Diversifying Digital

What motivates women to learn and work in digital

The research

In order to have a more diverse digital workforce to benefit our economy and society, we need to understand what would motivate more people to study or work in digital. While there is a need for much broader diversity in digital, we have focussed this research on women. Despite many interventions and activities to date, there is still a lack of women training and working in digital. By actively listening to women's views, we hope to better understand their motivations and take corresponding enabling action.

New research – completed by the Institute of Coding and Deloitte in 2019 and 2020 – suggests that women at different stages in their education and careers see the digital sector as exciting, innovative and creative. Digital is seen by women to offer varied and interesting work and a chance to make a positive difference in the world, as well as an industry that offers the prospect of good salaries and career progression.

The research also suggests that we can help overcome perceptions that may inhibit women from choosing digital jobs or training, such as not knowing how to retrain, or believing they lack the right qualifications.

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<context and headlines>

“Improving the diversity of those studying and working in digital is critical, ensuring technology develops and benefits every section of society.”

Shilpa Shah, Alternative Delivery Model and Deloitte Women in Technology Leader

We know that digital needs greater diversity. There is a digital skills gap in the UK and we need new students and learners from diverse backgrounds at different stages in their lives and careers to meet the need for more skilled digital professionals[1].

The Institute of Coding (IoC) has been working to encourage a larger, more diverse group of students into digital careers via higher education, and this research forms part of that effort.

Women make up 17% of the UK’s digital workforce[2]

We need more women in digital in order to overcome the skills gap, to develop fairer and more inclusive products, services and solutions, and to enable the digital industry to benefit from the talent and creativity that women can bring.

The IoC and Deloitte are sharing this research summary to set out how, together, we can open up the path into digital careers and learning.

defining digital skills

Technical and non-technical abilities that enable individuals to learn, understand or use the appropriate digital technologies to achieve their desired outcomes (e.g. coding, collaboration).

This new research identifies three important ways for motivating more women to pursue digital education and careers:

<1/smarter signposting>
<2/digital rebrand>
<3/flexible learning>

what we did

– Surveyed a total of 1,410 people using three online questionnaires
– Sampled three groups to enable comparative analysis

1. **16-18 year olds** (420 respondents)
2. **University students** (483 respondents)
3. **People in work** (507 respondents)

– Concentrated on motivations for training and working in digital
– Asked 23 questions, including demographic, open-ended, closed and ranking questions
– Collected both quantitative and qualitative data
– Focused initial analysis specifically on women as an underrepresented group in digital, with additional analysis to come in the future

[1] WISE Campaign (2019); Winterbotham et al (2018); PWC (2017); Department of Culture, Media and Sport and ECORYS UK (2016)
[2] Tech Talent Charter (2019); BCS (2017)

<1/smarter signposting>

The research results indicate that, with the right real-world and digital guidance, we could create pathways to jobs and careers for women who are interested in digital. As a sector, we can provide access to better information about the vast range of digital jobs available, the reality of these roles and the skills required. With the right information, we can facilitate access to education and training for those who say they do not know where to go to access the digital sector.

What we heard:
the information women need to make informed choices about digital work and education

16-18 year olds

"Demonstrating the variety of fields which people can enter through digital, as well as encouraging people to pursue it through examples." *16-year-old woman*

University students

"If [people] understand that anyone can work in a digital related field, there are so many jobs available which don't require advanced technical skills." *Woman university student aged 19-24*

Women in work

"[Build a] website that collates and lists all providers of digital education at different levels and the available courses both free and paid." *Woman in work aged 41-54*

Key stats:
Guidance is needed on how to access information on digital, showing the need for smarter signposting.

16-18 year olds

59%

of 16-18 year old women believe **you need to have a GCSE in a Science, Technology, Engineering or Maths (STEM) subject to work in digital**, emphasising that improved careers guidance is needed that outlines non-STEM routes into digital.

University students

49%

of women university students believe they are **not studying the right subjects to work in digital**, highlighting the need for more signposting that demonstrates that you can study any subject and work in digital.

Women in work

54%

of women working in non-digital jobs stated that the main reason they were not pursuing a digital career was because **they did not know how to retrain or did not believe that they had studied the subjects necessary to work in digital**.

<2/digital rebrand>

There is a perception mismatch between those inside and outside of digital education and careers. We need to move beyond the current image problem of digital, including some perceived stereotypes.

The research suggests that if we help to show digital as being diverse, accessible and open to all, highlighting the wide range of available jobs as creative, innovative, varied and a force for good, this will attract more women into the sector.

What we heard:
how to myth bust digital stereotypes

16-18 year olds

"I would show the more exciting bits of it, for example, all the tech events or cool innovative ideas that have been created lately."
Woman university learner aged 16-18

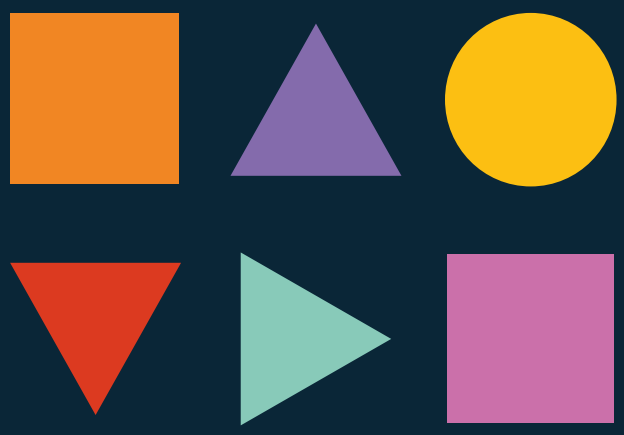
University students

"Break the stereotypes of digital work being less social than other sectors."
Woman university student aged 19-24

"[Make] it accessible. It's intimidating with all the jargon and perceived specialist skill needed." *Woman university student aged 41-54*

Women in work

"Encourage older people to join the digital workforce so people don't assume they can't have a digital career if over a certain age."
Woman worker aged 25-40



Key stats:
Women at different life stages are attracted to different elements of what digital can bring, showing the need for a digital rebrand.

