

Careers in Construction: Insights from Gen-Z school-leavers in a work-based training program

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Introduction

The Australian construction industry faces a drastic shortage of labour. At its peak in 2023, public infrastructure demand for workers will reach 442,000, more than double the projected available supply¹. The problem is compounded by an ageing workforce, with over 40% of the total infrastructure workforce expected to retire within the next 15 years.

Given that only 12.7% of the construction workforce and 2% of workers in construction trades are women, increasing gender diversity in construction sector presents a significant opportunity to meet the skills shortage. However, it is argued that potential new entrants to the industry (men and women) are discouraged by negative perceptions about what jobs and careers in the construction sector are like².

In response to this, a 2021 Australian Infrastructure Plan includes recommendations to ensure:

- the construction industry is a sector of choice for employees, and
- that current and future workforce demands are met by introducing cultural reform to embrace diversity and inclusion³.

Understanding what potential new entrants to the industry (Gen-Z school-leavers) think about pursuing a career in construction is important to being able to address this skills shortage.

This report outlines the findings from research which explored the experiences and perceptions of trainees participating in a two-year Infrastructure Traineeship Program, an initiative of the New South Wales Government in Australia. During the program, trainees undertake three eight-month rotations which involve periods of work experience in private and public sector construction organisations.

The research provided a unique opportunity to collect data from school-leavers who were engaged in a program that combined classroom-based vocational education with work placements with construction organisations. Consequently, the trainees were able to reflect on their experiences and observations in their work placement to inform their thinking about whether or not they would ultimately pursue a career in the construction industry on completion of the traineeship.

Three waves of surveys were undertaken with trainees in December 2021, June 2022 and December 2022. Interviews were also conducted with a sub-set of 15 trainees between March and April 2022.



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¹ Infrastructure Australia. 2022. Infrastructure Market Capacity: 2022 Report. Australian Government: Canberra

² Infrastructure Australia. 2021. Infrastructure workforce and skills supply: A report from Infrastructure Australia's Market Capacity Program. Australian Government: Canberra.

³ Infrastructure Australia. 2022. Delivering Outcome: A roadmap to improve infrastructure industry productivity and innovation. Australian Government: Canberra

Key Findings

Expectations shaping the intention to pursue a career in construction

Survey data reflecting experiences of the trainees commencing in 2021 and 2022 was combined with a total of 136 trainees (48% of whom were women, 51% of whom were men and 1% of whom preferred not to identify their gender).

Participants were asked whether they have decided to pursue a career in construction. Of the 136 trainees, 129 provided a response and the results are shown by gender in Figure 1. The majority of participants (64%) were undecided about pursuing a career in construction and there was little difference between men and women.

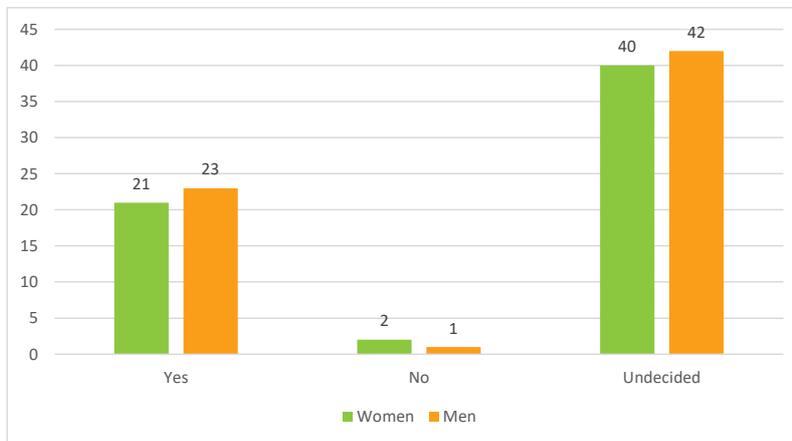


Figure 1: Trainees' intentions to pursue a career in construction

Participants were asked to rate 24 job characteristics according to the extent to which they are important to them in making a career choice, and the extent to which they believe that a career in construction offers these job characteristics.

Table 1 shows the top five ranked job characteristics for men and women who completed the survey.

