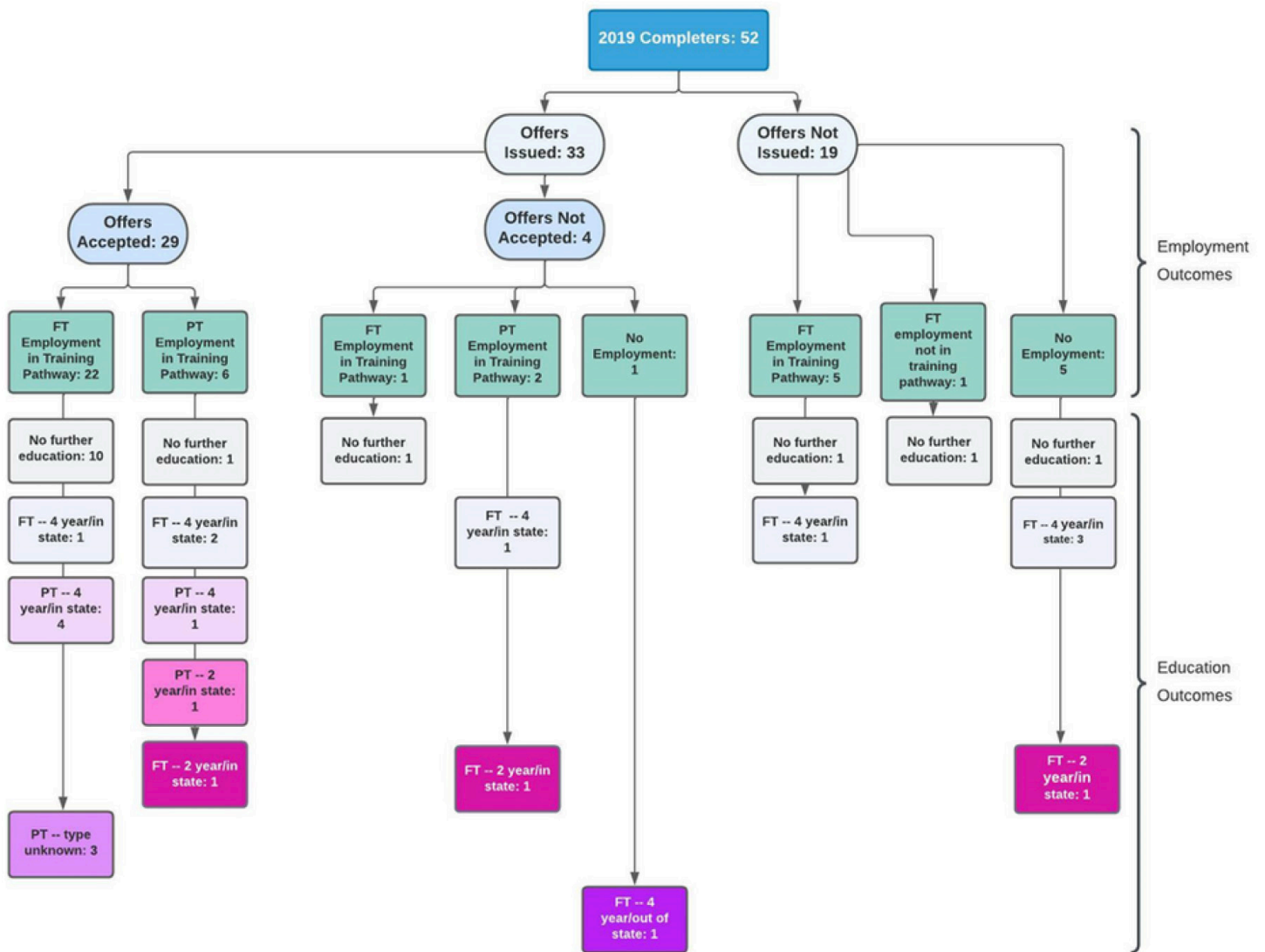
71% of the 2019 cohort completers are employed either part-time or full-time in their training pathway.

