INSIDE THE SKILLS GAP

BUSINESS AND TECHNOLOGY TRENDS DRIVING THE TRAINING CERTIFICATION MARKET
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• Business and tech challenges
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Introduction

Which technologies and trends are dominating leaders’ minds today and which will disrupt business tomorrow? And which skills, qualifications and certifications are the professionals eyeing as the route to meeting tomorrow’s challenges?

The world is changing and it’s doing so at an ever-increasing rate. Organisations are under huge pressure from their customers to deliver refined digital experiences. To meet these challenges, the pressure to transform processes, products and people - to make them digitally mature – can be enormous. If you’re looking for proof, witness the demand for service managers and business analysts and think about how those professions are, themselves, growing, changing and adapting.

Next, we have burgeoning technologies such as artificial intelligence, blockchain and augmented reality - and the omnipresent nature of cyber security. These forces individually, and collectively, have the potential to disrupt whole industrial sectors.

To grow - and to embrace disruption - organisations need people with the right skills, up-to-date knowledge and evolving experience. And, of course, training and certification are central to ensuring that our people are prepared to meet today’s challenges and ready to exploit tomorrow’s opportunities.

This is a point that needs to be reiterated. Digital transformation is often presented and debated as a negative and draining force; a burden on organisations. It shouldn’t be viewed like this. Rather, savvy leaders see and seize the opportunities that transformation offers – be that for the organisation itself or for the people and teams within the organisation.

It’s because of this rapid change - and all those evolving pressures - that BCS set about creating this report: Inside the IT skills gap – the business and technology trends driving the training certification market.

It aims to provide top-level insight into the training, qualification and certification market. Which macro-level forces are going to change IT and its provision? Which technologies may, in the future, generate demand for skilled people? And, what drives people – our staff and colleagues – to seek out training?

Through research and analysis we hope to paint a full, data-driven picture of these two elements. And, by combining them, we hope you can draw conclusions that will let you make future-ready decisions about your business and your strategy.

To grow and to embrace disruption, organisations need people with the right skills, up-to-date knowledge and evolving experience.

It’s my belief that BCS is ideally placed to answer those questions. As an organisation, we have been involved in shaping the IT profession and defining what it means to be an IT profession for over 60 years. During that time, we have helped to create an educational and career pathway that runs from the classroom right through to chartered professional status. BCS has been involved in creating the national curriculum for computing in the UK, we support computing teachers and, of course, offer next stage qualifications and pathways such as apprenticeships and certifications.

Paul Fletcher, CEO. BCS, The Chartered Institute for IT

It’s because of this rapid change - and all those evolving pressures - that BCS set about creating this report: Inside the IT skills gap – the business and technology trends driving the training certification market.
Executive summary

“We found that very few organisational leaders believe that they have all the necessary resources to meet their strategic objectives. These leaders don’t believe that they need bigger budgets. Rather, they need a workforce with enhanced skills and capabilities. When it comes to IT workers – the skilled people in whom we need to invest – many report that they’re likely to embark on training. Receiving training and development, these people tell us, is very important to them and their personal development. What we see, then, is a very healthy market. The IT industry is changing rapidly and leaders are looking to training and development to help turn these challenges into opportunities.”

Paul Fletcher, CEO. BCS, The Chartered Institute for IT

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Meeting the IT skills gap

BCS’s Professional Certifications Market Research 2018 explored how training and certification is perceived by professionals from across the IT industry.

Among those likely to take a qualification over the next three years, 60% would like a digital option for their learning.

The goal of research conducted was to provide BCS and its partners with valuable market insight across several key markets. The aim was, among other things, to demonstrate our knowledge of niche vertical markets and to provide insight for product development. Key findings were:

• 32% of respondents claim to be very likely to study for a certification over the next three years and 44% are quite likely.
• 49% feel that skills qualifications are very important to them personally and 40% indicated they are quite important.
• Among those likely to take a qualification over the next three years, 60% would like a digital option for their learning.
• Among those likely to take a qualification over the next three years, 69% would prefer a training course with certification (i.e. with an exam at the end), 22% would prefer a training course without certification and 8% had no preference.
• Among those likely to take a qualification over the next three years, 50% would prefer to take their exam online from a remote location (e.g. home, office), 29% would favour a classroom digital exam and 20% would opt for a classroom paper-based exam.
• Among those likely to take a qualification over the next three years, 72% indicated that their organisation would pay for their certification.

Inside the skills gap

Along with data and insights from the BCS’s Professional Certifications Market Research 2018, this report also draws on the BCS’s Digital Leaders 2018 survey. It focused on capabilities, skills and ethics in IT. The top level trends were:

• Business transformation and organisation change was seen to be respondents’ top organisation priority for 2018 (50%).
• Top technology priorities for 2018 were: Cyber security, cloud technologies, Saas/PaaS/IaaS – the ‘as-a-service model’.

