bcs
The Chartered Institute for IT

INDIA PROFESSIONAL CERTIFICATION MARKET RESEARCH

BUSINESS, TECHNOLOGY AND CAREER-BASED TRENDS DRIVING THE TRAINING CERTIFICATION MARKET

Making IT good for society

INTRODUCTION

WHICH TECHNOLOGIES AND TRENDS ARE DOMINATING LEADERS' MINDS TODAY AND WHAT WILL DISRUPT BUSINESS TOMORROW? AND WHAT QUALIFICATIONS, CERTIFICATIONS AND SKILLS ARE SET TO BE THE ROUTE TO MEETING THE CHALLENGES WE FACE IN THE IT WORLD? THIS RESEARCH PAPER DELVES INTO THE MINDS OF IT PROFESSIONALS IN INDIA TO UNDERSTAND JUST THAT.

THE PRESSURE TO DEVELOP AND EVOLVE PROCESSES, PRODUCTS AND PEOPLE IS HIGH. ORGANISATIONS ARE UNDER HUGE PRESSURES FROM CUSTOMERS AND STAKEHOLDERS TO DELIVER DEFINED BUYING JOURNEYS AND DIGITAL EXPERIENCES.

In addition to this, we have the influx of burgeoning technologies like artificial intelligence, blockchain and augmented reality as forces with the potential to disrupt whole industry sectors.

To grow and to embrace the disruption, organisations need people with the right skills, up-to-date knowledge and evolving experience. Of course, training and certification are central to ensuring that people are prepared to meet the challenges of today and tomorrow and are ready to exploit new technologies in the future.

It's because of this rapid change that BCS created this report: *Professional Certifications Market Research 2019*, focusing on the trends driving the training certification market in India.

It provides top-level insights into the training, qualification and certification market and what macro-level forces are going to change IT.

I believe that BCS is ideally placed to share what is going on in the IT industry and the current and future challenges we are set to face. As an organisation, we have been involved in shaping the IT profession and defining what it means to be an IT professional for over 60 years. During that time, we have helped create an educational and career pathway that runs from the classroom right through to chartered professional status.

Paul Fletcher

CEO. BCS, The Chartered Institute for IT

CONTENTS

1. MEETING THE IT SKILLS GAP

75%

WOULD BE VERY LIKELY TO TAKE A QUALIFICATION OVER THE NEXT 3 YEARS

BCS' *India Professional Certifications Market Research 2019* explored how training and certification is perceived by professionals from across the IT industry.

The goal of the research conducted was to provide BCS and its partners with valuable market insight across several key markets within India. The aim was, among other things, to demonstrate our knowledge of niche vertical markets and to provide insight for product development. We asked a number of professionals who work in the areas of business analysis, IT service management, software testing and information security.

Key findings were:

› 75% of respondents claim to be very likely to study for a certification over the next three years and 21% are quite likely

› 82% of participants indicated that skills qualifications are very important to them and a further 17% said they are quite important

› Among those likely to take a qualification over the next three years, 72% would like a digital option for their learning

› Among those likely to take a qualification over the next three years, 75% would prefer a training course with certification (i.e. with an exam at the end), and 25% would prefer a training course without certification

› Among those likely to take a qualification over the next three years, 60% would prefer to take their exam online from a remote location (e.g. home), 25% would favour a classroom digital exam and 15% would opt for a classroom paper-based exam

1.1 Inside the skills gap

Along with data and understandings from BCS' *India Professional Certifications Market Research 2019*, this report also draws on the *IT leaders survey 2019* which was released at the inaugural Insights event in London on the 6th June 2019. It focused on some of the most pressing issues facing the IT industry today.

Key trends were:

› 88% of organisations do not have enough resources for success in 2019

› 74% of IT Leaders would use upskilling and on the job training to address the capability gap

› When asked to single out their number one priority for 2019, 22% chose business transformation and organisation change

› The technologies that organisations are prioritising for 2019 are cloud (53%), cyber security (52%), automation (36%), IT governance (34%), and agile methods (also 34%).

An interesting link between the *IT leaders survey 2019* and this professional certification market research report shows some cross over in opinions about resources and skills.

Looking at the *IT leaders survey 2019*, we can see that 88% of organisations do not have enough resources for success in 2019. This reflects tellingly in a comparison to the *Professional Certifications Report* whereby 40% of respondents expressed that keeping up with changes and technology and therefore skills, is a key challenge facing the industry over the next 12 months.