Completion is a key program outcome, and therefore one we must disaggregate, to determine whether there are disproportionate rates of attainment among any particular population. As we seek to explore and substantiate the “options multiplier” hypothesis of youth apprenticeship, we track what apprentices do after completion. And, we explore their own perceptions of what they gained from the program, in terms of skills, experience and social capital.

“I have learned how to take control of my future early.”

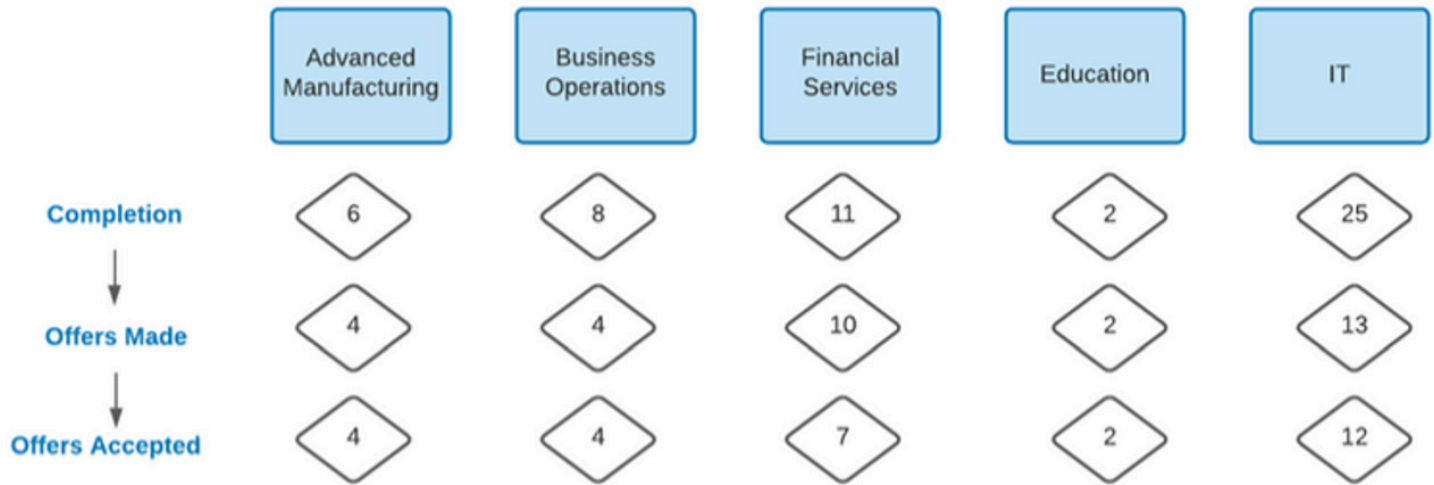
2019 COMPLETER OUTCOMES

Education and employment outcomes at completion for the 2019 cohort

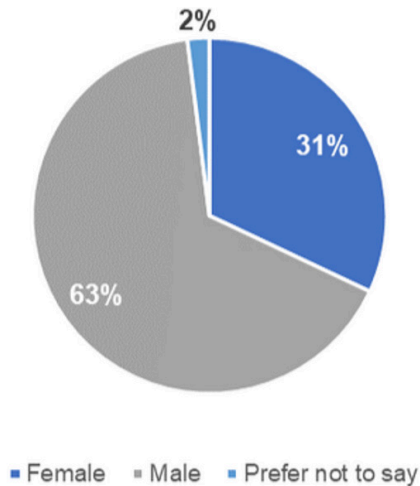


WHO ARE THE COMPLETERS?