69% would prefer a training course with certification.

A revealing link and insight into the IT training and certification market can however be revealed when you begin to explore the resources employers feel they need to meet these challenges. Looking at the Digital Leader’s Report 2018, only a paltry 14% of respondents were of the view that they had enough resources to be truly successful this year. More telling yet, 58% of organisations are looking for enhanced IT capability and skills in their existing workforce. Whilst 41% of respondents felt they needed a bigger budget, the right people – with the right skills, knowledge and experience – are the key to success.

To meet the strategic challenges, research shows, business leaders see enhancing an existing workforce’s IT capabilities and skills as a top priority for 2018.
Defining industry trends

BCS surveyed its members, CIOs and digital leaders to understand how the IT landscape is changing and the forces that are driving those changes.

For the past seven years BCS has been surveying its members to get a sense for what digital leaders feel about their roles, resourcing needs and areas of concern for the forthcoming year. For 2018 this survey covers more issues than ever. It has been expanded to include more on skills, training and the ethical landscape.

Interestingly, while it is unsurprising that there are mentions of the oft-trumpeted concerns on the GDPR legislation and effects of Brexit, most of the survey shows an attitude of wanting to get on with the job, whatever the circumstances surrounding it.

BCS deliberately allows scope for comment, so, in addition to the raw numbers, we can reflect the views of those working in digital environments every day. We can see their concerns but also their drive and creative thinking.

Sometimes we can sense comments that come from frustration, but likewise we see some fascinating ideas to address some of the issues we face, not only as an industry, but as a society enabled by this exciting industry.

The report begins with the numbers - then moves into the more qualitative, but perhaps more thought-provoking, views expressed. Here is a top level summary:

- The priorities for 2018 are business transformation and organisational change (50%), continuous innovation (46%), regulatory compliance (45%), and operational efficiencies (44%).
- When asked to single out their number one priority, 21% chose business transformation and organisational change.
- The technologies that organisations are prioritising for 2018 are cyber security (48%), cloud (40%), big data / insight (32%), SaaS, PaaS, IaaS, X-aaS / as-a-service model / everything-as-a-service (31%), and IT governance (28%).
- When asked to identify their top technology priority, 17% chose cyber security.
- Only 14% of participants feel their organisation has enough resources to achieve success in 2018.

48% of surveyed IT leaders reported that cyber security was their top tech priority.
Only 14% of participants feel their organisation has enough resources to achieve success in 2018.

Three technologies rang out as leaders’ prime concerns for 2018: Cyber security - 48%, Cloud technologies - 40% and Big data / insights – 32%

Business transformation and organisation change was revealed to be 2018’s top organisational priority. Here 50% of respondents marked it as among their top five priorities.
Understanding personal motivation

Why do professionals take training and choose certification? BCS explores what really drives practitioners from different specialisms to invest time and money in training and accreditation.

The desire to move your career forward would seem, intuitively, a natural driver when it comes to thinking about buying training and seeking certification. When it comes to understanding markets, intuition is, of course, never as good as data. So, what can we learn about practitioners’ aspirations and how they believe training and certification may allow them to achieve those professional goals?

Looking across business analysis, service management, software testing and information security, BCS’s research clearly shows that few professionals are likely to be happy in flatlining careers.

How far can we take our careers?

When asked ‘how important is career progression to you?’, 95% of information security professionals replied either very important or quite important. Eighty eight percent of software testing practitioners reported that they were similarly motivated. Across business analysis and service management around 80% of the workers who answered reported the same desire to move forward.

And how far do practitioners from across these specialisms want to push their careers? Looking at information security, 26% targeted a C-level role and the same proportion aim for a directorship. In the BA sphere, 38% of respondents aspire to directorship or a C-level position. Just 10% of service management professionals report C-level as their desired level of progression.

By contrast, cyber security professions reported themselves as those who saw their career progression as most important. They also aspired to occupy the top jobs. Over 60% of security workers also reported that they felt certification was very important to them. 54% of security practitioners surveyed felt that it was very important to take an exam after training and 38% said it was quite important, indeed, 76% of the cyber workers we polled held a qualification.

Across all these career paths we found that – in all cases - at least 70% of respondents were likely to study for certification in the next three years.

BCS’s research clearly shows that few professionals are likely to be happy in flatlining careers.
How important is career progression to you?

How likely are you to study for a certification over the next 3 years?

What are you looking to achieve from your studies?
Base: all very or quite likely to study for a certification over the next 3 years (n=576)
Learning styles and buying preferences

How do professionals prefer to learn and how do they select that training? Like other markets, is digital disrupting the training and qualifications market? Or do traditional modes still have their place?

Across all of the specialisms explored (BA, SM, ST and IS), over 77% of all the professionals polled reported that they would be likely to study for a certification over the next three years. But how will these people look to access the training, education and the certifications that should enable them to move their careers forward? And what do they consider to be most important when picking the right certification solution?