Importance ranking	Women trainees	Men trainees
1	A job with gender diversity and fair treatment	Colleagues I can get along with
2	A job that enables a healthy lifestyle	A pleasant working environment
3	A pleasant work environment	A job that I find enjoyable
4	A secure job	A job that enables a healthy lifestyle
5	A job where I can gain transferable skills	A job where I can gain transferable skills

Table 1: Top five job characteristics considered important by trainees by gender

Women trainees ranked having a job with gender diversity and fair treatment as being of top priority and, while this was not included in the top five characteristics for men trainees, overall 74% of survey respondents identified this as being important to them. Other job characteristics identified as being important are:

- having a job that gives them some control over their work time (70% of trainees), and
- having a job with hours that don't interfere with their non-work roles and interests (68% of trainees).

In contrast, when asked whether the job characteristics would be available to them in a career in construction, the trainees indicated low levels of availability for many of the job characteristics they identified as being important. Job characteristics for which perceptions of availability were lowest were:

- a job that can easily be combined with parenthood,
- a job that gives them some control over their work time,
- a job with hours that don't interfere with their non-work roles and interests,
- a job that doesn't take them away from family for long durations, and
- a job that enables them to have a healthy lifestyle.

Thus, although having a job that supports a healthy lifestyle and work hours that enable work-life balance and flexibility were considered to be important when choosing a career, trainees believe these characteristics are not likely to be offered should they pursue a career in construction.

Importantly, the survey results also reveal that the greater the 'gap' that exists between trainees' job characteristic priorities and their expectations about what a construction career will offer, the less likely it is that the trainees expressed an intention to pursue a career in construction.

Figure 2 shows the gap between characteristics considered important and the extent to which trainees perceive them to be offered in a career in construction for people who have made the decision to pursue a career in construction. Figure 3 shows the gap for trainees who have not decided or who do not want to pursue a career in construction. For the latter group of trainees, the gap is particularly large for job characteristics relating to being able to have a healthy lifestyle, having work hours that do not interfere with life outside work, experiencing gender diversity and fair treatment, having an enjoyable and secure job, pleasant work environment, a reasonable workload and colleagues that they can get along with.



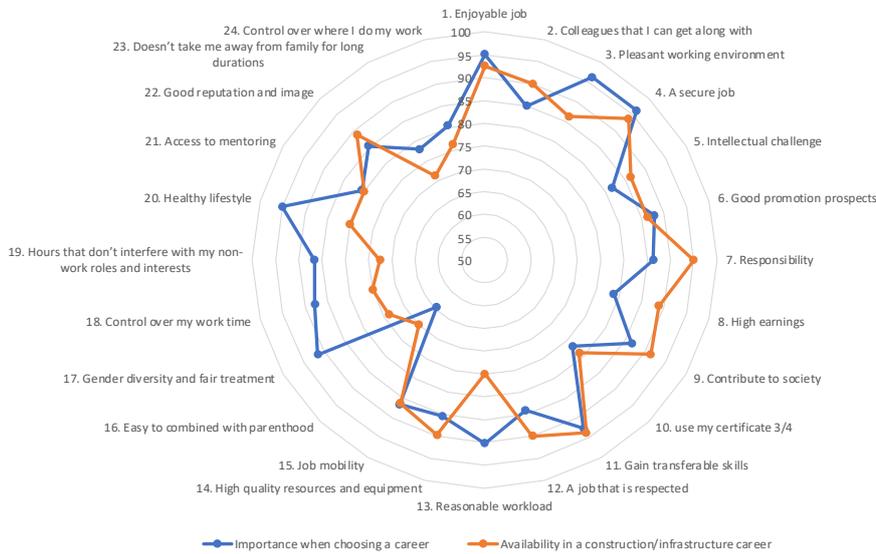


Figure 2: Importance-availability 'gap' for trainees who have decided to pursue a career in infrastructure construction