75%

WOULD PREFER A TRAINING COURSE WITH A CERTIFICATION

Anecdotally, respondents reported that there will be 'challenges around keeping up to date with new technology', 'we will need to upgrade our skills' and for example, when looking at artificial intelligence, it would 'force us to learn more and more new skills.'
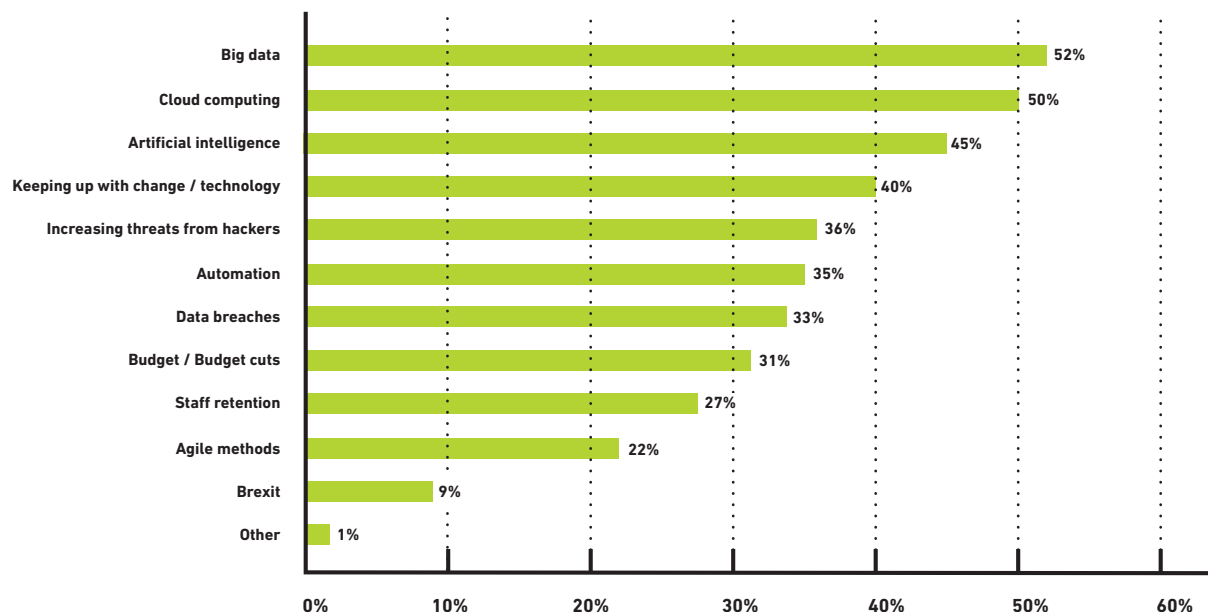
It's also interesting to note more of the similarities in the trends facing organisations over the next 12 months. In India, the top 3 trends and challenges that are facing the industry include; big data (52%), cloud computing (50%) and artificial intelligence (45%).

In comparison with the *UK Professional Certification Market Research Report*, the top challenges were; data breaches (45%), keeping up with change and technology (41%) and Brexit (38%).

So, whilst the UK is seemingly focusing on firefighting and protecting assets, the Indian IT community are looking at new technologies and progression.

Figure 1:

WHAT ARE THE UPCOMING TRENDS AND CHALLENGES THAT ARE FACING YOUR ORGANISATION OVER THE NEXT 12 MONTHS?

Category	Percentage
Big data	52%
Cloud computing	50%
Artificial intelligence	45%
Keeping up with change / technology	40%
Increasing threats from hackers	36%
Automation	35%
Data breaches	33%
Budget / Budget cuts	31%
Staff retention	27%
Agile methods	22%
Brexit	9%
Other	1%

Source: Professional Certifications Market Research 2019 - India

2.
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 to training and accreditation.

What can we learn about practitioners' aspirations and how they believe training and certification may allow them to achieve their professional goals?

The desire to push forward in your career may be a natural driver in seeking certification, but when it comes to understanding the market, intuition is never as good as the data we receive.

98%

OF ALL PARTICIPANTS SAID THAT CAREER PROGRESSION IS IMPORTANT TO THEM

We looked across business analysis (BA), IT service management (ITSM), software testing (SWT) and information security (INFOSEC), and noted that 98% of all participants indicated that career progression is important to them. This compares to a slightly lower importance at 89% in the UK.