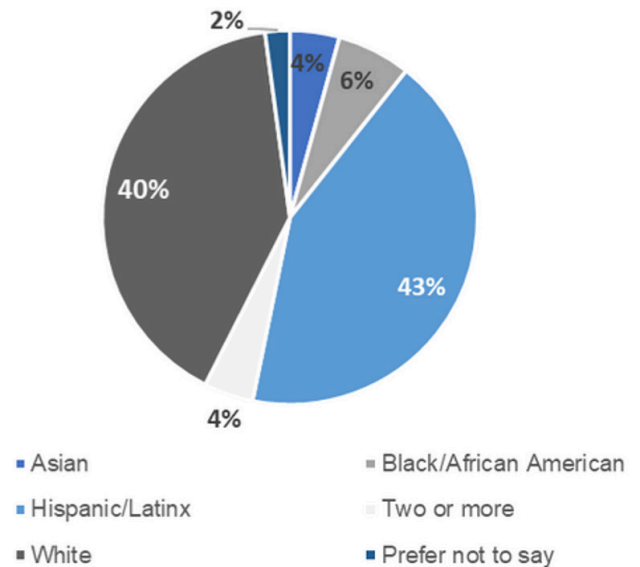
Completers by pathway



Completers by gender



Completers by race/ethnicity



Female apprentices made up a larger share of non-completers than they did completers. Hispanic or Latinx apprentices made up a higher share of completers than they did non-completers.

Non-completers by gender

Female	Male	Non-binary	Prefer not to say
42%	45%	.8%	2%

Non-completers by race/ethnicity

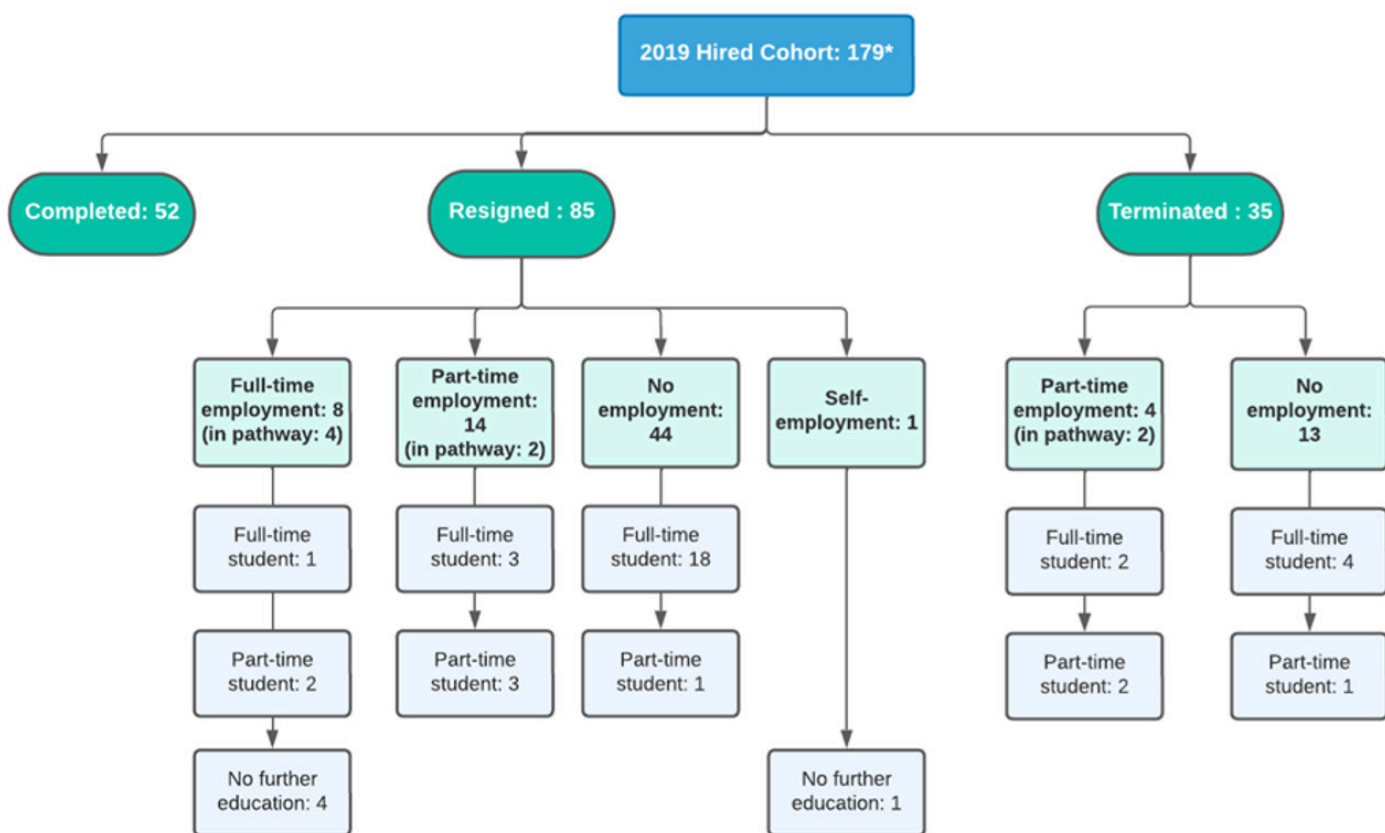
Hispanic or Latinx	American Indian or Alaskan Native	Asian	Black or African American	Two or more	White	Prefer not to say
28%	2%	2%	8%	2%	42%	4%