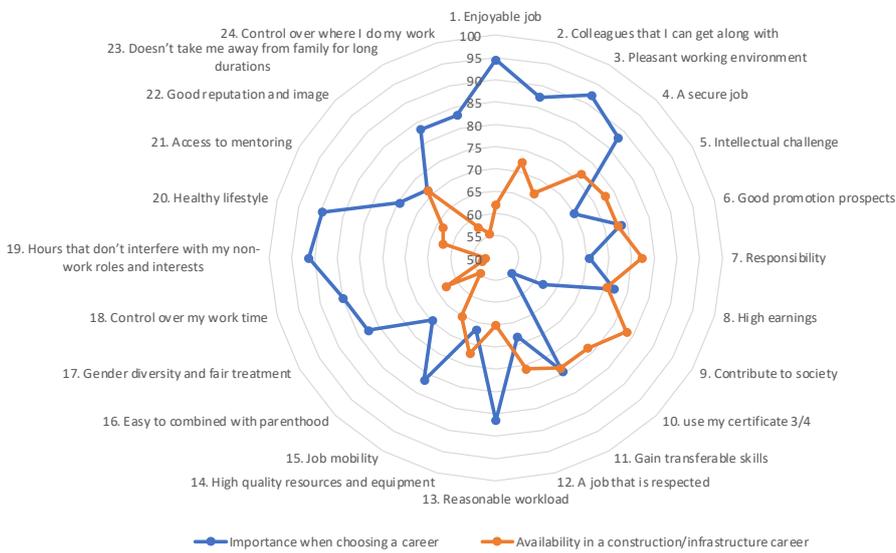


Figure 3: Importance-availability 'gap' for trainees who are undecided or have decided not to pursue a career in infrastructure construction

Significant positive relationships were also found between trainees' self-reported experiences during their work placement and their stated intention to pursue a career in construction. Specifically, trainees were more likely to indicate an intention to pursue a career in construction when, during their work placement trainees:

- experienced a culture of gender diversity and inclusion,
- felt their career goals were being supported, and
- were able to experience a satisfactory balance between their work and non-work lives.

The Culture in Construction Initiative

The Construction Industry Culture Taskforce (CICT) - comprising the Australian Constructors Association and the Governments of New South Wales (NSW) and Victoria - has developed a Culture Standard intended to address the following three major issues impacting the construction industry's performance and sustainability:

- time for life
- health and wellbeing, and
- gender diversity.⁴

The survey results indicate that the trainees see these three areas as being of great importance to them when forming intentions in relation to pursuing a career in construction. Results relating to the three pillars of the Culture Standard are presented below.

Time for Life

The survey revealed having a job with hours that don't interfere with their non-work roles and interests (e.g. family and social) and having a job that provides some control over work time as among the most important job characteristics influencing the career choice decision-making of the trainees.

During the interviews, trainees also highlighted the importance that having time for life is to them: *"I don't mind putting in long hours or anything, as long as I've got time for my family and my studies and other things that I need to do, take care of myself as well."*

However, for some interviewees the expectation that they would need to work long hours that would adversely affect their life outside work was identified as a factor that would discourage them from pursuing a career in construction: *"Everyone was working very, very long days, which I was very blown away by. Some people were getting there at 6:30 and going home at 7:00, and that blew my mind, because they're doing that six days a week, and that was a surprise to me. That would absolutely be a struggle if I did end up trying to do those hours."*

During the traineeship program, trainees' work hours are capped at 37.5 per week, yet they formed these expectations by observing others in the workplace whose hours are not capped: *"Over the small amount of time I've worked in the industry, I see people working long hours, 10-12 hrs a day up to 6 days a week, and even in the small amount of time they do have away from work, they are constantly called, messaged, etc"*

⁴ <https://cultureinconstruction.com.au/culture-standard/>

about work. Personally, I just can't see myself spending that much of my life on work, with no time for my personal interests - it just seems too exhausting."

Trainees who experienced some control over their work time during their job placement indicated a more positive view: "My own balance of my life is very important and the fact that maybe I'm not working extreme hours and they [the employer] don't force me to work hours I don't want to work, that's one of the most important things."

However, having control over hours worked was not perceived to be standard in the construction industry: "It seems like the general gist of things with construction is they don't usually have much choice over their hours. I think it's just sort of how construction sort of sits."

"I feel like there's no reason why you should just be working, working, working, when at the end of the day, your life's about you and what you want to do, and being able to balance it out and have that option as well. I think that's going to be an important thing for me, and also not working in an environment where you feel like you're not getting a fair go, and being pushed aside and not treated fairly."

Health and Wellbeing

The survey revealed that having a job that enables a healthy lifestyle was in the top five characteristics of importance for trainees, irrespective of their gender (see Table 1).