Of all the specialisms explored software testers were those most likely to say that career progression is 'very important' to them at 89%. Business analysts were the lowest scoring, with 79%.

Whilst a small number are happy to continue without further training and certification, the majority had a strong drive to progress in their career.

3. DRIVING YOUR CAREER FORWARD

When asked 'how high do you want to progress in your career?', most were looking to develop into senior, C-level or director level status within their business. Business analysts, software testers and IT service management professionals were mostly looking to progress to senior managers or C-level. Information security professionals wanted to progress to director level. This shows a clear appetite for progression and a need for ongoing training and learning across the industry.

Across these career paths, we found that 96% of participants are 'very likely' or 'quite likely' to study for a qualification over the next three years. The figure saying 'very likely' was highest for information security professionals at 82% and lowest for business analysts at 63%.

This shows a real need to develop market relevant certifications and training to provide for those who wish to study.
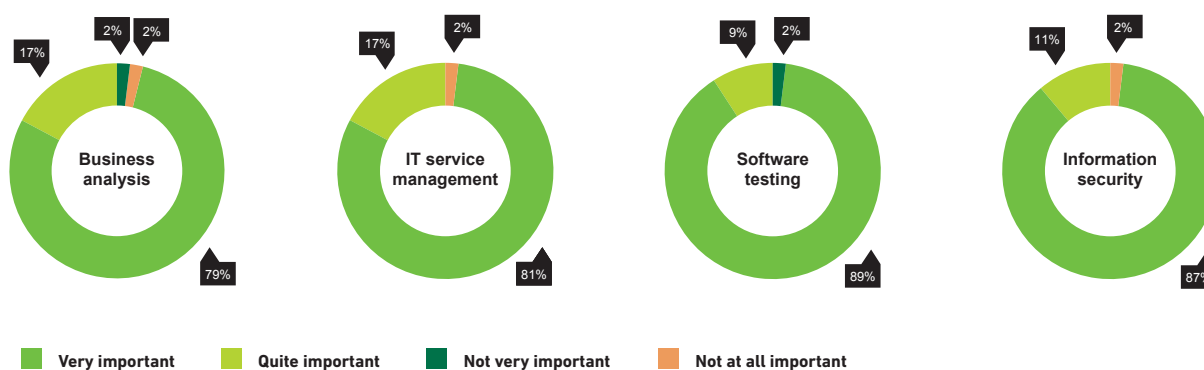
96%

OF PARTICIPANTS ARE LIKELY TO STUDY FOR A QUALIFICATION OVER THE NEXT 3 YEARS

Figure 2:

HOW IMPORTANT IS CAREER PROGRESSION TO YOU?

Business analysis: 2%, 2%, 17%, 79%
IT service management: 17%, 2%, 81%
Software testing: 9%, 2%, 89%
Information security: 11%, 2%, 87%

■ Very important   ■ Quite important   ■ Not very important   ■ Not at all important
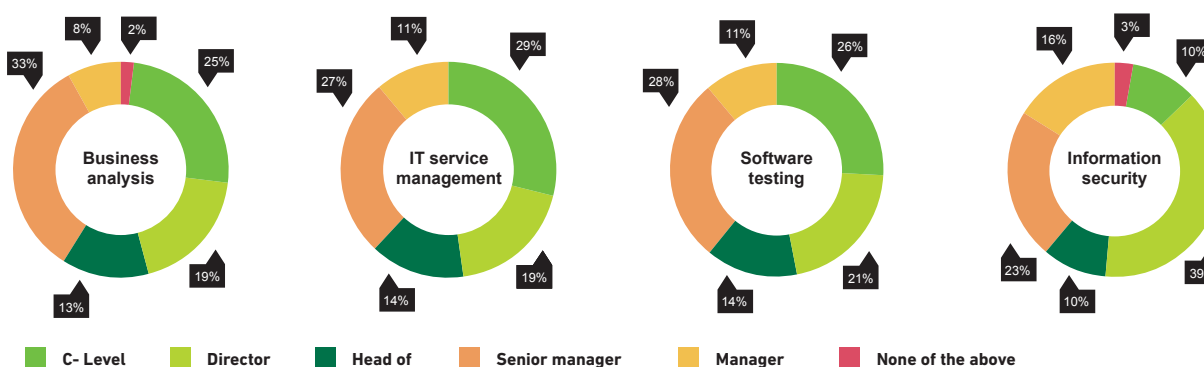
Source: Professional Certifications Market Research 2019 - India

Figure 3:

HOW HIGH DO YOU WANT TO PROGRESS?