2019 HIRED COHORT OUTCOMES

While 29% of the 2019 hired cohort completed the program, an additional 7% of those who resigned went on to full or part-time employment in their training pathway and 21% to full or part-time post-secondary education.

- 6% of all non-completers went on to employment in their training pathway
- 23% of all non-completers went on to full-time post-secondary education
- 7% of all non-completers went on to part-time post-secondary education

Finally, 31% of non-completers continued their high school after exiting the apprenticeship.



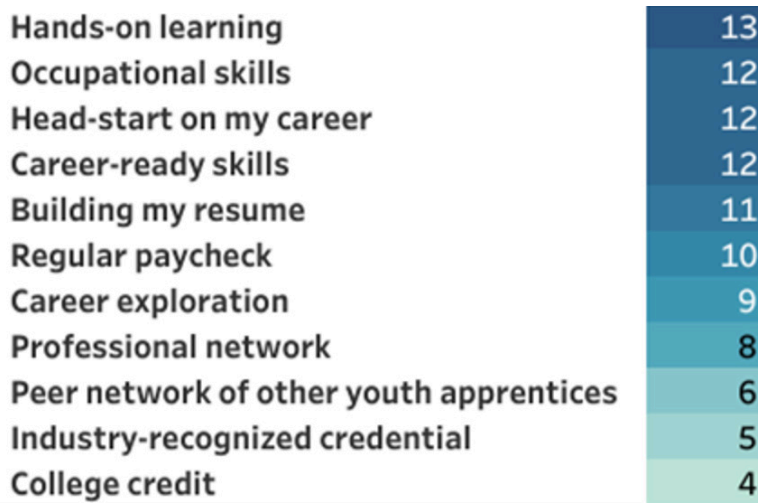
*Outcomes for 7 apprentices are unknown

VALUE OF APPRENTICESHIP

How knowledgeable do you think you are about future career opportunities compared to when you started the apprenticeship?



Which potential benefits of youth apprenticeship have meant the most to you, if any?



By reviewing apprentice completion interviews year over year, we can observe growing thematic consistency in the way apprentices describe the benefits and value of the experience. The most commonly discussed benefits include:

- Building self-esteem and self-confidence in their abilities by expanding previous boundaries
- Learning to rely on their own problem solving skills in challenges and stressful situations
- Discovering and refining career interests and professional and academic goals by trying new and different types of work and through exposure to different parts of their industries
- Learning by doing and through hands-on, experiential means

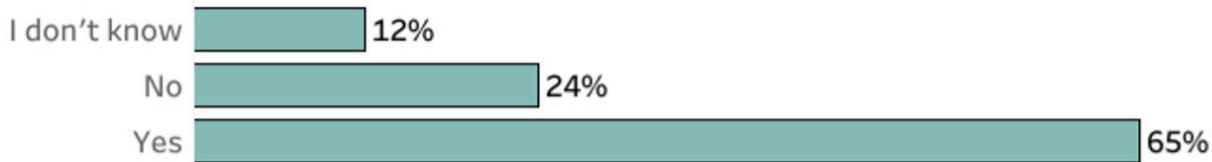
COVID-19 and inconsistent supervisors came up as the challenges 2019 completers described most frequently in interviews. As in previous years, apprentices emphasize the sacrifice required.

