JFF

Increasing Opportunities for Black Learners and Workers Within Digital & IT Careers

Report by AudienceNet

AudienceNet

Background and research aims

Jobs for the Future (JFF) is conducting a multi-layered scoping exercise, looking at increasing opportunities for Black learners and workers within technology careers (including digital, programming, IT, media, etc.). JFF commissioned AudienceNet to conduct primary research to help bring the lived experiences of Black learners and workers into the process.

This research focuses specifically on Black learners and workers and seeks to understand experiences across the learning and working-age population, including those in postsecondary education and training. Looking at this population has allowed us to assess **barriers and enablers** to careers in digital and IT throughout the **full career life cycle**. The sample also includes those who may not have considered careers within digital and IT; understanding their perspectives will help us **estimate the loss of talent**—i.e., those who may have considered such roles if they had the right information, support, and/or opportunities.

Methodology

AudienceNet conducted an online survey with a representative sample of the working-age Black population in the United States. The aim of this was to gather robust data on **key issues** and **opportunities** in relation to increased participation for Black learners and workers in the digital and IT sector.

The survey achieved n=1,011 completes, took approximately 10 minutes, and was live November 19-30, 2021. Respondents were sourced through AudienceNet's online U.S. panel of 5 million+ individuals from non-white ethnic backgrounds.

The survey covered the following areas:

- Educational background with a focus on **motivations and barriers to studying STEM** subjects
- Career **ambitions and experiences**
- **Perceptions** of working in digital and IT of those not working in the sector
- **Change of career** into digital and IT of those not working in the sector
- **Experiences** of working in digital and IT
- Potential ways to **promote** careers in digital and IT

Interpreting this report

- Where (single choice) question percentages do not add up to 100%, this is due to rounding of the data.
- Margin of error: with any piece of research, it is almost never feasible to measure the entire population and thus achieve results that are 100% accurate. We must, therefore, take into account the potential for error. As a guideline, we advise caution when interpreting results that have less than a (-/+) 3/4% difference.

Executive Summary

Barriers to a career in digital and IT

- **Key barriers to studying a STEM subject at postsecondary level among those who had never done so were a lack of knowledge and the fact that they hadn't actively considered doing so.** Respondents were most likely to highlight that they hadn't studied STEM at a postsecondary level because they thought that it would be too difficult (21%) or that they didn't know enough about it (21%), with the expense (14%) also being a consideration.
- **Reasons relating to knowledge, skills, and finances also emerged as key reasons for not working in digital and IT by those who did not currently do so**, such as not knowing where to start (55%), financial reasons (51%), and/or not feeling as if they had the right skills (52%).
- **Those who did currently work in digital and IT highlighted the challenges they face, which could potentially act as barriers to keeping people employed in the sector long term.** A wide range of challenges were experienced, most commonly relating to having to consistently work long hours (41% experienced this "a lot"), earning less than they feel they should (40%) and not being able to progress in their careers (39%).

Gender differences in the appeal of a career in digital and IT

A thread running through much of this research was that female respondents were less likely to have pursued a career in digital and IT or to want to do so, with certain reasons for not doing so resonating more with them than they did with male respondents.

- **In high school, females reported lower levels of knowledge in all areas of digital and IT apart from general technology skills.** This difference was higher for advanced technology skills (+19%) and three options relating to the kinds of careers in digital and IT, job prospects, and how to pursue such a career in the sector (+13-14%).
- **When asked about postsecondary education, females were less likely to be studying a STEM subject.** Around a third of females were either current STEM students, had been one in the past, or indicated that they would be interested in being one in the future, compared to around half of males.
- **Females not working in digital and IT were less likely to find a career in the sector appealing.** On a scale from 0 (not at all appealing) to 10 (very

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appealing), 26% of females found it very appealing (between 8-10 and 8% lower than males) and 26% not at all appealing (between 0-2 and 13% higher than males).

- **Females not working in digital and IT had more negative associations about the sector and also highlighted a variety of reasons as to why they don't work in it.** They were, compared to males, more likely to associate a career in that sector with long hours and being intimidating. When asked why they don't work in the digital and IT sector, females were also more likely to say this is because of the skills and effort needed as well as feeling they wouldn't fit in or that they were not interested in the subject matter.
- **Fewer females worked in the digital and IT sector overall;** of the total amount working in the sector, 58% were male and 41% female. Females were less likely to find the experience very appealing and were more likely to say they faced challenges including not being able to progress to the level they think they should be at and earning less money than someone else doing the same job.

Education

- **There is a strong interest in postsecondary education.** All but a handful (11%) had an interest in pursuing a postsecondary credential at some point.
- **Interest in STEM subjects at a postsecondary level is consistently high among past, current, and potential future postsecondary students, but is also more pronounced in males.** Around 4 in 10 from each group had studied or were considering studying a STEM subject, however this rose to approximately half in male respondents while it was one-third in females.
- **The appeal of STEM subjects is that they are enjoyable and that they provide the opportunity to learn new things and enhance career prospects.** Each of these were selected by between 42-44% as a reason for why they had, wanted to, or were currently studying a STEM subject.
- **STEM subjects are researched through speaking to people and/or internet research.** 62% had spoken to someone—those most likely to be consulted were adults outside their family (22%) and teachers/guidance counsellors (20%)—while 57% had used a website / the internet.
- *This could indicate the need to ensure that, where there might be gaps in knowledge around STEM among the people they tend to speak to (e.g., parents, guidance counsellors, other adults), that there are sufficient resources they can call on about the benefits of studying STEM subjects and the pathways they offer into a career in digital and IT.*

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- **Almost half (45%) of those who hadn't studied a STEM subject said it was something they had considered.** The most prominent barriers were the perceptions that it would be too difficult (21%) or that they didn't know enough about it (21%), with the expense (14%) also a consideration.
- **Beyond general technology, high schools are not widely teaching students advanced technology skills or about why/how they might work in digital and IT** (i.e., 56% had learned "a lot" about general technology skills, compared to 20-24% in other areas). There was also a gender gap outside of general technology skills with female respondents less likely to say that they left high school knowing something about it.
- *While self-perception of skills could be a factor in this, it is important to understand more about why high schools might not be meeting the needs of female learners in particular.*

Career ambitions and experiences

- **Around 4 in 10 of our sample work in digital or IT roles and are more likely to be male and aged 16-34.** 6% worked in computer/mathematical occupations, with the remaining 35% working in a role in another sector.
- **When asked what was important to them in their career vs. what they currently experience, there are gaps in terms of how much money they earn and being able to advance.** The top five important factors in their career were only separated by 3% and included doing something they enjoy (89%), learning new skills (88%), being happy with what they earn (87%), helping other people (87%), and being able to advance in their career (86%).
- **Mentors are an invaluable tool aiding career development and acting as an important source of advice.** They were also widespread with almost half (45%) having consulted either a formal or informal mentor at some point. While both types were useful, formal mentors excelled in aspects such as helping to set career goals and to advance their career to the next level.
- **Most respondents have mentors of the same race/ethnicity, and this is generally thought to be useful.** 77% had a mentor of the same ethnicity/race with most (54%) saying they found that useful. A further 7% said their mentor wasn't of the same ethnicity/race but that this is something they would have liked.

Perceptions of working in digital and IT of those not working in the sector

- **Of those who don't work in digital and IT, a career in the sector appeals to some but this is by no means universal.** Half the sample (50%) scored it between 3-7 on a scale ranging from 0 (not at all appealing) to 10 (very appealing), 29% between 8-10 and 21% between 0-2. Female respondents generally found it less appealing than males.

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- **The most common association of a career in the sector is that it is well paid (64%).** Female respondents were more likely to associate it with long hours and being intimidating. Those aged 16-44 were more likely to regard it as exclusive (i.e., hard to get into) compared to those aged 45-64.
- **The most common reasons for not working in digital and IT relate to not knowing where to start, financial reasons, and not feeling like they have the right skills.** Each of these three reasons were selected by 50-55% of respondents.
- *This could highlight the need for more resources around the steps involved in pursuing/changing careers and the kind of skills they would need to cultivate.*

Changing career into digital and IT of those not working in the sector

- **6 in 10 of those not currently working in digital and IT would consider a career change to work in the sector.** This was higher in males than females, and in those aged 16-44 compared to those aged 45-64.
- **The main drivers of wanting to switch career are to learn new skills and earn more money.** These were each selected by between 56-57% of those who would consider changing careers with their answers also closely matching up generally with what was important to respondents in a career.
- **Free internet-based resources and short-term courses are preferred in helping to change careers into digital and IT.** These methods were selected by 39% and 33%, respectively. A lower but still significant number said they would study in higher education, either full (18%) or part (26%) time.

Experiences of working in digital and IT

- **Of those who work in digital and IT, most are satisfied in their career, with a considerable minority being dissatisfied.** On a scale ranging from from 0 (not at all satisfied) to 10 (very satisfied), 57% gave a score of 8-10, 36% of 3-7, and 7% of 0-2. At 52%, females were 10% less likely to give a high score of 8-10 compared to their male peers.
- **A wide range of challenges are perceived as part of working in digital and IT, but the top two relate to working long hours and not earning as much as they think they should**, which were experienced to some extent by 80% and 74%, respectively. All other challenges in question were experienced to some extent by at least two-thirds of respondents or more (65-71%), and included challenges such as a lack of support from peers, struggles with mental health, and earning less than someone doing the same job.
- **Those working in the sector are likely to agree that they had learned new skills and challenged themselves.** This matches up well with what

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respondents wanted from a career, and what those not in digital and IT perceive a career in the sector to be like.

- *These messages (i.e., challenging yourself and learning new skills) could be key areas to focus on as part of any communications about the benefits of working in the sector.*

- **A mentor from a formal scheme is found to be most useful but any kind of mentorship is appreciated by a majority of those who have / have had one.** Of those working in digital and IT, 89% who had had a formal mentorship found it extremely/very useful compared to 78% of those who had had an informal one.

- *This shows there is scope to develop further mentorship schemes (either formal or informal) for those currently working or hoping to work in digital and IT. This might be particularly useful for female Black learners and workers who were not as represented in the sector.*

Promoting careers in digital and IT

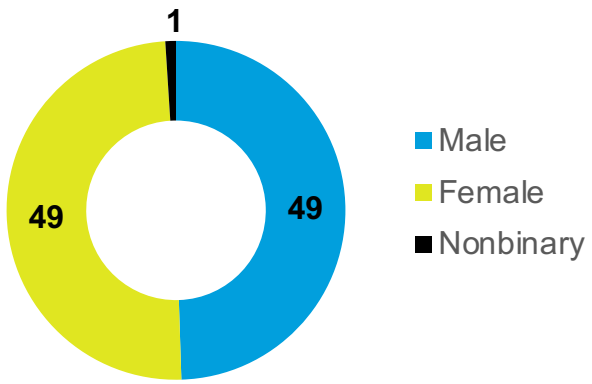
- **Potential solutions focused on education are generally thought to be most effective in encouraging more Black learners and workers into the digital and IT sector.** Top was "Teachers or guidance counsellors in K-12 sharing more information about digital and IT careers," which 21% thought would be the most effective solution and was followed by "More affordable postsecondary education" (14%).

About the Sample

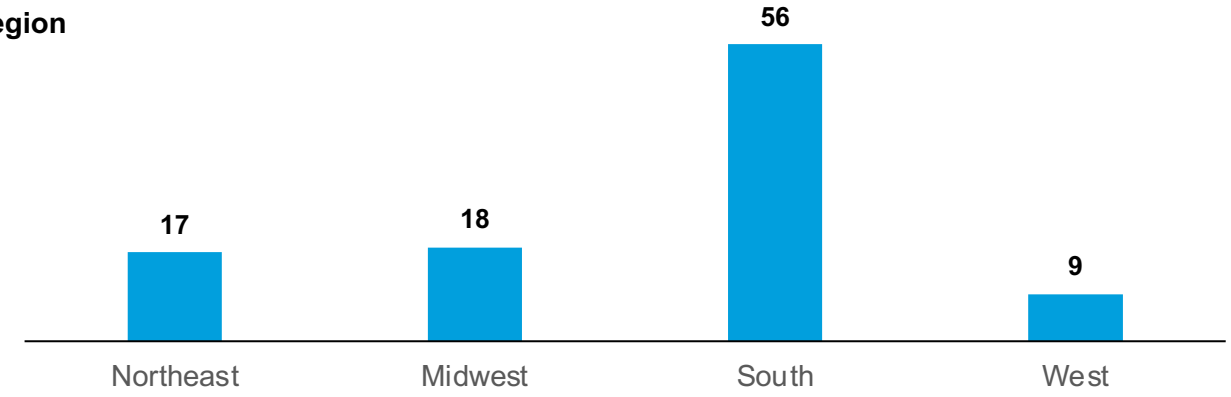
(shown as the % of the overall sample)

N=1,011 respondents who were representative of the working-age Black population in the United States