Business analysis: 33%, 8%, 2%, 25%, 19%, 13%
IT service management: 27%, 11%, 29%, 19%, 14%
Software testing: 28%, 11%, 26%, 21%, 14%
Information security: 16%, 3%, 10%, 39%, 10%, 23%

■ C- Level   ■ Director   ■ Head of   ■ Senior manager   ■ Manager   ■ None of the above
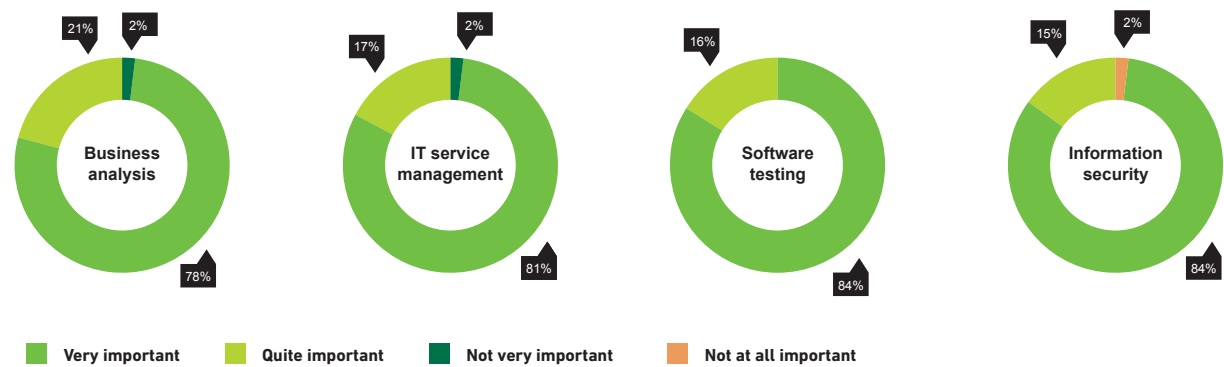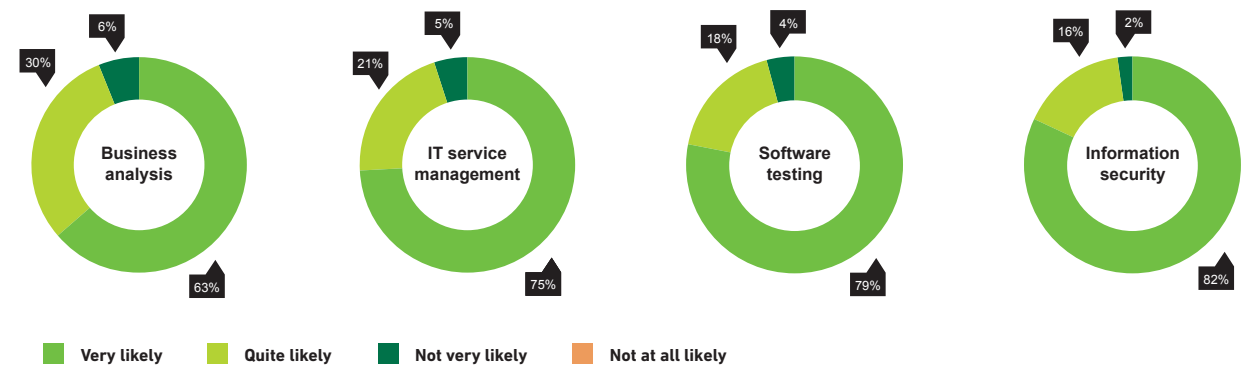
Source: Professional Certifications Market Research 2019 - India

9

72% PREFER A DIGITAL OPTION FOR THEIR LEARNING

Figure 4:

HOW IMPORTANT TO YOU PERSONALLY ARE SKILLS QUALIFICATIONS?

Business analysis — 21%, 2%, 78%
IT service management — 17%, 2%, 81%
Software testing — 16%, 84%
Information security — 15%, 2%, 84%

Very important   **Quite important**   **Not very important**   **Not at all important**

Source: Professional Certications Market Research 2019 - India

Figure 5:

HOW LIKELY ARE YOU TO STUDY FOR A SKILLS QUALIFICATION OVER THE NEXT THREE YEARS?