16-18 year olds

60%

of 16-18 year old women said they would consider a digital career if there was the **prospect of a good salary and clear career progression.**

University students

63%

of women university students said that they would consider pursuing a digital career if there was a **possibility of using digital to make a difference in the world and contribute to future technology.**

Women in work

95%

of women in work agreed that **increasing the diversity of a digital workforce is beneficial for creativity and productivity, highlighting the need for greater gender parity in digital.**

<3/flexible learning>

The research suggests that there is a significant appetite to learn more digital skills. Women are motivated to do so at different stages in their lives if they understand the benefits and if the provision of digital learning and training can evolve and respond to their preferred (and diverse) ways of learning.

Learning can be tailored specifically to appeal to women who prefer a blended approach, incorporating elements of online learning with face-to-face interaction with teachers, mentors and peers, and creating supportive communities of learning. With industry input, we can intervene earlier in the pipeline and improve digital teaching in the school curriculum, embedding a digital culture at source.

What we heard:
how to bring digital subjects alive in schools

University students

"[Make digital] more accessible at earlier ages: more accessible to girls from a very young age (like 5) rather than waiting until they are 13 to bombard them with encouragement to join. Teach coding in schools at a higher level, allowing people to be creative rather than just follow instructions." *Woman university student aged 19-24*

Women in work

"Encouraging more work experience or programming classes at schools at different ages all over not just in cities." *Woman in work aged 19-24*

"Organising hackathons and STEM events in schools, colleges and universities to give them a taste of what it is like to pursue these careers." *Woman in work aged 19-24*

Key stats:
Women at different life stages have different learning preferences, showing the need for flexible and tailored learning.

16-18 year olds

48%

of 16-18 year old women expressed an interest in work placements, 40% for online tutorials, 40% for video/media and 37% for learning in social groups with friends.

University students

61%

of women university students identified work-based or hands-on placements as a preferred way of learning, 59% expressed an interest in online tutorials and 37% extracurricular classes and activities.

Women in work

61%

of women in work expressed an interest in learning through online tutorials, 44% for face-to-face extra-curricular classes and 43% for hands-on work placements.

<key insights>

What attracts women to digital?

We asked women not currently studying or working in digital what would motivate them to pursue a digital career. Here are three commonly reported motivations for each sample group:

16-18 year olds	University students	Women in work
Prospect of a good salary and clear career progression (82%)	Possibility of using digital to make a difference in the world (64%)	Prospect of a good salary and clear career progression (60%)
Possibility of using digital to make a difference in the world (45%)	Prospect of a good salary and clear career progression (62%)	If they knew would have opportunity to be innovative and creative with varied work (59%)
If they knew would have opportunity to be innovative and creative with varied work (39%)	If they knew would have opportunity to be innovative and creative with varied work (59%)	Possibility of using digital to make a difference in the world (55%)

University students

"It allows self growth and I want to become part of this industry which is yet to tap into the massive potential of our digital age."
Woman university learner aged 19-24

What are women looking for in an employer?

We asked women what characteristics they are looking for in a future employer. Here are three sought after characteristics for each sample group:

16-18 year olds	University students	Women in work
Positive impact on society (63%)	Opportunities to keep learning (60%)	Flexibility (55%)
Opportunities to keep learning (50%)	Positive impact on society (55%)	Opportunities to keep learning (55%)
Recognition of employee value (45%)	Recognition of employee value (49%)	Recognition of employee value (54%)

Women in work

"Being at the forefront of latest technologies and using them to benefit customers."
Woman in work aged 25-40

What do women want to learn?

We asked women what skills they wanted to learn to enhance their careers. They said:

16-18 year olds	University students	Women in work
Coding & programming (incl. Java, C++, R, Python)	Software packages (particularly Excel)	Project management
Software packages (particularly Excel)	Human skills (incl. communication, collaboration, critical thinking, co-operation)	Data analytics (incl. data visualisation)
Human skills (incl. communication, collaboration, critical thinking, co-operation)	Coding & programming (incl. Java, C++, R, Python)	Coding & programming (incl. Java, C++, R, Python)

16-18 year olds

We asked women if they were learning the necessary digital skills for their chosen careers. Only 38% of 16-18-year-old women believe that they are learning the right digital skills for their continuing education and chosen career, illustrating a clear need for enhanced digital skills training.

<about the research>

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The research was conducted by the IoC in collaboration with Deloitte, the IoC Digital Skills Observatory at University of Bath, Birkbeck University of London and Manchester Metropolitan University. The IoC is a large national consortium of educators, employers and outreach organisations that is co-developing new courses and activities that will help a larger and more diverse group of students and learners into digital careers.

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The world of work is changing. Exponential advances in technology, changing demographics and shifting workforce expectations are all driving change in how business is done. New technologies are having a significant impact on the talent and skills required by organisations across all industries.

The gap between the skills that businesses are demanding from the workforce, and their availability, continues to be a challenge.

Women are vastly underrepresented across the technology industry, meaning that business leaders are missing out on a huge pool of untapped talent.

As an IoC consortium member and champion for better diversity in digital and digital inclusion, Deloitte collaborated with the IoC to undertake this research in order to increase understanding around the factors that will encourage more women to take part in digital education and careers in technology.

Getting in touch

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