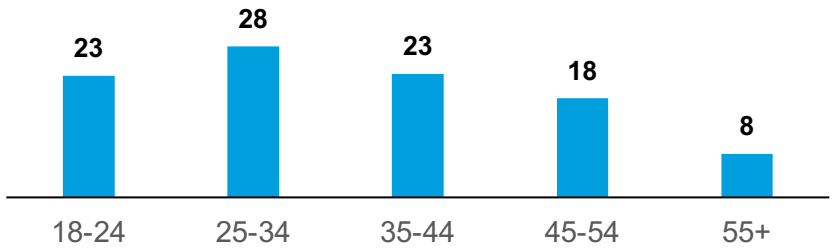
Gender



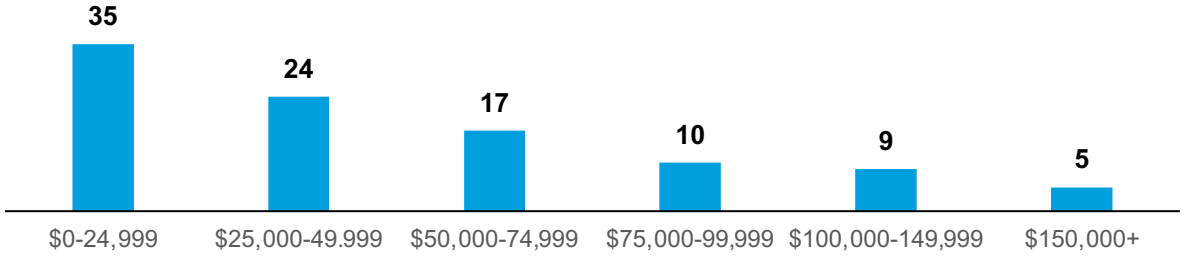
Region



Age



Personal annual incomes (pre-tax)



Base: Total sample (n=1,011)

01 Education

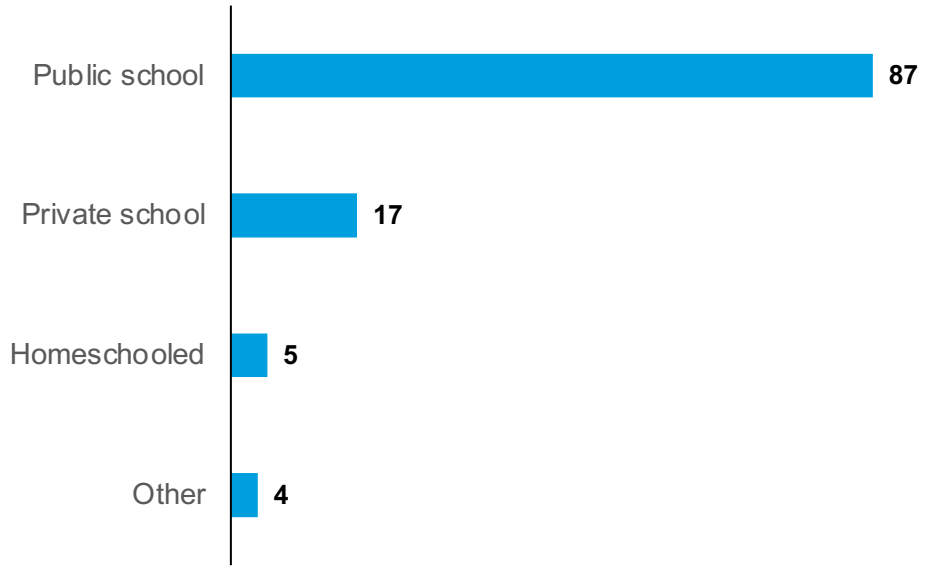
This section focuses on the educational background of respondents with a focus on their motivations and barriers to studying STEM (science, technology, engineering, and math) subjects.

Educational background

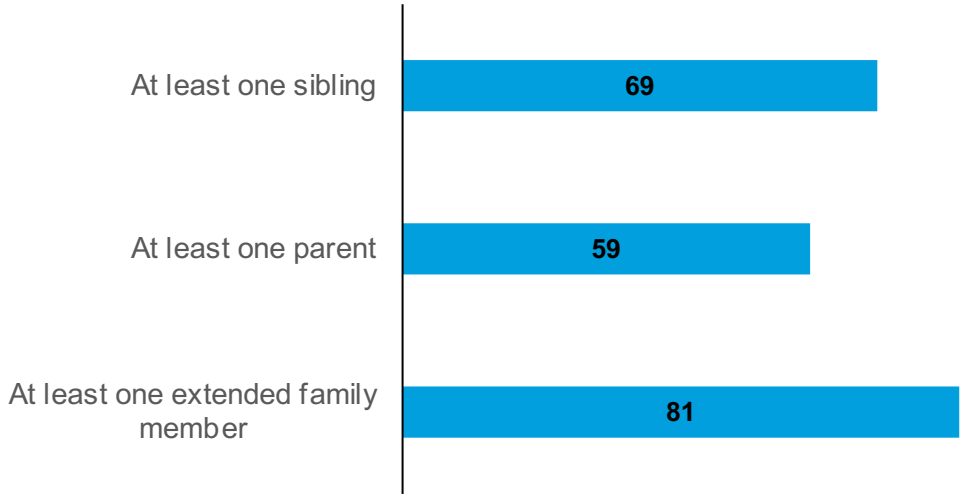
Respondents were asked what kind of school they went to and who (if anyone) in their family went to college. Most respondents had gone to public school (87%) with smaller proportions having gone to private school (17%) or been homeschooled (5%).

Respondents were most likely to have had someone in their extended family such as a cousin, aunt, or uncle (81%) who went to college at any level. This was followed by siblings (69%) and parents (59%).

What type of school they went to



Who in their family went to college



Base: Total sample (n=1,011)

Engagement with postsecondary education

Interest in and engagement with postsecondary education (e.g., bachelor's, associate's, master's, or doctoral degrees) was high with only 11% having no interest in ever studying for one.

11% hadn't studied for a postsecondary credential and had no interest in doing so

70% would consider studying for a postsecondary credential in the future

- Of those, 43% were interested in studying a STEM subject, higher among males (53% vs. 34% of females).
- They were most likely to definitely/maybe be considering a bachelor's (91%), followed by a master's (83%), associate's (72%), or doctoral (62%) degrees.

31% are currently studying for a postsecondary credential

- Of those, 39% are currently studying a STEM subject, higher in males (47% vs 32% of females).
- They were most likely to be studying for a bachelor's (48%), followed by associate's (42%), master's, (23%) or doctoral (10%) degrees.

47% had obtained a postsecondary credential

- Of those, 41% had studied for a STEM subject, higher in males (50% vs. 34% of females).
- They were most likely to have studied for a bachelor's (69%), followed by associate's (59%), master's (27%) or doctoral (12%) degrees.

Base: Total sample (n=1,011)

Within STEM: A focus on computer science

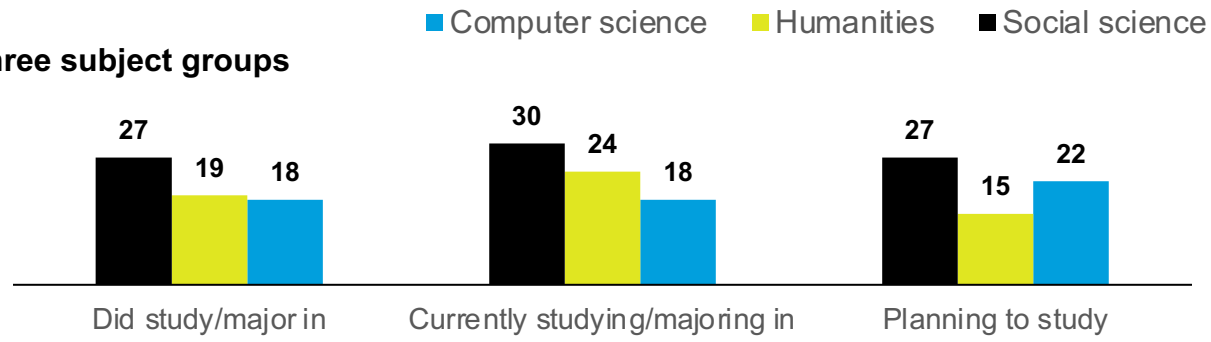
Computer science was popular and was in the top three subject groups that respondents wanted to or did study.

Of the broad subject groupings in question, computer science emerged as a popular choice and the most popular STEM subject overall (i.e., ahead of other STEM subjects, which included mathematics, natural sciences, and applied mathematics or sciences). It was in the top three either studied or considered by current (18%), past (18%), and potential (22%) students.

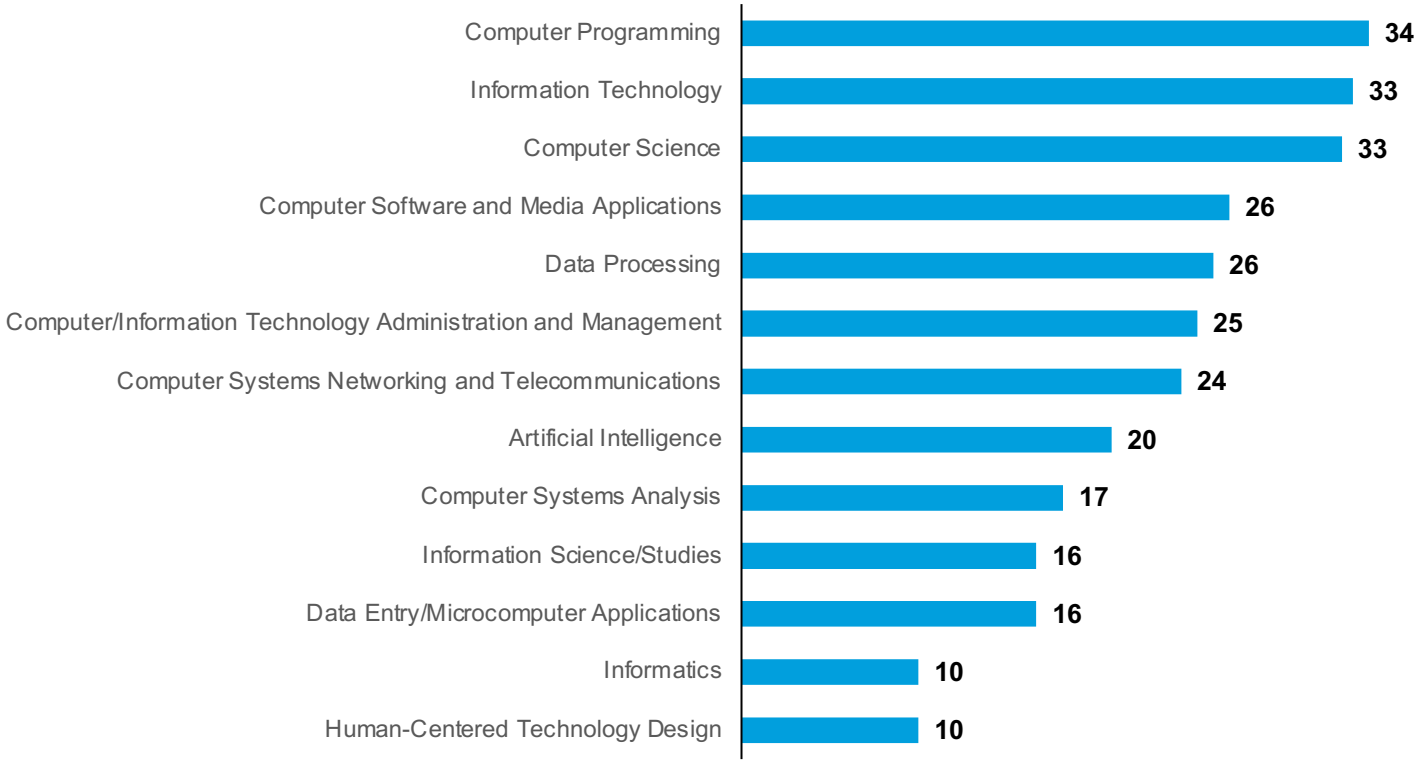
Potential (i.e., might study it in the future), current, or past computer science students were asked about the specific computer science area(s) they had studied or intended to study, with a broad range selected:

- Computer programming (34%), information technology (33%), and computer science (33%) were all selected by around a third of respondents.
- Computer software and media applications, data processing, administration/management, and systems networking and telecommunications were all selected by around a quarter (i.e., between 24-26%) of respondents.
- Other options were selected by less than a quarter and included artificial intelligence (20%) with no other option selected by more than 17%.

Top three subject groups



Computer science subject studied



Base: Did study/major in (n=471), currently studying/majoring in (n=311), planning to study (n=712), computer science students (n=344)

Picking a STEM subject

STEM subjects appealed as they were seen to be enjoyable, thought to advance careers, and involved learning new things with factors relating to money (e.g., value, increasing earning potential) also resonating. They were researched largely through speaking to people and internet research.

Those who had studied a STEM subject* or were interested in doing so were asked more about why and what resources they had used to make their decision.

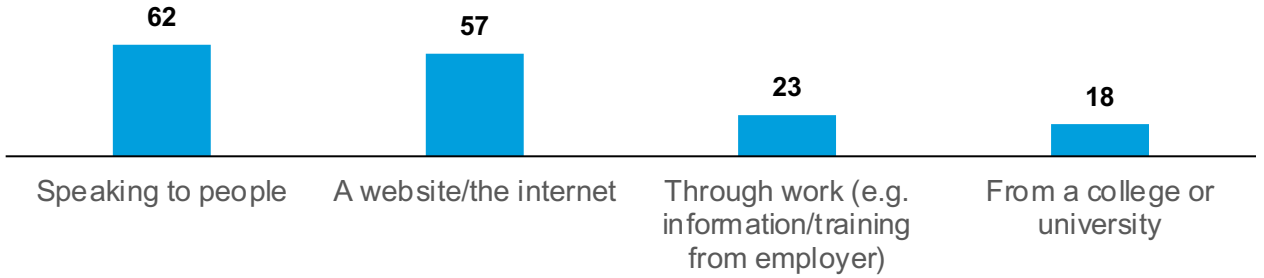
The top three reasons why people studied a STEM subject highlight the diverse motivations at play. This included enjoyment of the subject (44%), advancing in their career (42%), and wanting to learn new things (42%). Other reasons were selected by around a third of respondents and included value for money, helping to achieve career goals, and increasing earning potential. No other reason was selected by more than 25% of respondents.