Looking specifically at learning styles, self-study with books polled comparatively poorly. Only 8% of business analysts, 12% of service managers, 12% of software testers and 13% of information security workers preferred this mode of learning.

Most respondents reported a preference for more structured and guided modes of learning such as online with recorded material, live online learning with a tutor and training in a classroom setting. Business analysts and service managers reported the strongest preference for classroom learning. Cumulatively learning online showed itself to be a very popular choice.

How to find training

When it came to researching and finding the right training, there was a clear winner: recommendation. Half the respondents reported that they depended on this marker when exploring their options. Despite online learning itself proving popular with respondents, online search polled – among the most important variables - comparatively poorly (23%), coming in third after advice from managers and employers (25%).

Though cost of training was clearly important: 33% marked it as their most important consideration (of those likely to study for certification over the next three years, 72% said their organisation would pay for certifications and qualifications). The type of learning on offer (classroom, online and other styles) was also a key consideration. Only 3% of respondents reported that the date of training was the most important factor. It would appear that professionals are willing to wait for the right training session. Location and training provider are also important considerations when making a buying decision. Forty seven percent rated training provider among their top 3 factors.
Thinking of your learning style and time allowance, which of the following training course options would suit you best?

Base: all very or quite likely to study for a certification over the next 3 years

![Pie charts showing different training course options](image)

What’s the biggest factor when looking at taking a qualification?

Base: all very or quite likely to study for a certification over the next 3 years (n=576)

![Bar charts showing factors affecting training choices](image)
The qualifications landscape

How do professionals and their employers regard qualifications and what factors motivate technology workers to embark on a journey toward qualification?

Across our cohort of respondents, cyber security professionals were the most likely to hold a professional qualification – 76% of those employed in information security held a relevant qualification. Around 59% of BAs, 67% of service managers and 69% of software testing professionals also held qualifications.

Professionals from across all four specialisms – BA, service management, software testing and information security – are all, then, likely to possess a qualification. But what motivates people to study for and achieve a qualification in their field?

Looking at the survey data, the desire for career advancement looks like the strongest motivator. The highest rated driving factor was: it made my CV better. Receiving more responsibility and helping respondents to find a new job came third and fourth in our list of catalysts.

And, from the professional’s perspective, was studying worth the effort? It appears so. Respondents indicated worthwhileness as second in their list of preferences (a better CV being number one).

And which providers are – in the view of the survey’s respondents – the best? Around 34% of polled information security professionals reported that BCS accredited providers offered the best qualifications for their particular sector.

Business analysts and service management professionals also rated BCS as the preferred certification of choice.

Awarding bodies

When it comes to qualifications there are, of course, a huge number of examining institutes and awarding bodies. Some of these bodies, of course, operate in different sectors. Across all the specialisms being researched, BCS was the most widely recognised name. The table below shows the percentage of respondents who reported that they’d heard of BCS.

<table>
<thead>
<tr>
<th>Professional</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business analysis</td>
<td>61%</td>
</tr>
<tr>
<td>Service management</td>
<td>55%</td>
</tr>
<tr>
<td>Software testing</td>
<td>52%</td>
</tr>
<tr>
<td>Information security</td>
<td>68%</td>
</tr>
</tbody>
</table>

Membership of a professional body

Across business analysts, service managers and software testers, around 30% of professionals were a member of a professional body. When it came to cyber security professionals, this figure took a large step forward. Around 47% of cyber security workers who were polled reported that they were a member of a professional body.
76% of those employed in information security hold a relevant qualification.

Which of the following awarding bodies have you heard of?
(A different list was presented to each of the four segments)
“Our mission is to make IT good for society. We cannot do that unless what we do as an Institute and as a group of people is ethical. So, I would argue that ethics is actually at the core of everything we do. And certainly, it’s key in our achieving our mission in every sphere of activity.”

Chris Rees, President. BCS, The Chartered Institute for IT

BCS, The Chartered Institute for IT, is committed to making IT good for society. We use the power of our network to bring about positive, tangible change. We champion the global IT profession and the interests of individuals, engaged in that profession, for the benefit of all. The Institute fosters links between experts from industry, academia and business to promote new thinking, education and knowledge sharing.

To find out more, visit: www.bcs.org

Research notes

Two survey-based reports were used to create this document. These were Professional Certifications Market Research 2018 and the Digital Leaders survey, 2018. Both were compiled by BCS.

Professional Certifications Market Research 2018 followed this methodology: 10-minute online survey, questionnaire set up by BCS. Survey Sampling International (SSI) were contracted to provide a panel of respondents who currently work in business analysis, service management, software testing and information security, fieldwork ran between 24 February to 8 March 2018. The research is based on 751 completes in the UK.

Digital Leaders 2018 followed this methodology: This research was conducted online by BCS during the period 30 November 2017 to 8 January 2018. A total of 388 digital leaders took part in the survey.
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