Interviews conducted with trainees further revealed that they perceive working in the construction industry to be inherently stressful which has the potential to affect workers' health: "The project is being handed over so they are working very long hours and they're [co-workers] getting very tired and it's getting to them so I have witnessed that side of it."

"You're always trying to get something done, and something else will pop up, and you've got to get this done urgently, and you focus on getting that done. Then other things you've had pile up and you forget about that."

Participants also identified difficult relationships with project stakeholders as a stressful component of project-based work in the construction industry: "I think that most project managers I have seen in these two rotations are overworked, overloaded, under resourced and at their wits end. Although they seem happy and love to have a drink and socialize with mates, I believe their job could be made less stressful so that they are not torn apart by contractors, subbies, public works, agencies, and stakeholders. It just feels like they are trying to put out fires left, right, and centre and when they extinguish one, three others start. I guess that is just the job of project management".

It was also observed that workplace cultures in construction can be challenging and potentially harmful, highlighting the importance of respectful workplace relationships and interactions: "I'm going to say most of construction companies would be a little bit toxic or could be toxic. I think that would be the biggest challenges for anyone in construction."

Gender Diversity

Working in a job with gender diversity and fair treatment was identified as the most important factor for women trainees in terms of choosing a career. Survey respondents (women and men) who reported that, during their job placement, they experienced a workplace culture characterised by diversity, inclusion and fairness were also significantly more likely to indicate that they have decided to pursue a career in construction on completion of the traineeship.

Notwithstanding the importance of a gender-diverse, inclusive and fair work culture, trainees who participated in interviews observed that women are not well-represented in the sector and tend to work predominantly in office-based administrative roles: *“I think if females are going to pursue a career in construction then they will mainly go for an admin role.”*

The scarcity of women in site-based construction roles was identified as a source of concern for some women trainees: *“That’s probably one of the main things I was worried about going on a construction site, just not being respected and being looked down on because I was a female on a construction site.”*

Irrespective of their gender the trainees indicated a preference for working in an environment that is diverse and inclusive: *“I think that you need a team and you need a workforce that’s sort of almost reflects what you see on the street.”* - man

Conclusions

The results of this research indicate that young workers are significantly more likely to decide to pursue a career in construction when they perceive a good fit between their priorities (i.e., what they consider to be important in a job or career) and what a construction career can offer.

The job characteristics that trainees identified as being important to them included both social rewards (e.g. having a pleasant working environment, having a job that is enjoyable, having colleagues that they can get along with) and tangible/material rewards (e.g. having a secure job and having a job that provides transferable skills).

Importantly, the trainees also identified job characteristics associated with having a healthy and balanced life as being important in their career decision-making. In particular, having a job that enables them to have a healthy lifestyle, a reasonable workload that affords control over their work time, and with hours that do not interfere with non-work life were important to the trainees, irrespective of their gender. A diverse, inclusive and fair work environment was also identified as being a high priority among the majority of trainees who participated in the study. Most of the trainees perceived that these job characteristics are not likely to be available to them if they pursue a career in the construction industry and this significantly reduced their self-reported intention to pursue a career in construction on completion of their traineeship.

Interviews with trainees further revealed that construction jobs are often perceived to be stressful and demanding. The trainees expect that a career in construction would inevitably require them to work long hours that would adversely affect their ability to participate in life outside work. These perceptions are likely to influence trainees’ career choice decision-making upon completion of the program.

The findings provide evidence to suggest that the construction industry will be better able to attract and retain Gen-Z workers (both men and women) if the industry adopts new ways of working that enable increased time for life, improved health and wellbeing and increased gender diversity and inclusion. This

evidence reflects the potential for industry-wide culture change (supported by the CICT's Culture Standard) to assist in addressing the chronic shortage of workers facing the sector.

"I've been so lucky to be a part of teams and work with people that are really trying to change the future of construction and infrastructure."

"I think a lot of people still adopt this old school idea of what construction is and what construction was and what it should be. Very gung-ho, cowboy slinging kind of old school approach"

Acknowledgments

The CICT represents a unique collaboration between the private and public sectors, working with leading academic researchers in the field to develop a Culture Standard for the construction industry. This research was funded by the Australian Constructors Association and the NSW and Victorian Governments and we are grateful for their commitment to improving the sustainability of the construction industry.

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Time for Life. Wellbeing. Diversity.

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