Respondents were most likely to speak to people as part of their research, followed by consulting a website / the internet. Fewer went through work (e.g., information training from an employer) or explored directly with a college/university.

Looking in detail at people they spoke to, respondents were most likely to have consulted with “other” adults they know (e.g., employers, friends' parents), which was top at 22%, followed by teacher/guidance councilors at 20%. Interestingly, this was above family members, with 17% speaking to their parents and 14% to siblings or extended family.

Base: Those who have studied a STEM subject at a postsecondary level in the past, are currently doing so, or might do so in the future (n=418)

How they researched studying a STEM subject



Reasons for choosing/wanting to study a STEM subject

*STEM subject areas asked about included computer science, mathematics, natural sciences, and applied mathematics or sciences.

Reasons for *not* picking a STEM subject

A lack of knowledge about what studying a STEM subject involved and a perception that it was difficult emerged as important factors in why those who were *not* interested in a STEM subject didn't study one.

Respondents who didn't study a STEM subject (59% of the sample) were asked if it is something they considered and, if it was, what their reasons were for not choosing to study it.

Almost half (45%) of those who hadn't studied a STEM subject indicated that it was something they had considered.

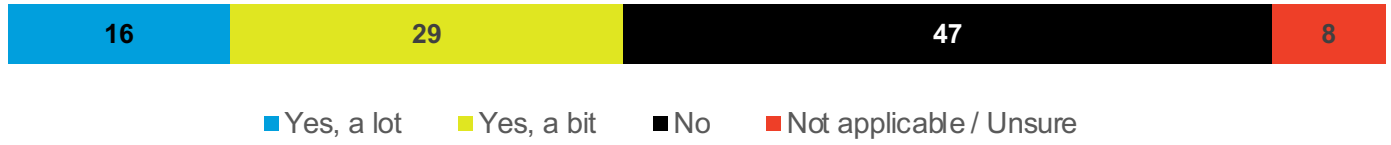
Encouragingly, there do not appear to be any insurmountable barriers for this group—none were selected by more than a quarter.

A lack of knowledge and concerns that it would be "too difficult" were the top two reasons for not picking a STEM subject, both selected by 21% of respondents.

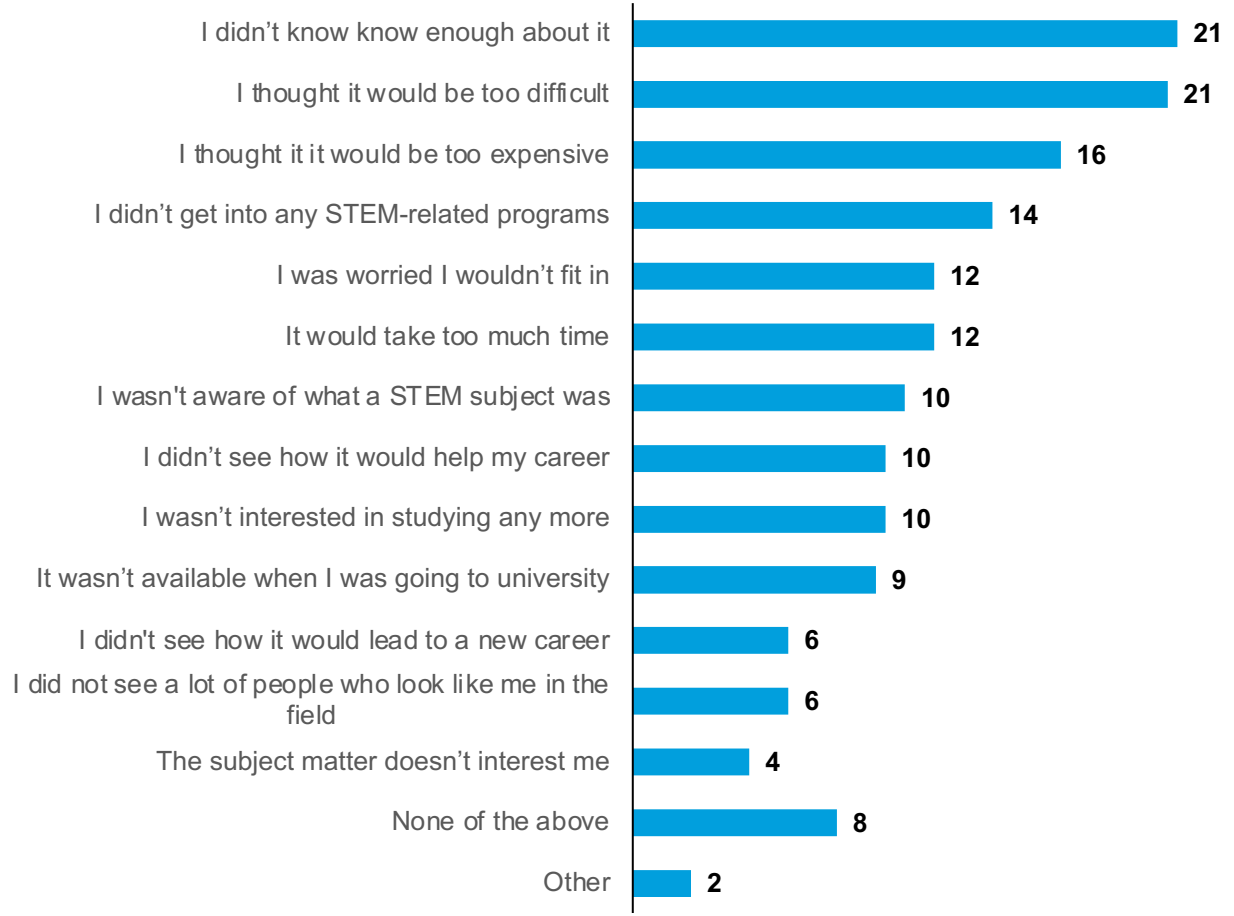
Other reasons were thinking it was too expensive (16%), not getting into a program (14%), worrying they wouldn't fit in (12%), and that it would take too much time (12%). No other reason was selected by more than 10%.

Base: Those who haven't studied a STEM subject at a postsecondary level (n=593)

Did they consider studying a STEM subject



Reasons for choosing not to study a STEM subject



High school: Technology skills and career knowledge

General technology skills were widely taught in high school, but students were not as often equipped with advanced ones (and knowledge relating to careers in digital and IT). Female respondents particularly rated their knowledge as lower in these areas.

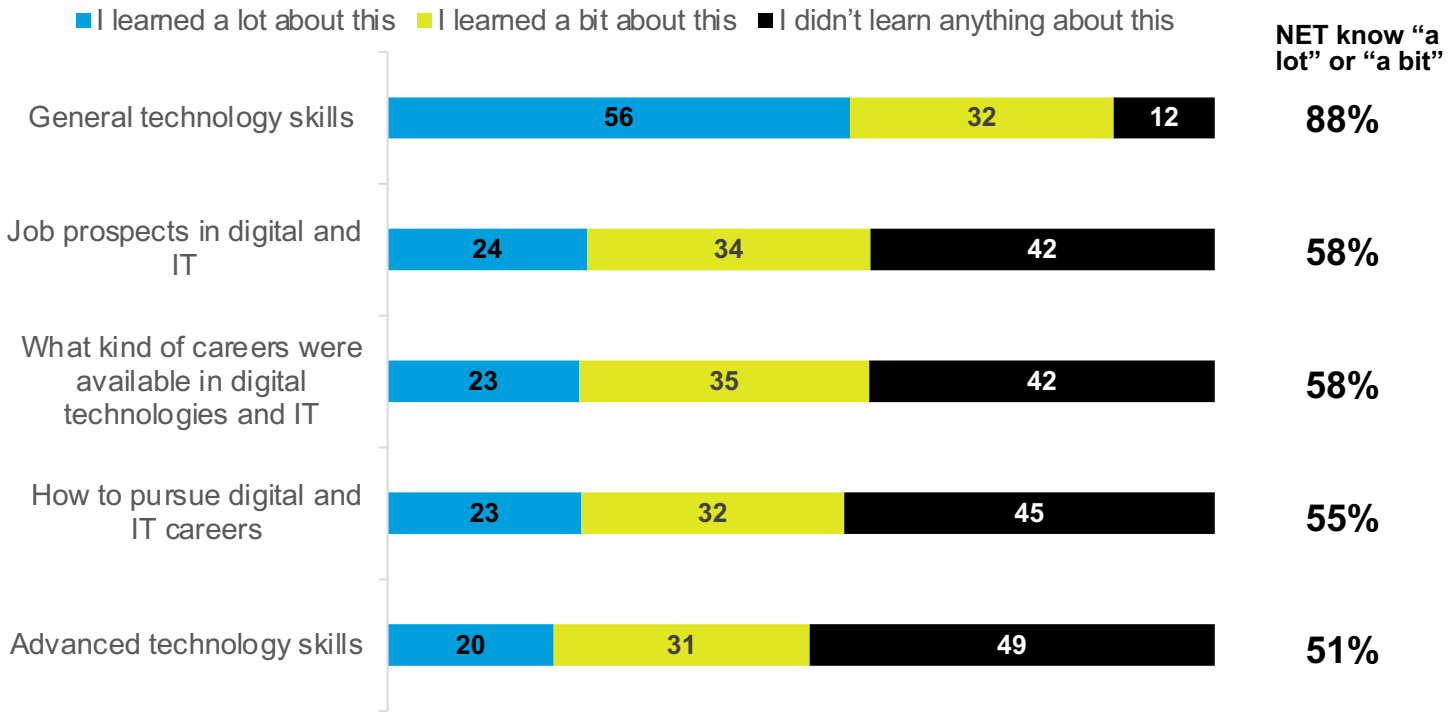
Respondents were asked what, if anything, they had learned about in school relating to technology and their knowledge about the careers that are available in it. Encouragingly, most had learned something about general technology skills (88% had learned "a lot" or "a bit") although only 56% thought they had learned "a lot." Exposure to advanced skills (e.g., coding, AutoCAD, robotics) was lower, with 51% learning something about it and 20% learning "a lot."

Awareness of careers in digital and IT was mixed, with approximately half knowing something about the job prospects (58%), what kind of careers are available (58%), and how to pursue them (55%). The number of those who say they know "a lot" about these areas was lower at around a quarter (i.e., 23-24%).

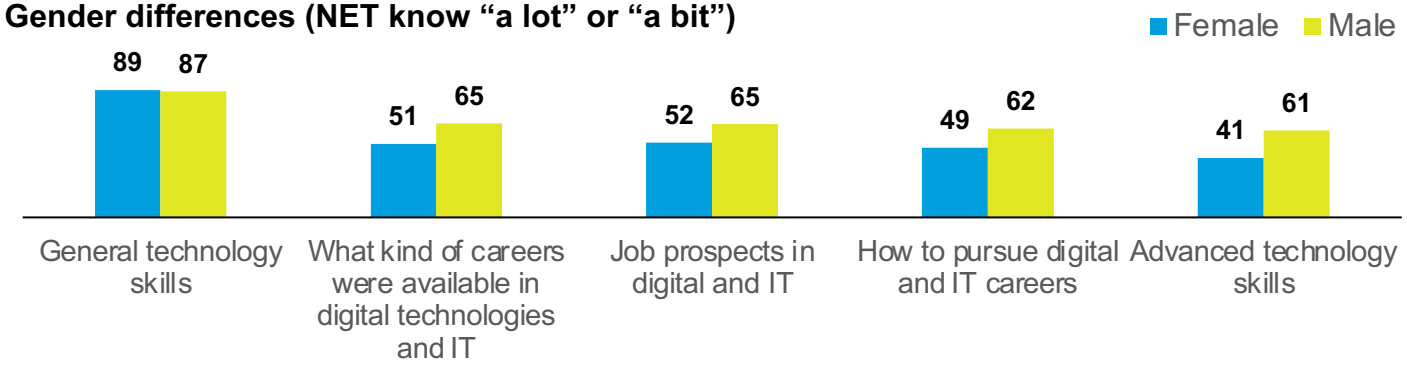
Outside of general technology skills, there appeared to be a gender divide in terms of the skills and knowledge taught in high school. This was particularly evident in advanced technology skills (+19% higher in male respondents) and in knowledge about careers available in digital and IT (13%-14% for the three options related to the kind of careers, job prospects, and how to pursue such a career).

Base: Total sample (n=1,011)

What they learned in high school



Gender differences (NET know "a lot" or "a bit")



02

Career Ambitions and Experiences

This section focuses on what is important to respondents in their career and how this matches up with what they currently experience. It also asks about their experiences with career mentors.

Definition of digital and IT

All respondents were asked questions about what occupation, if any, they currently or had most recently worked in. If respondents were classified as working in digital and IT, they were asked about their experiences working in that sector. If they worked in another sector or hadn't had a job yet then they were asked about their perceptions of the sector and about potentially working in it in the future.

We classified those who work in digital and IT as being:

- Those who say they have a computer or mathematical occupation

or

- Those who didn't but said their role could be described as being in digital and IT using the definition on the right.

"This could be any role or responsibility that primarily focuses on the practical application and use of software, hardware, technology, and/or the internet in business and daily life. For example, this could include roles in areas such as digital marketing, software project management, customer relationship management, data analysis, data visualization, medical billing and coding, market research, AutoCAD, additive manufacturing (3D printing), financial modelling, programming, coding, cybersecurity, IT support, etc."