- While many apprentices described their workplace as comfortable, kind and welcoming, they also reported that it was hard to maintain continuity of learning and growth when supervisors rotated due to personnel changes or changes in the management of the program.
- COVID was a stressor for some, who found themselves disconnected and, at times, uncertain in the world of remote work. Most seemed to adjust to the new reality after an initial period of disquietude.
- Many apprentices reported that it was hard to give up extracurriculars, free time and living a more open-ended “kid life” but that they ultimately believed it to be worthwhile.

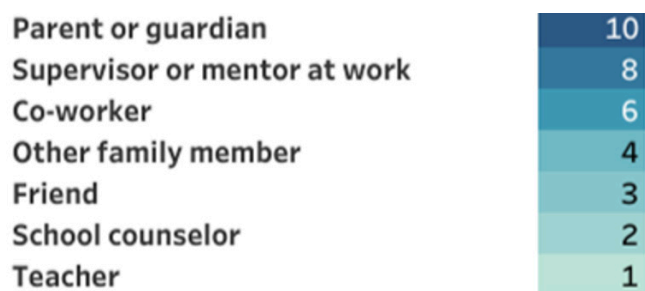
SOCIAL CAPITAL

With this survey, we are building on strong evidence from prior years that apprentices who complete are developing important professional relationships. Yet, while supervisors, mentors and coworkers rank highly among the people apprentices believe can help them in their careers, parents still rank higher. Further, that nearly 25% of completers do not have someone who actively supports their career journey suggests the possibility that apprentices are developing broad networks but not deep relationships at work. Frequent supervisor changes, as discussed on the previous page, may be driving this dynamic.

Is there anyone in your life who gives you information or advice about how to set and achieve career and/or academic goals?



If yes, what is your relationship to that person?



“I truly get to expand my network.”

“I have learned new skills and working with colleagues is giving me more opportunities to learn .”

Because of my apprenticeship...

Responses	I gained skills that will lead me to success in future employment	I built professional relationships and connections that I would not have otherwise made	I developed professional relationships that will support my career progression
Strongly agree	83%	89%	78%
Somewhat agree	6%	11%	17%
Somewhat disagree	6%		6%
Strongly disagree	6%		

NEXT STEPS

Below we highlight the key questions/ideas sparked by and unanswered by this research effort that we will prioritize in future updates to this report and the next iteration of the learning agenda.

- Is it important for apprentices of color to be equally represented or over-represented relative to BOTH their sending school districts and local communities? Are we looking only at the broad pool of students of color or are we interested in sub-groups? Can we define this target more clearly, including the phrase “broader demographics of our communities”? In the future, we aim to include socioeconomic status in our demographic analyses.
- Analyze occupation/pathway makeup by race/ethnicity and gender in order to highlight the ways in which race/ethnicity play a role in exacerbating gender inequity.
- Conduct new analysis of exit reasons, timing and related instruction satisfaction and training plan documentation by occupation/pathway to explore the emerging hypothesis that more technical, well-defined pathways better support retention.
- More narrowly scope our question about drivers of retention to improve answerability in a specific time frame.

“I am learning more about the real world through my job at a faster pace than I would on my own.”



CareerWise
Colorado

**FOR FURTHER INFORMATION PLEASE CONTACT
MANDANA NAKHAI
MANDANA.NAKHAI@CAREERWISECOLORADO.ORG**

CAREERWISECOLORADO.COM