Business analysis — 30%, 6%, 63%
IT service management — 21%, 5%, 75%
Software testing — 18%, 4%, 79%
Information security — 16%, 2%, 82%

Very likely   **Quite likely**   **Not very likely**   **Not at all likely**

Source: Professional Certications Market Research 2019 - India

4. 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 qualifications market? Or do traditional modes still have their place?

The specialisms explored, reported at 96% that they would be likely to study for a certification in the next three years. Based on this, how will these people look to access their training, education and the certificates that enable them to move their career forward? What do they consider during this 'buying' process and what is the most important thing they contemplate to find a solution?

Looking at learning styles, it's interesting to see the split in how individuals like to be taught and how they digest their information. As with anything, everyone is different, but it is interesting to see that online learning with recorded material or live online learning with a tutor was chosen as their preferred delivery option. Business analysts and information security professionals cited as mostly wanting online learning with recorded materials (34% and 43% respectively), whereas IT service management professionals and software testers noted that they preferred live online learning with a tutor (28% and 31% respectively).

There is still a small percentage of individuals who would prefer a classroom with a tutor: business analysts (8%), IT service management professionals (15%), software testers (11%) and information security professionals (8%).

This could indicate that there is still a need and a desire to have traditional classroom-based learning as an option. However, at 72%, the majority of professionals asked cited that they would prefer a digital option of some kind for their learning.

85%

WOULD PREFER TO TAKE AN ONLINE EXAM

As a direct result of taking a qualification, many respondents noted that increased responsibility, enhanced CVs and a salary increase were all true.

It would make sense then that 75% would prefer a training course with a certification (with an exam at the end). This way they have tangible evidence of their commitment and expertise in their area of study. Only 25% would prefer a training course without a certification.

When looking at what type of exam a professional would like to take for a certificate, 60% would prefer to take their exam online from a remote location, 25% would favour a classroom digital exam and 15% would opt for a classroom paper-based exam. So, mostly digital-based exams are favoured with a minority who still prefer classroom-based exams.

WHILST THERE IS STILL A PLACE FOR TRADITIONAL TRAINING AND EXAMINATION METHODS, THE MAJORITY OF PEOPLE WOULD PREFER DIGITAL ALTERNATIVES.

5. HOW TO FIND TRAINING

Whereas in the UK recommendation seems to be the clear winner with 40% of respondents citing that recommendation was key when researching qualification options available to them, in India there is a different story.
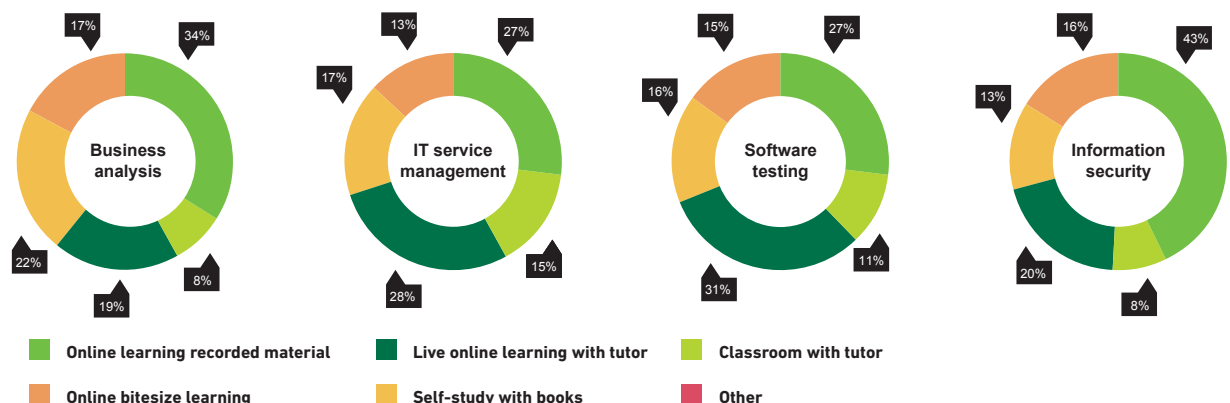
38% of respondents reported that online searches were most important when looking at options available to them. The second most important method was recommendation (34%).

It's interesting to note the differences between the UK and Indian audiences here, where online searches are the least favoured in the UK, but most favoured in India.

Although cost was marked as the most important factor when looking at taking a certification (26%), 82% of respondents indicated that their organisation would pay for their certification. This was followed by course type (classroom, online etc.) at 25% and training provider at 17%.