Occupations

Around 4 in 10 worked in digital and IT, with those doing so more likely to be male (58%) and aged between 16-34 (61%).

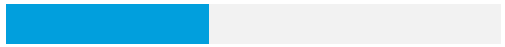
Computer/mathematical occupations were the fifth most common areas overall that respondents were currently or most recently employed in. The top occupations overall were sales (9%), business and financial operations (9%), and art/design/entertainment/sports/media (8%).

Of the 41% of our sample who worked in digital and IT (i.e., either a computer/mathematical occupation or one in another sector primarily focused on digital and IT), they were more likely to be male and younger:

- 58% were male and 41% female.
- 61% were ages 16-34 compared with 49% of the working-age population overall.

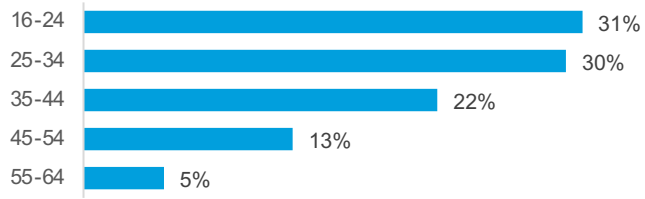
Base: Total sample (n=1,011)

41% worked in digital and IT

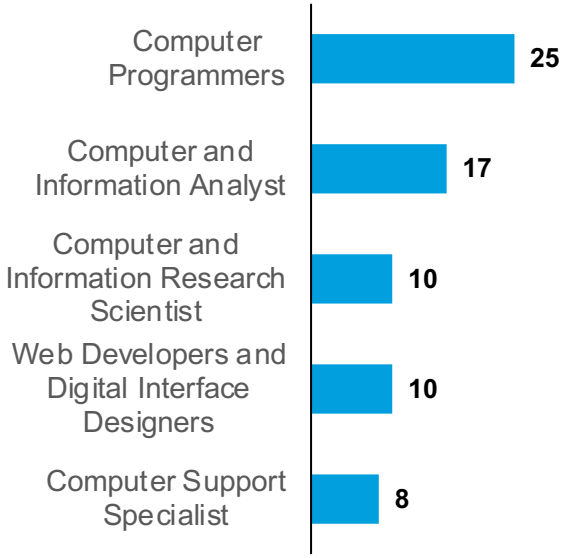


- 6% worked in a computer/mathematical occupation
- 35% worked in a role in another sector that primarily focuses on the practical application and use of software, hardware, technology, and/or the internet in business and daily life.

Of those working in digital and IT:



Top computer occupations



Top other occupations

Career wishes vs. reality

A wide range of factors were important to respondents in their career with "gaps" in what they currently experience around pay and advancement.

All respondents were asked what is important to them in their careers and those who are currently employed were also asked if it is something they experience in their job.

A wide range of factors were important to respondents in their careers. There were five factors separated by only 3%: doing something they **enjoy** (89%); learning **new skills** (88%); being happy with what they **earn** (87%); **helping** other people (87%); and being able to **advance** (86%).

All other factors were also selected by around 8 in 10 (80-84%) respondents, except for doing **innovative / cutting edge** work, which was selected by 74%.

Across most factors, how important something was in their career was mirrored by the level of agreement that they experience it in their current employment. The two key areas of differences, highlighting where there might be frustration with their current role, were around being happy with how much **money** they earn and being able to **advance**.

Base: Total sample (n=1,011)

Important factors in a career vs. what they experience in their career

Career aspirations

Respondents were asked to describe their career aspirations *in their own words*. Though some did mention having the ambition to achieve fame within their fields and high levels of wealth, far more expressed the desire to do a job that they were **passionate** about and **enjoyed** doing on a daily basis while also making enough money to **live comfortably**. For a number of respondents, passion was tied to doing work that they saw as **beneficial to the world and their local communities**. Another common theme was having **control** of their work life. For most, this meant working for themselves and/or starting their own company.

*"I just want a good career that I'm **happy** with that makes **pretty good money**."*
Male, 35-44, South

*"My aspiration is to gain as much **knowledge and experience** as possible while still in the workforce. I then hope to take what I've learned and apply it to a **business of my own**. All while helping others."*
Male, 25-34, Northeast

*"My career aspirations are to be able to **own a successful business** and be able to **give back to my community** along with being able to employ the disabled and bringing more jobs to my community."*
Female, 25-34, South

*"I would love to work in a field that I am most **passionate** about, **helps** people, and makes me **money** while doing it."*
Female, 35-44, Midwest

Use of career mentors

The almost half (45%) of respondents who had had any kind of career mentor found them useful in a multitude of ways, with formal mentorships standing out for helping to set career goals.

Respondents were asked if they had previously had a career mentor and how it might have helped them:

- 55% hadn't had any kind of mentor before
- 45% had previously had some form of mentor, which was evenly split between formal (24%) and informal (24%)

Importantly, both types of mentorships were thought to be useful by a majority of respondents across all factors in question:

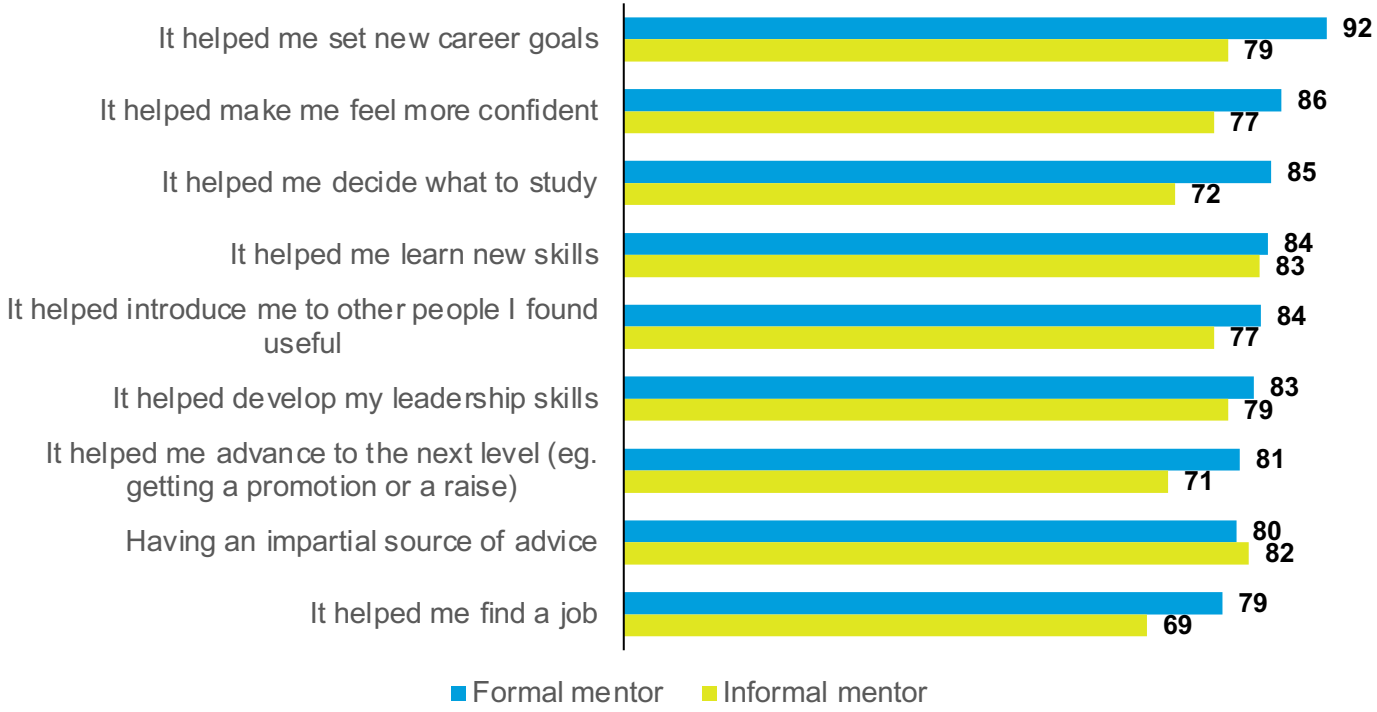
- Formal mentors tended to score higher on most aspects, with their particular strength being helping to set career goals (92%)
- For informal ones, factors where they were as effective or more so than formal mentors were helping to learn new skills (83%) and having an impartial source of advice

In terms of a hierarchy, differences between formal and informal mentorship were greatest in terms of helping to decide what to study (+13% higher for formal mentors), helping to set career goals (+13%), helping to advance to the next level (+10%), helping to find a job (+10%), and helping to feel more confident (+9%).

Base: Total sample (n=1,011), those who have had a formal career mentor (n=219), those who had a informal career mentor (n=217), those who haven't had a career mentor (n=497)

Those who had a career mentor

How their career mentor helped (NET Extremely/very useful)



Do those who have never had a mentor wish they had had one?

Background of career mentors

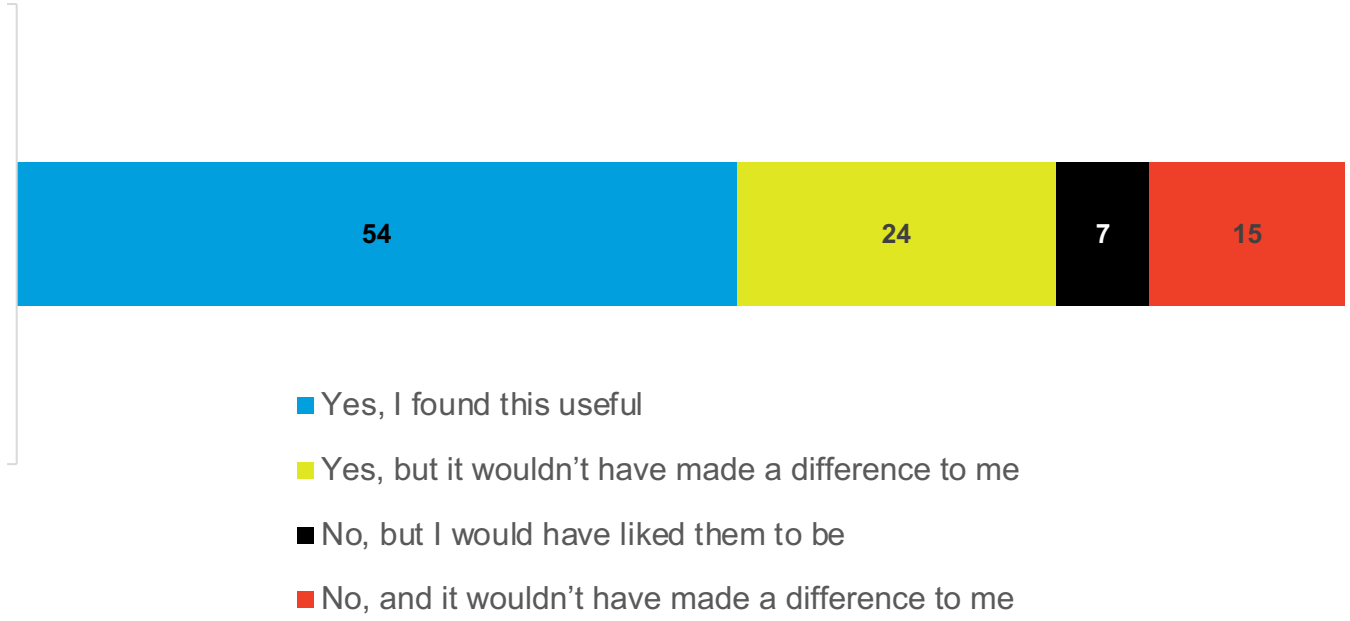
Most mentors were of the same race/ethnicity as respondents, with this generally being something they found useful.

Respondents who had been mentored (either formally or informally) were also asked if their mentor was the same race/ethnicity as them.

In around three quarters of instances (77%) they were, with most (54%) saying that was something they found useful.

Around a quarter (23%) said their mentor wasn't the same race/ethnicity as them. They were more likely to say it wouldn't have made a difference to them (14%) than they would have liked them to be (7%).

If their mentor was the same race/ethnicity as them



Base: Those who had had a career mentor (n=403)

03 Perceptions of Working in Digital and IT of Those Not Working in the Sector

This section focuses on the overall appeal of working in digital and IT as well as what is associated with it. This section also covers the barriers to pursing a career in the sector and what resources, if any, are used to learn more about it.

Appeal of working in digital and IT

Most were on the fence about a career in digital and IT, although it appealed more to male respondents. Concerningly, it was lower in the 16-24 age group.

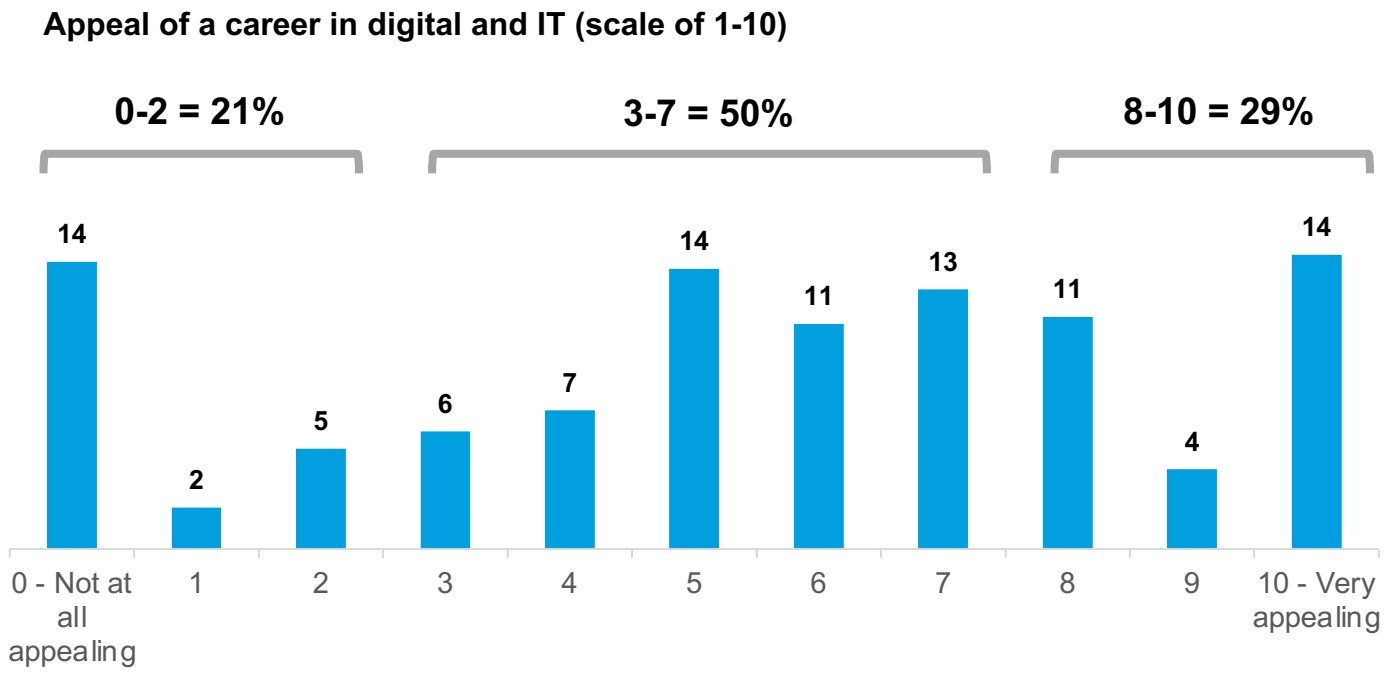
Those that do not currently work in digital and IT (59% of the total sample) were asked to rate how appealing they found a career in the sector on a scale from 0-10:

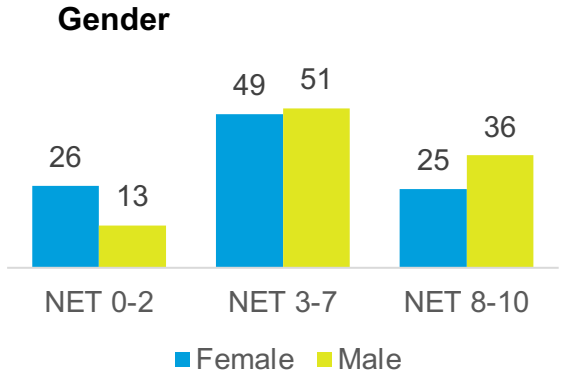
- Respondents were most likely to select a middling level of appeal, with half (50%) scoring between 3-7.
- Around 3 in 10 (29%) found it very appealing and gave it a score between 8-10.
- Approximately one-fifth (19%) did not find it appealing, selecting a score between 0-2.

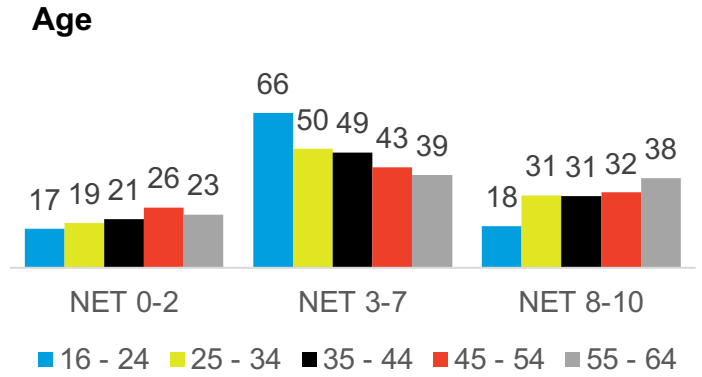
A career in digital and IT did not appeal as much to females. It was scored highly (i.e., between 8-10) in terms of appeal by 25% (8% less than males) and lowly (i.e., between 0-2) by 26% (13% higher than males).

Somewhat concerningly when thinking about the pipeline of talent, the youngest age group (i.e., those aged 16-24) were, compared to older age groups, less likely to say a career in digital and IT was very appealing (18% scored it between 8-10) and more likely to say it had middling appeal (66% scored it between 3-7).

Base: Those who don't currently work in digital and IT (n=594)







Associations with a career in digital and IT

Digital and IT was thought to be a well-paid field to work in. Some negative associations, such as it being intimidating and having long hours, resonated more with females.

Respondents who did not work in the digital and IT sector were presented with a list of words and asked which of them they associated with the sector. Nearly two thirds (64%) associated it with being "well paid," the highest proportion by some way.

"Long hours" (40%), "exciting" (35%), and "difficult" (32%) followed, while no other option was selected by more than 22% of respondents.

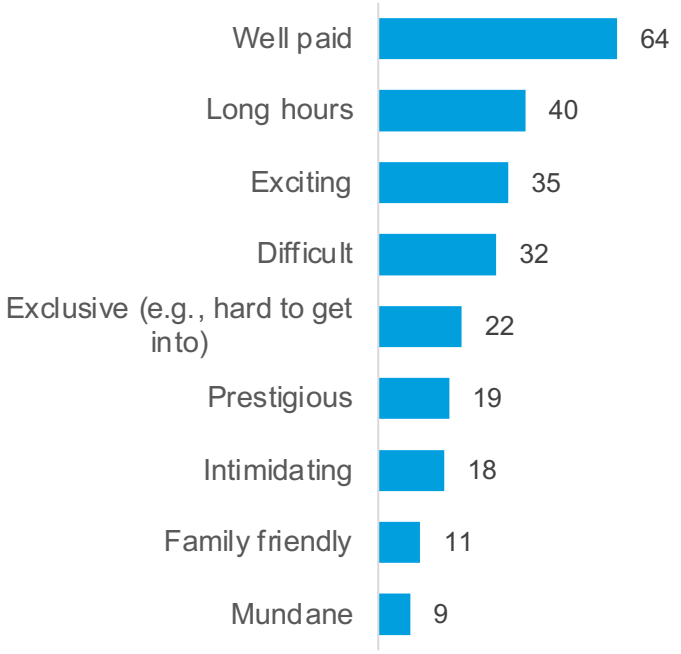
The words respondents were least likely to associate with a career in digital and IT were "mundane" (8%) and/or "family friendly" (11%).

Women were more likely to say they associated a career in digital and IT with being "intimidating" (21%, 7% higher than male respondents) and to have "long hours" (44%, 9% higher than male respondents).

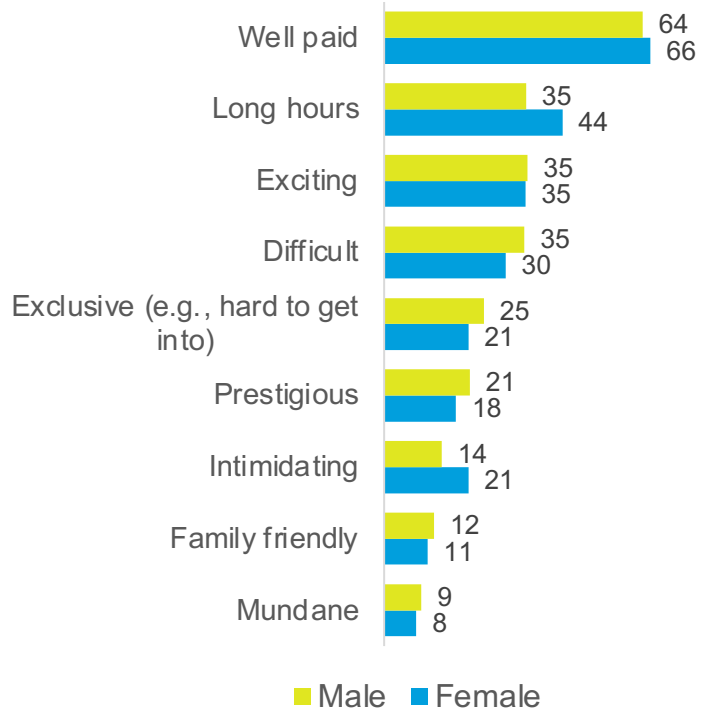
The youngest three age groups (i.e., those aged between 16-44) were more likely to associate it with being "exclusive." Between 24-29% did so, compared to 17% of the 45-54 and 15% of the 55-64 age groups.

Base: Those who don't currently work in digital and IT (n=594)

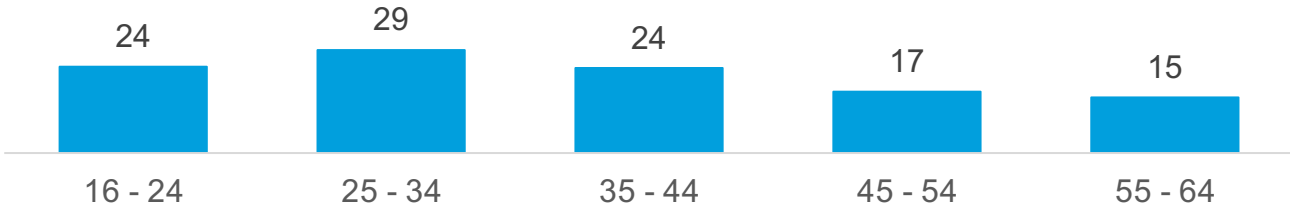
Overall associations



Associations by gender



There were some key differences by age in terms of how the digital and IT sector is associated with being exclusive (e.g., hard to get into)



Reasons for not working in digital and IT

As well as financial reasons, a lack of knowledge and a perception that they don't have the right skills were particularly evident in the reasons for why respondents didn't pursue a career in digital and IT.

Respondents not working in digital and IT were asked what reasons for choosing a different career path applied to them.

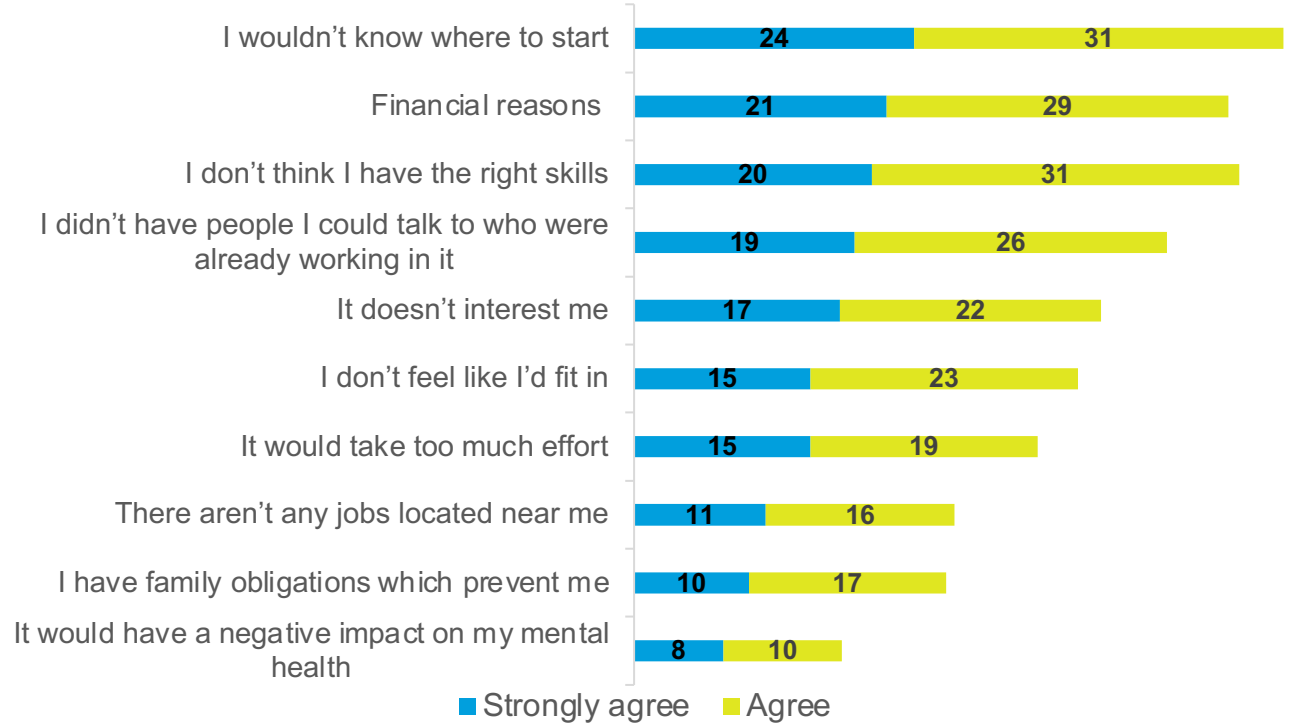
More than half of respondents strongly agreed or agreed that not knowing where to start (55%), financial reasons (51%), and/or not feeling as if they had the right skills (52%) had an impact on them choosing a sector other than digital and IT.

A lack of connections in the industry (45%), a lack of interest (40%), feeling that they wouldn't fit in (37%), and/or the amount of effort it would take (34%) each had an impact on more than a third. No other reason was selected by more than 27%.