Figure 6:

THINKING OF YOUR LEARNING STYLE AND TIME ALLOWANCE, WHICH OF THE FOLLOWING TRAINING COURCE OPTIONS WOULD SUIT YOU BEST?

- Online learning recorded material
- Online bitesize learning
- Live online learning with tutor
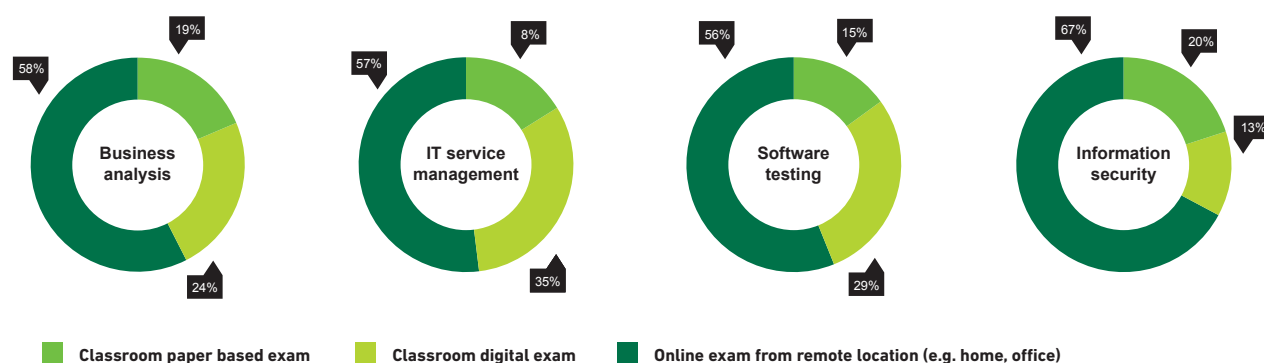- Self-study with books
- Classroom with tutor
- Other

Source: Professional Certifications Market Research 2019 - India

RESPONDENTS FROM INDIA USE ONLINE SEARCHES TO FIND TRAINING AVAILABLE TO THEM, WHEREAS THE UK USES WORD OF MOUTH RECOMMENDATIONS.
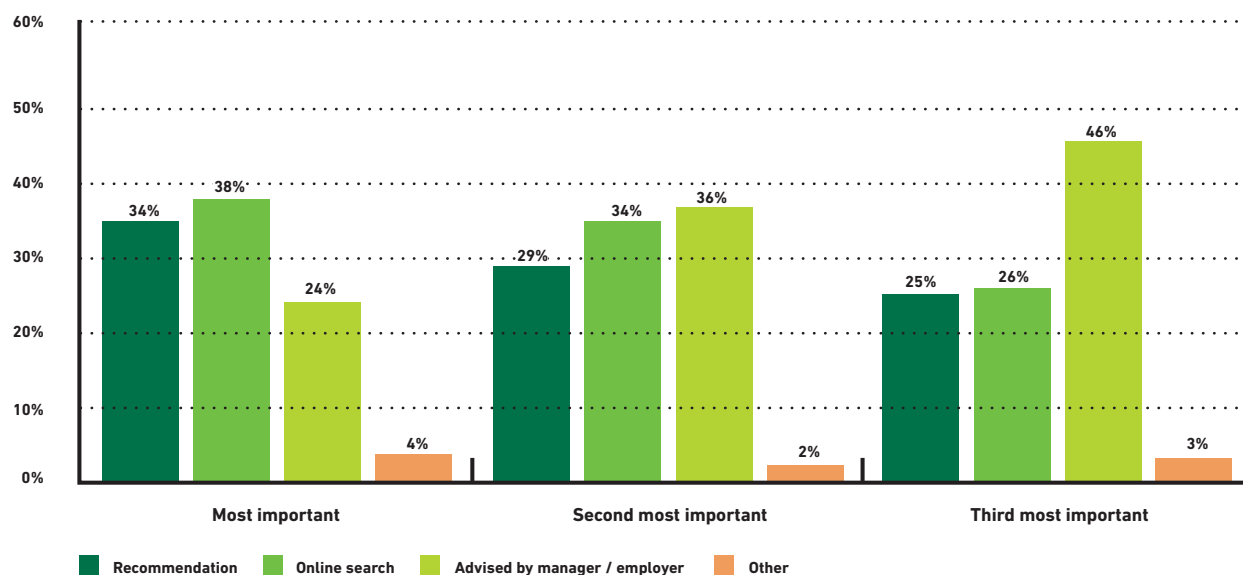
Figure 7:

WHICH TYPE OF EXAM WOULD YOU PREFER TO TAKE?