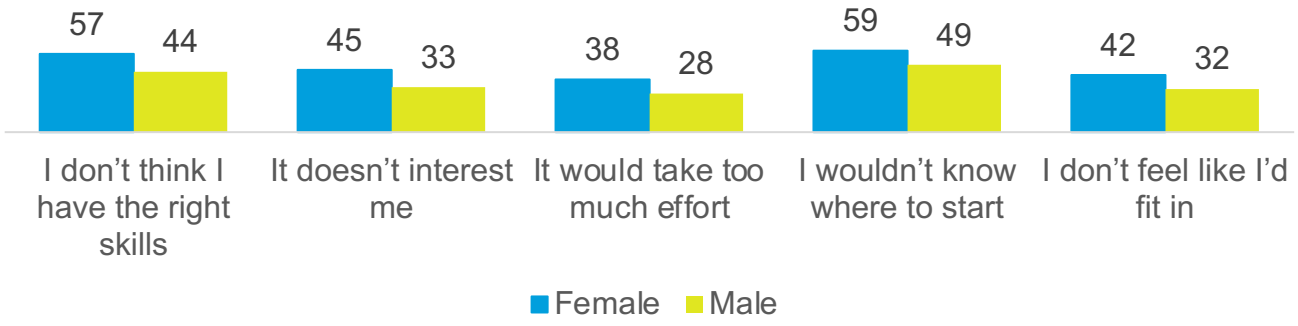
There were also some key differences in gender, with five reasons more likely to be selected by at least 10% more females than males. These included factors relating to the skills and effort needed as well as not feeling they'd fit in or that they were interested in the subject matter.

Base: Those who don't currently work in digital and IT (n=594)

Those that agree with the reasons for not working in digital and IT



Key differences by gender



Resources used to learn more about digital and IT

Free online resources such as YouTube and social media were the most used in learning about the skills needed for a career in digital and IT.

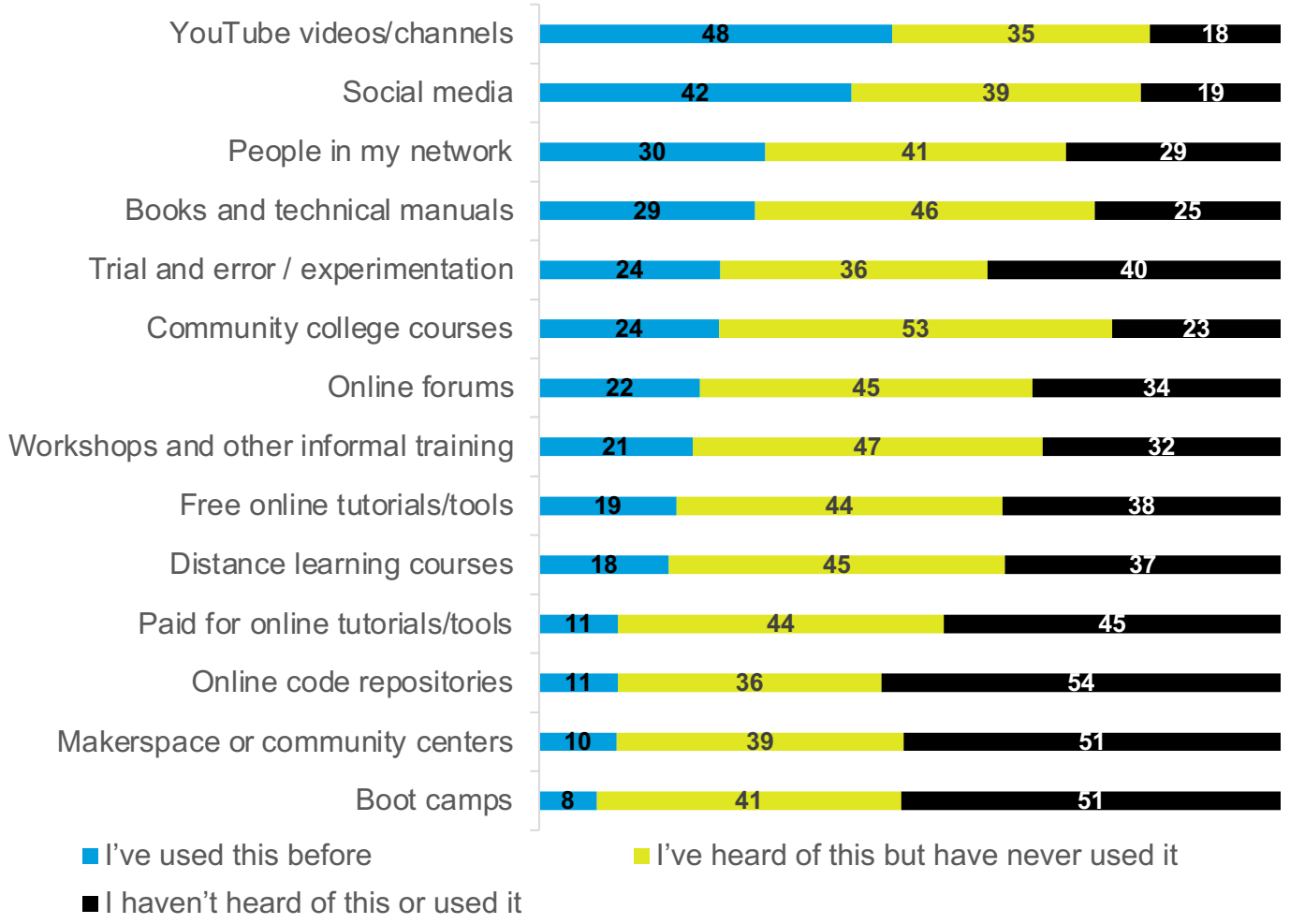
Those not working in digital and IT were also asked what resources they had used or were aware of to learn more about the skills needed for a career in the industry. Free online content emerged as a common tool, with almost half having used YouTube videos/channels (48%) and/or social media (53%) to learn more.

People in their networks (30%) along with books and technical manuals (29%) were used by around 3 in 10.

While no other resources were used by more than a quarter (24%), awareness for many of these was at least high. Around half had heard of but not used community colleges courses (53%), workshops (47%), or informal training and online forums (45%).

Base: Those who don't currently work in digital and IT (n=594)

Sources used to learn more about the skills needed for a career in digital and IT



04 Changing Career into Digital and IT of Those Not Working in the Sector

This section focuses on whether respondents would consider changing careers to work in digital and IT and what the reasons for their decisions are.

Who would change career into digital and IT

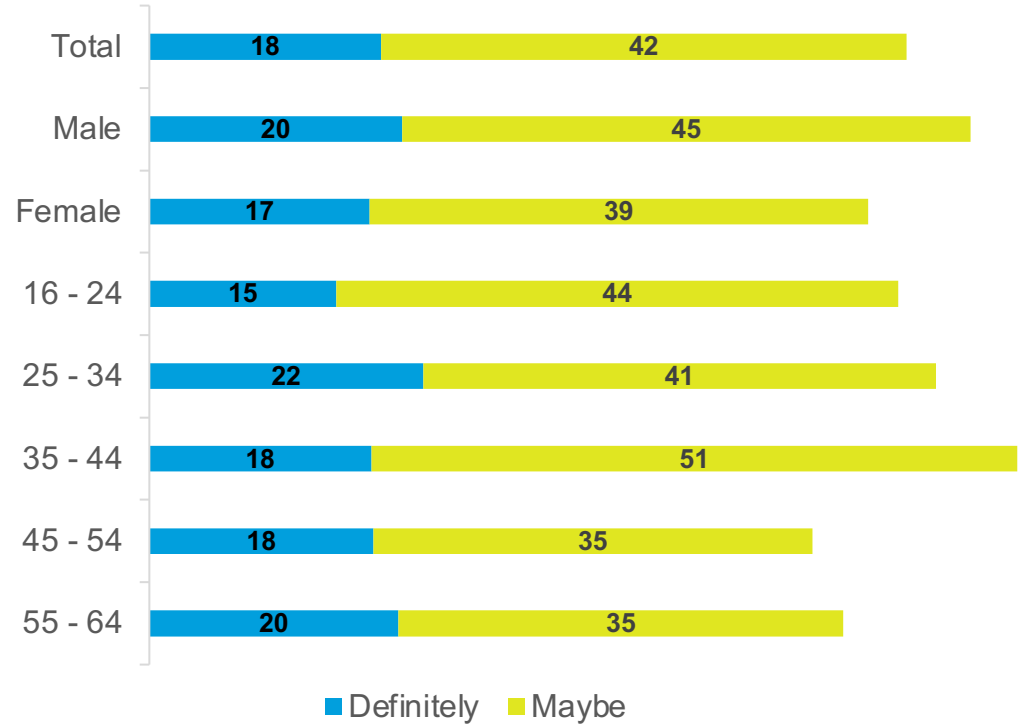
Six in 10 would consider changing career to digital and IT in the next five years, with this even higher in male respondents and those aged 16-44.

Those not currently working in the digital and IT sector were asked if they would consider pursuing a career change into digital and IT. 60% of them indicated that they would consider doing so, with nearly 1 in 5 (18%) stating that they would definitely consider the switch.

Future consideration of a career in digital and IT remained high across demographic groups, with males being slightly more likely to make a career change into digital and IT than females.

When looking at age, 35- to 44-year-olds were the most likely to be open switching, while 25- to 34-year-olds had the highest proportion, indicating that they would definitely consider the switch.

Those that would consider switching careers into digital and IT in the next five years



Base: Those who don't currently work in digital and IT (n=594)

Reasons for changing career into digital and IT

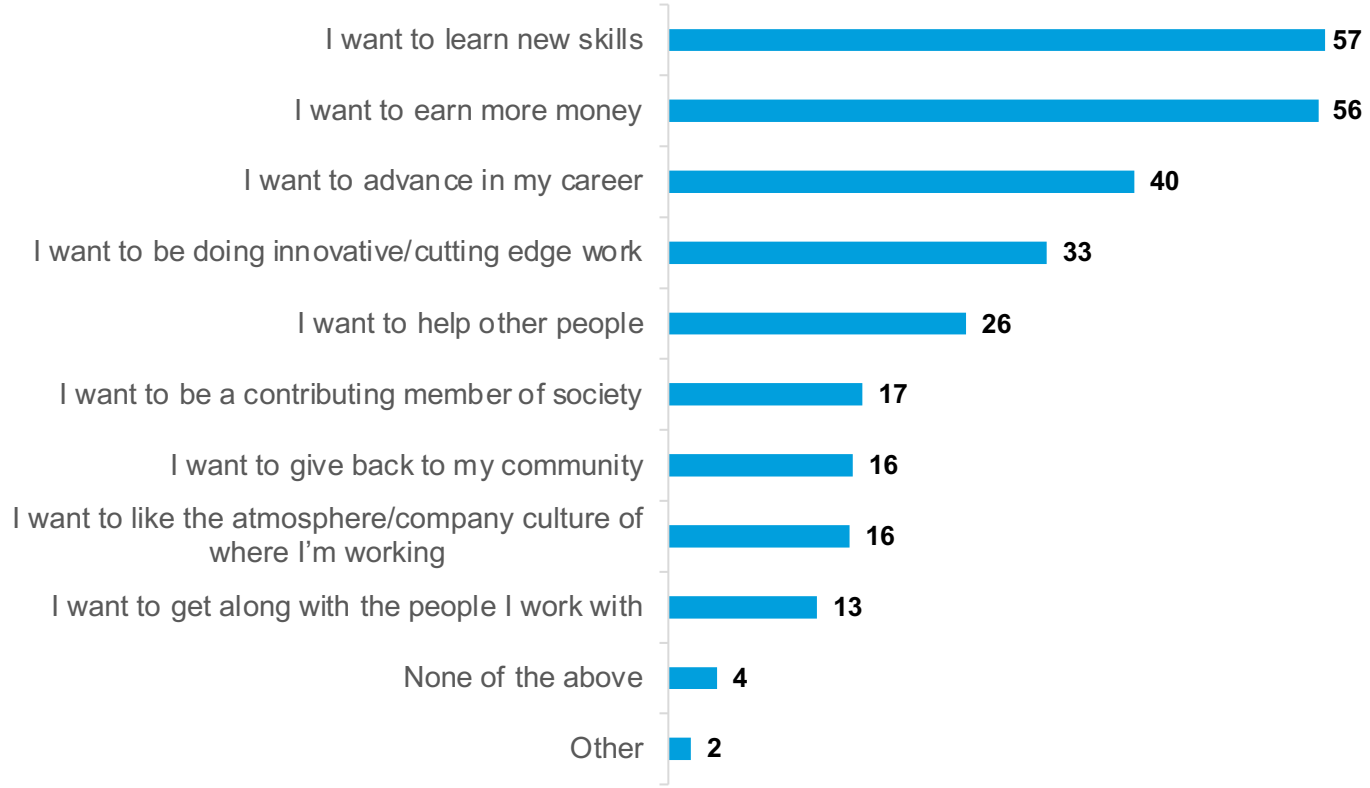
Learning new skills and earning more money are the main motivators for changing to a career in digital and IT.

Those that would consider changing careers into digital and IT were asked their reasons for wanting to do so. Learning new skills (57%) and earning more money (56%) emerged as key reasons.

Career advancement (40%), the desire to do innovative/cutting-edge work (33%), and helping other people (26%) were also cited by considerable proportions of respondents.

No other reason was selected by more than 17% of respondents.

Why they would change career into digital and IT



Base: Those who don't currently work in digital and IT but would consider changing careers to work in the sector (n=356)

The role of education in moving into digital and IT

Free and short courses were preferred over higher education in helping to make a switch to a career in digital and IT.

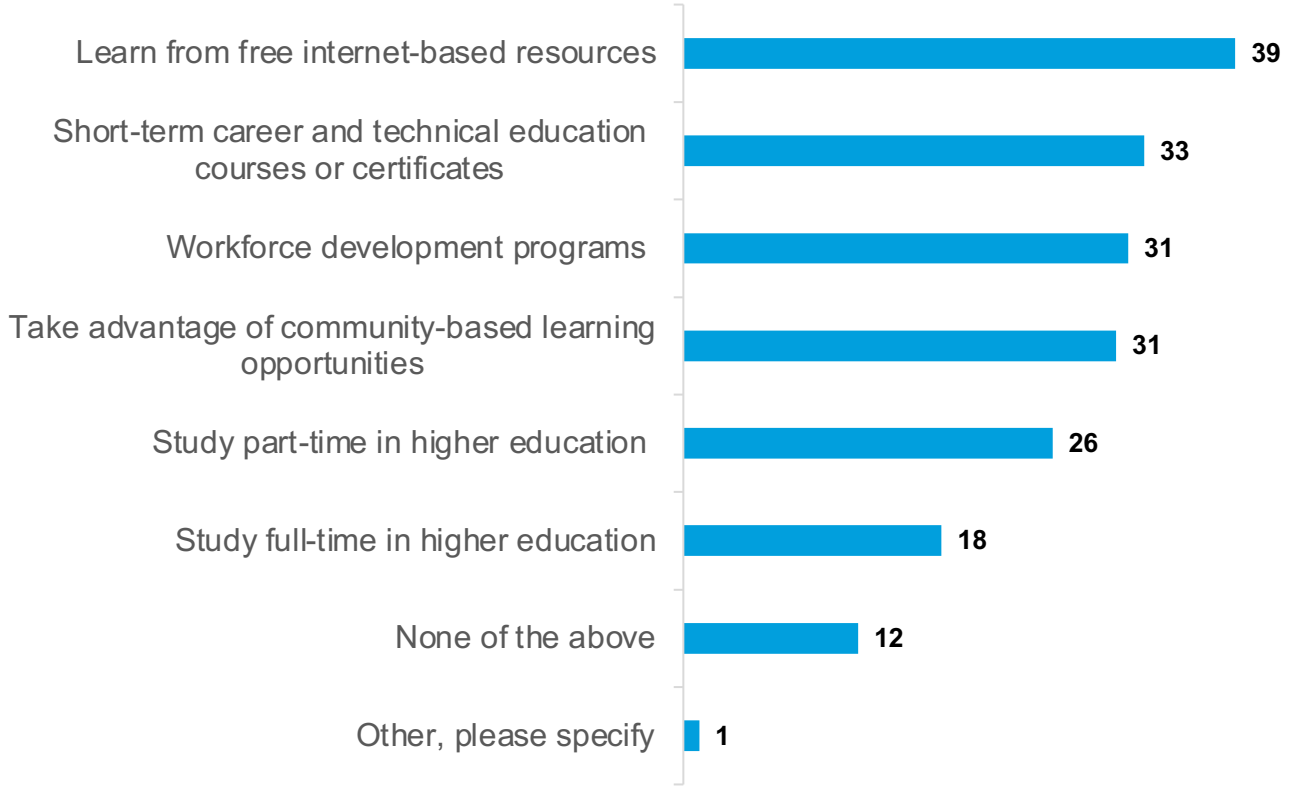
Respondents who were open to changing careers into digital and IT were asked what educational resources they would be likely to use to help with the switch. Their responses indicated that free internet-based resources would play an important role—39% expressed that they would use these resources to help with the career change.

Around a third indicated that they would use career/technical education courses (33%), workforce development programs (31%), and/or partake in community-based learning opportunities (31%).

A noticeably higher proportion would partake in part-time higher education (26%) as compared to full-time higher education (18%).

There were no trends evident when looking at differences by age groups.

What they would do to help change careers into digital and IT



Base: Those who don't currently work in digital and IT but would consider changing careers to work in the sector (n=356)

Reasons for not moving into digital and IT

Those who would not consider moving into digital and IT **in the next five** years were asked, in their own words, the main reasons why. Many indicated that they simply did not have an **interest** in IT or were **conten**t with their current career path and would prefer to focus on progressing in that field as much as possible. A number of respondents did, however, indicate that they felt a career in digital and IT was **not a realistic nor an accessible opportunity**. Many of these respondents expressed **doubt over their** ability to do the work required in a job in digital and IT, while others felt that their **life circumstances** would not allow them to spend the necessary time and money learning the skills needed to work in the field.

"I am not currently interested in a career in IT."
Male, 16-24, South

"My goal is to be successful in my own business in the next 5 years. Although understanding IT would be a big help, it is not the career that I plan to have."
Female, 45-54, South

"I believe it's too late for me to start over again. It would take too much time and cost too much."
Female, 45-54, Northeast

"If I was going to make such a move, I would have wanted to do so in college, with preparations beforehand (i.e., owning my own computer and learning about IT as a hobby in junior high and high school)."
Female, 45-54, Midwest

05 Experiences of Working in Digital and IT

This section focuses on those who currently work in the digital and IT sector and looks at their levels of satisfaction as well as what challenges they have faced. It also looks at how useful mentors have been to those who had them.

Satisfaction with their career in digital and IT

While most were satisfied with their careers in digital and IT, a minority were not completely satisfied, and this was more so the case for females.

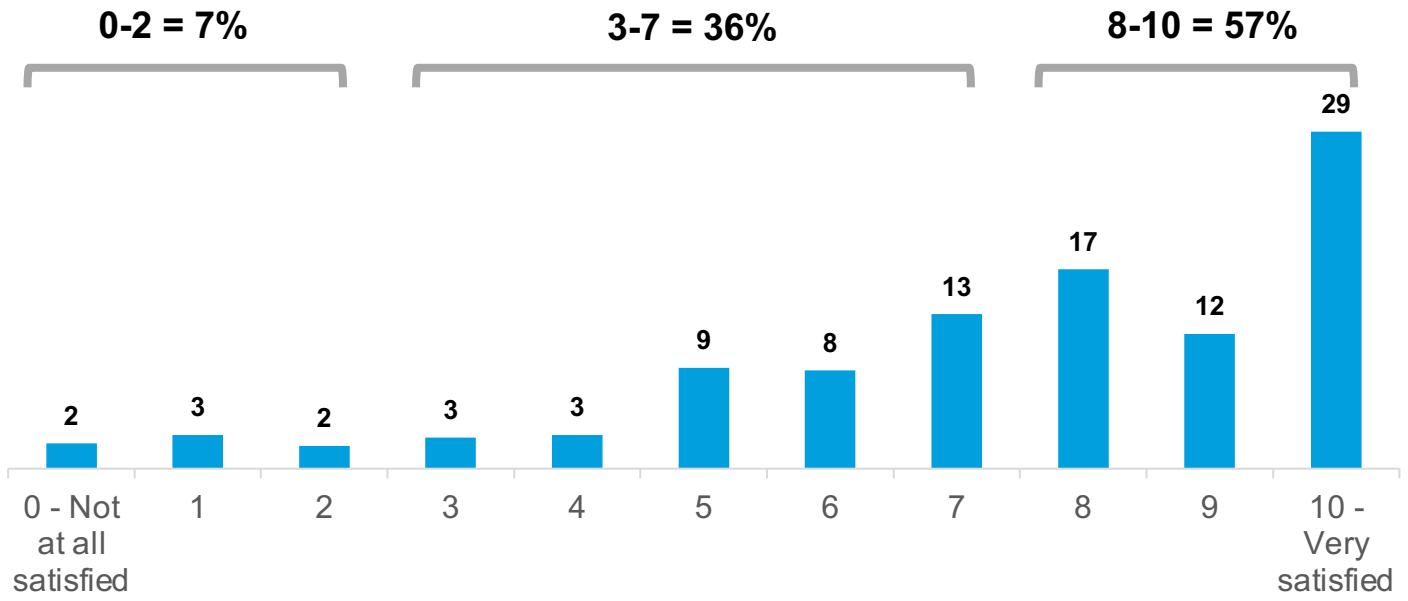
Those working in the digital and IT sector were asked to rate their career satisfaction on a scale of 0-10. In doing so, many respondents expressed high levels of satisfaction, although some were more negative about their experiences:

- More than half (57%) selected options 8-10, with 29% indicating the highest possible satisfaction by selecting 10 on the scale.
- Over a third (36%) selected options 3-7, indicating that they'd had mixed experiences.
- A small number (7%) selected options 0-2, indicating that they were not satisfied.

Females were less likely to rate their satisfaction highly (52% scored 8-10 compared with 62% of males) and were more likely to say they were not satisfied (9% scored 0-2, compared with 5% of males).

Base: Those who currently work in digital and IT (n=417)

How satisfied they are with their career in digital and IT (scale of 1-10)



"I enjoy the problem-solving aspects of it. Also, the sheer amount you find yourself capable of accomplishing after you spend some time learning to code."

Female, 16-24, South

"I get to learn new things and meet new people. The pay grade is high enough and my family encourages me to follow my heart and learn what I truly am good [at] and passionate about."

Male, 25-34, Northeast

Key challenges to working in digital and IT

Experience with a wide range of challenges is common, with those around progress and pay more pronounced, especially for females.

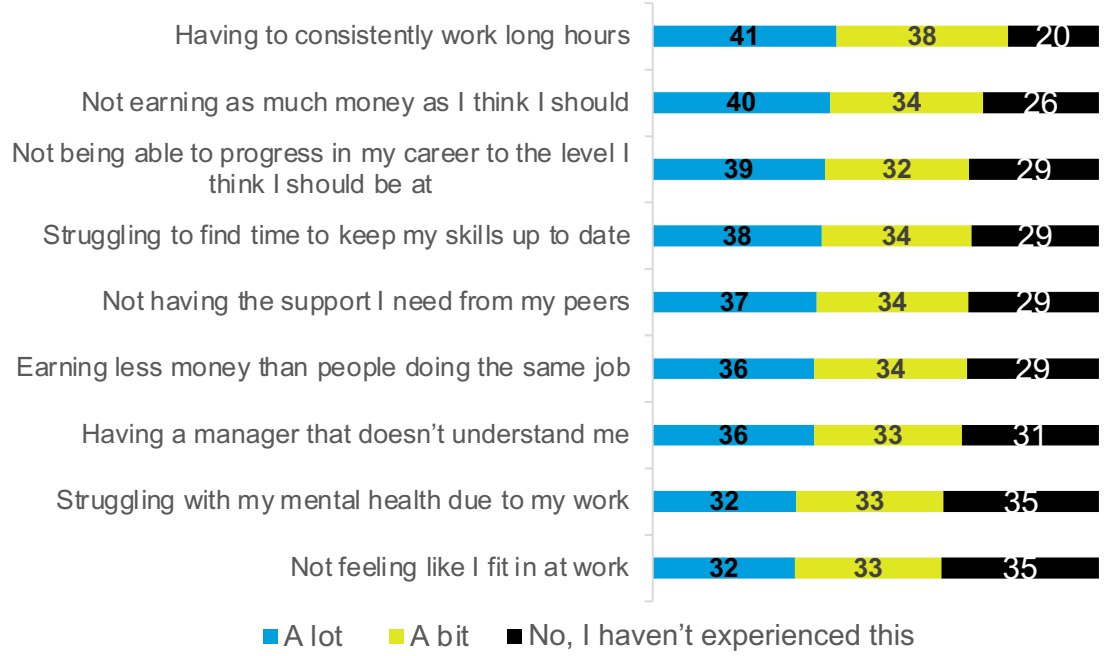
Those with careers in the digital and IT sector were presented with a list of potential career challenges relating to working conditions, outcomes (e.g., pay, promotions), levels of support, and how they feel at work, and asked to what extent they had experienced each. Experience with all challenges was common. For each challenge, at least two-thirds (65%) indicated that they had experienced it to some degree, and at least a third (32%) that they had experienced it a lot.

While having to consistently work long hours was the most experienced challenge (41% experienced it “a lot”), other challenges, such as earning less than they feel they should (40%) and not being able to progress in their career (39%), were not far behind.

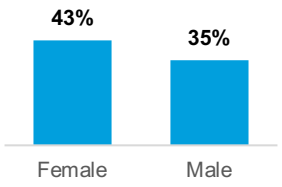
In terms of demographic differences, females were more likely to struggle with progressing in their careers to the level they felt they should be at (43% vs. 35% of males) and to say they earn less money than someone doing the same job (39% vs. 35% of male respondents). Males were more likely to say they consistently work long hours (43% vs. 38% of females).

Base: Those who currently work in digital and IT (n=417)

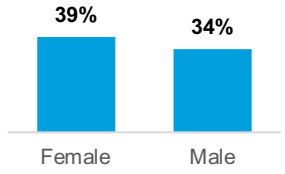
The challenges they have experienced



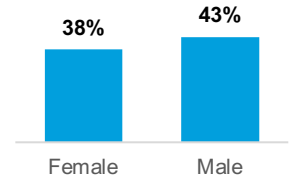
Key gender differences (experienced “a lot”)



Not being able to progress in my career to the level I think I should be at



Earning less money than people doing the same job



Having to consistently work long hours

Other challenges in a career in digital and IT

When asked to describe in their own words other challenges that they have faced in their careers, the vast majority of those working in digital and IT cited challenges relating to the **technical aspects** of their jobs. The most common of these challenges was keeping up to date with an unending stream of **new technological developments**. Some others mentioned the difficulties of **programming** and the need for close **attention to detail**. Though fewer, some also experienced challenges in the workplace. This included **coworkers/managers** that were not open to changes, as well as **discrimination**.

"What I find the most challenging is that it can be very technical therefore causing it to be a bit time consuming as you have to double check and verify everything."
Male, 25-34, Northeast

"My immediate manager and some of my peers not seeing the value in using technology to work more efficiently. It is frustrating to hear 'we've always done it this way.'"
Female, 55-64, Midwest

"As a woman of color, there is discrimination at the workplace—albeit it's not transparent."
Female, 25-34, Midwest

"Fast pace and being able to accelerate at a very high-level environment."
Male, 25-34, Northeast

Digital and IT career milestones

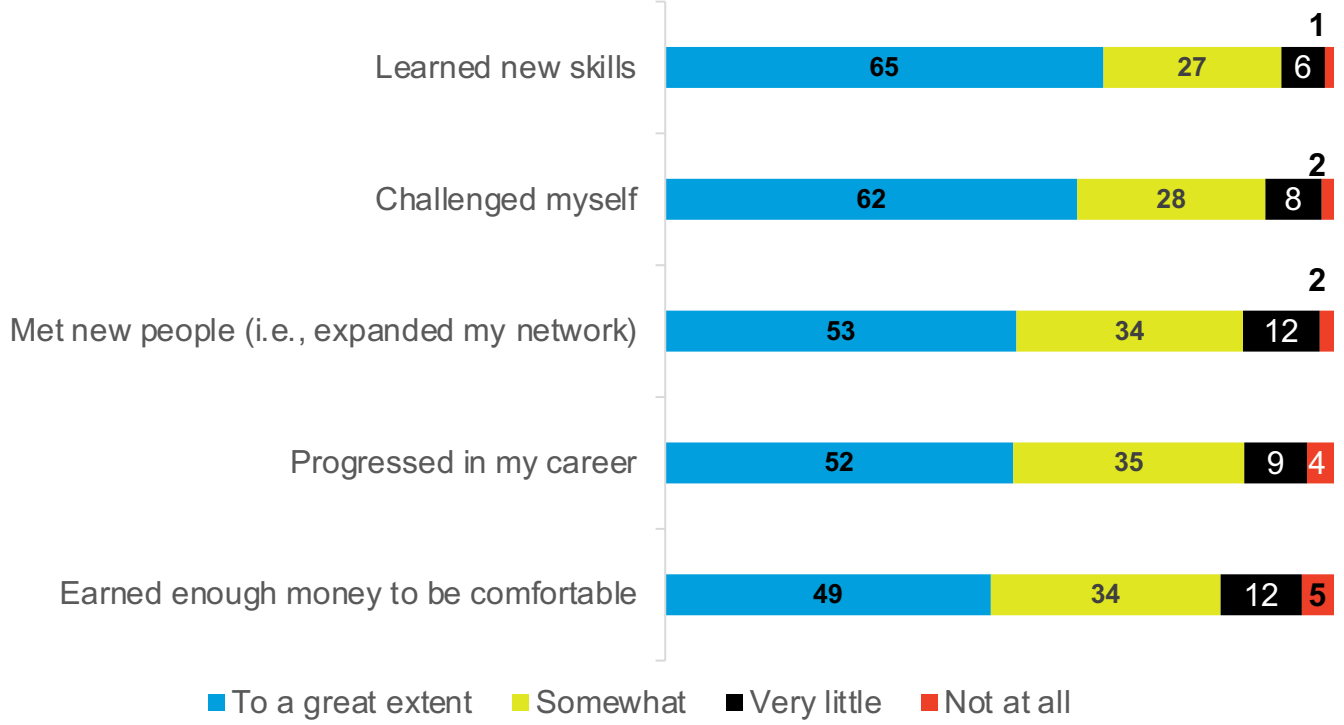
During their careers, respondents were most likely to have learned new skills and challenged themselves.

Respondents who work in digital and IT were asked a range of (positive) statements about what they had experienced in their career.

All statements were experienced to some or a great extent by between 83-92%. At the top was learning new skills (92%), followed by people feeling they had challenged themselves (90%).

Similar proportions felt they had progressed in their careers (87%), met new people (86%), and earned enough money to be comfortable (82%).

To what extent they've experienced the below in their career in digital and IT



Base: Those who currently work in digital and IT (n=417)

The use of mentors in careers in digital and IT

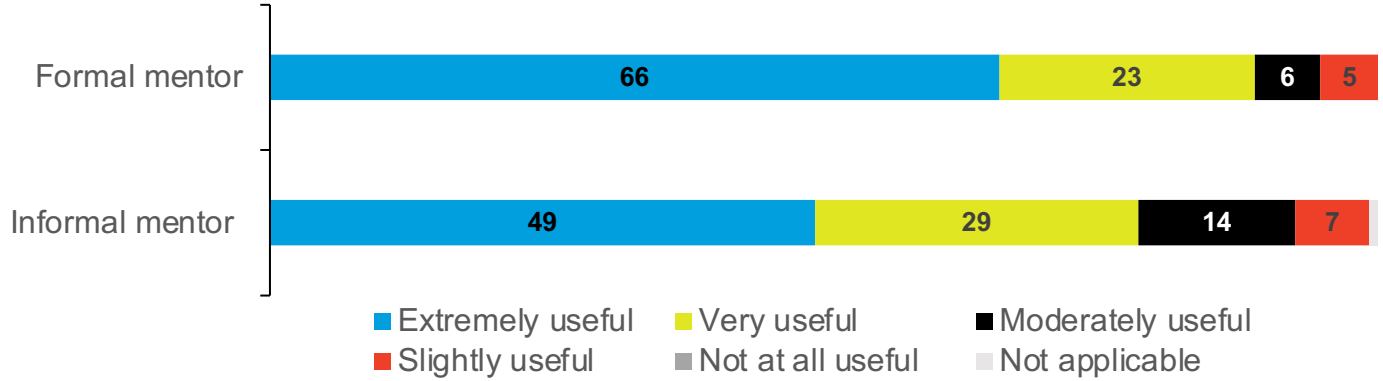
Mentors were found to be an invaluable tool in helping those in digital and IT to achieve their career goals in the sector.

Those that had a mentor were asked how helpful they found it, if at all. Respondents with both formal and informal mentors overwhelmingly indicated that having a mentor had been highly useful for them.

Those with a formal mentor (66%) were more likely to find the experience “extremely” useful as compared to those with an informal mentor (49%). However, in both cases more than three quarters found their mentor either extremely or very useful (89% of those with a formal mentor and 78% of those with an informal mentor).

When asked to describe, in their own words, what they found helpful about having a mentor, respondents mentioned being able to **grow their networks** through their mentor and receiving **valuable, experience-driven advice** on how to grow and develop their careers.

How useful a career mentor was to achieving their career goals in digital and IT



“It taught me practical skills and gave me tools and access to networks that are actually useful to my career.”

Female, 25-34, Midwest

“A mentor helps you stay focused on your career and improve your skills, networks, self-confidence, and ultimate success along the path in developing your career. They help you to learn about yourself and work out how and where you should be headed to achieve an optimum outcome.”

Male, 35-44, South

Base: Those who currently work in digital and IT and have had a formal (n=152) or informal (n=120) mentor

06 Promoting Careers in Digital and IT

This section focuses on potential ways that more Black learners and workers could be encouraged to work in digital and IT.

Further actions that could be taken

All ideas tested were found to be potentially effective, but those around education really resonated with respondents.

Respondents were presented with a list of potential solutions that could persuade more Black learners and workers to pursue a career in digital and IT. They were all rated similarly with between 74-79%, saying each was effective or very effective.

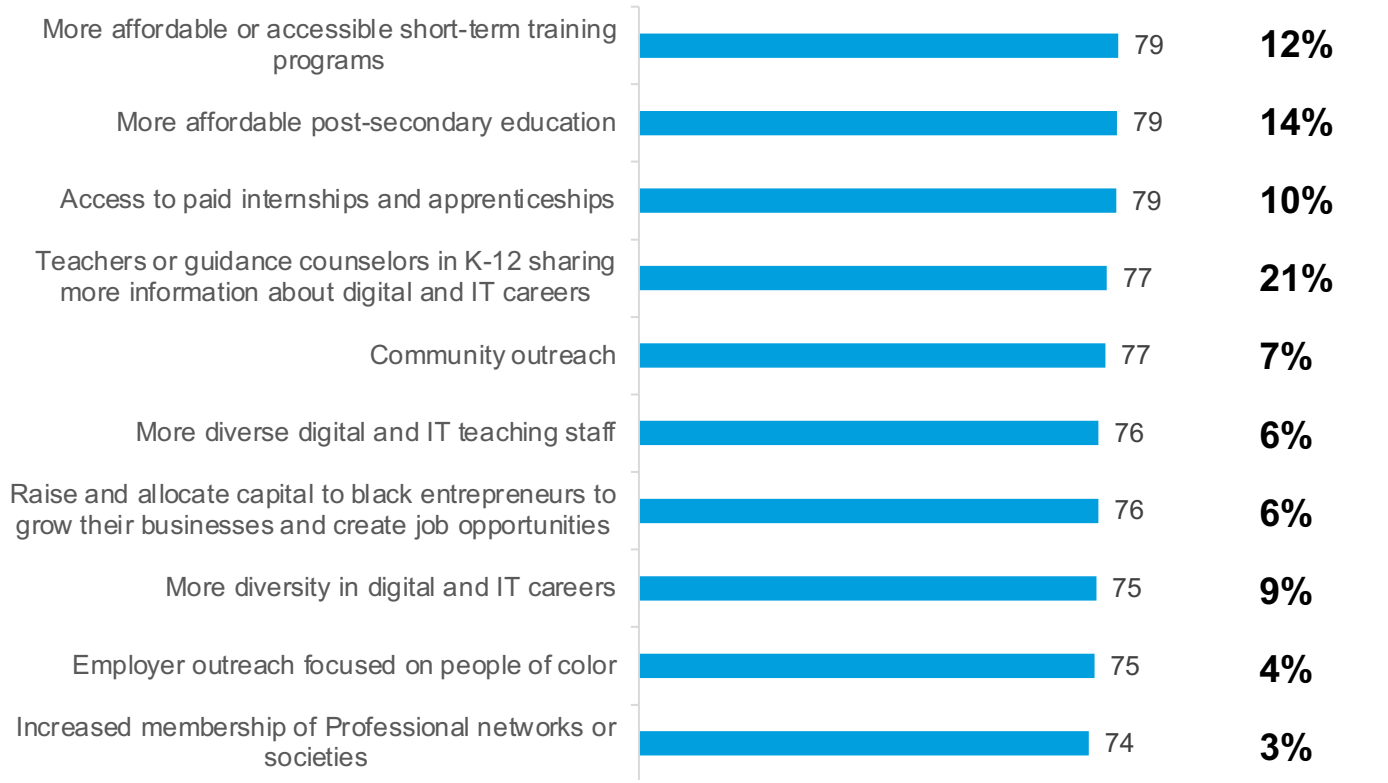
When forced to choose which one would be “most” effective, more differences arose. The top three reasons all had a strong focus on education and learning. This included **teachers or guidance counselors in K-12** sharing more information about digital and IT careers (21%), which was the most effective solution. It was followed by **more affordable postsecondary education** (14%) and more aff**ordable or accessible short-term training programs** (12%).

These were followed by solutions that involved the digital and IT industry directly. This included access to **paid internships and apprenticeships** (10%) and more **diversity** in digital and IT careers (9%).

No other solution was selected by more than 7% of the sample.

Base: Total sample (n=1,011)

Potential solutions to persuade more Black learners and workers to pursue a career in digital and IT (NET very effective/effective)



Other ways that Black learners and workers could be encouraged to work in digital and IT

After being shown the list of potential solutions on the previous slide for encouraging more Black learners and workers to enter the digital and IT sector, respondents were asked if there was anything not mentioned that they think could be effective. Many of the ideas built on some of the ones tested and included increasing the role of digital and IT in education through building into high school, middle school, and even elementary school curriculums. For many, this would help make information about tech and IT more accessible. **Mentorships** were also important as well as Black learners having the opportunity to **learn from Black teachers**. One respondent, for example, mentioned that they didn't feel as if the digital and IT industry was for them until they had had a Black teacher at a tech boot camp. Similarly, having Black mentors available was mentioned.

Others felt that the **industry needed to do a better job of encouraging Black learners** to pursue a career in digital and IT. This includes having more inclusive/representational recruitment materials such as pamphlets, as well as job and internship opportunities accessible to people from a variety of backgrounds. Some also suggested that industry companies run youth educational programs for members of the Black community.

"Teaching classes in grade and high school would be the perfect way to introduce children to IT. Understanding how the video games they play all the time work would be great motivation. Not to mention the financial blessing that comes along with this type of job."
Female, 45-54, West

"Having more mentorship throughout the whole process to help decide if this is really the path they want to go down and, if so, how to go about doing that successfully."
Female, 25-34, South

"We feel welcome when we see other people who look like us represented. When all the ads and recruiters are white, it sends a negative message. Likewise when they are all men. Thank goodness for groups like Girls Who Code."
Male, 55-64, West

"Maybe incorporate paid internships during college and early employment. Employers could create programs designed to promote up into IT-related roles, giving ALL employees the same opportunities."
Female, 55-64, Midwest

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