Business analysis — 58%, 19%, 24%

IT service management — 57%, 8%, 35%

Software testing — 56%, 15%, 29%

Information security — 67%, 20%, 13%

- Classroom paper based exam
- Classroom digital exam
- Online exam from remote location (e.g. home, office)

Source: Professional Certifications Market Research 2019 - India

Figure 8:

WHEN LOOKING FOR TRAINING, HOW WOULD YOU GO ABOUT RESEARCHING THE OPTIONS AVAILABLE TO YOU?

	Most important	Second most important	Third most important
Recommendation	34%	29%	25%
Online search	38%	34%	26%
Advised by manager / employer	24%	36%	46%
Other	4%	2%	3%

- Recommendation
- Online search
- Advised by manager / employer
- Other

Source: Professional Certifications Market Research 2019 – India

Figure 9:

WHAT'S THE BIGGEST FACTOR WHEN LOOKING AT TAKING A QUALIFICATION?

Most important   Second most important

■ Cost   ■ Course type (classroom, online, etc)   ■ Location   ■ Training provider   ■ Next available date   ■ Recommendation from friend / colleague
■ Brand   ■ Other
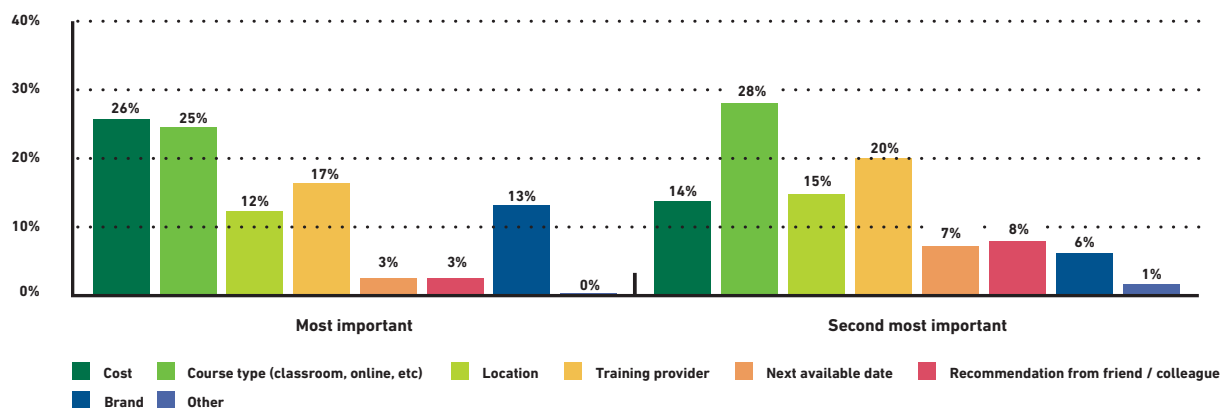
Source: Professional Certifications Market Research 2019 - India

6. THE QUALIFICATIONS LANDSCAPE

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

Across our cohort of respondents, software testers were the most likely to hold a relevant qualification at 96%. Information security, including data protection and compliance were at 87%, IT service management professionals, including DevOps at 89% and business analysts at 81%. Interestingly, these numbers are around 10% more than in the UK.

Professionals from across all four specialisms – BA, IT 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?

It appears, according to the data, that the desire for career advancement is the strongest motivator for attaining a qualification in their field. The most important driving factor was a promotion (29%), then salary increase (19%) and thirdly to help me do my job better (17%).

6.1 Awarding bodies

When it comes to qualifications there are a huge number of institutes and awarding bodies. Some of these bodies operate in other sectors of course. The information below shows the percentage of respondents who reported that they'd heard of BCS.

› Business analysis: 40%

› IT service management: 52%

› Software testing: 39%

› Information security: 52%

MORE THAN HALF OF RESPONDENTS ARE PART OF A RELEVANT PROFESSIONAL BODY.

7. MEMBERSHIP OF A PROFESSIONAL BODY

When asked whether they were a member of a relevant professional institution, 70% of software testers said they were. IT service management professionals came in second at 65%, information security at 60% and the lowest was business analysts at 56%.
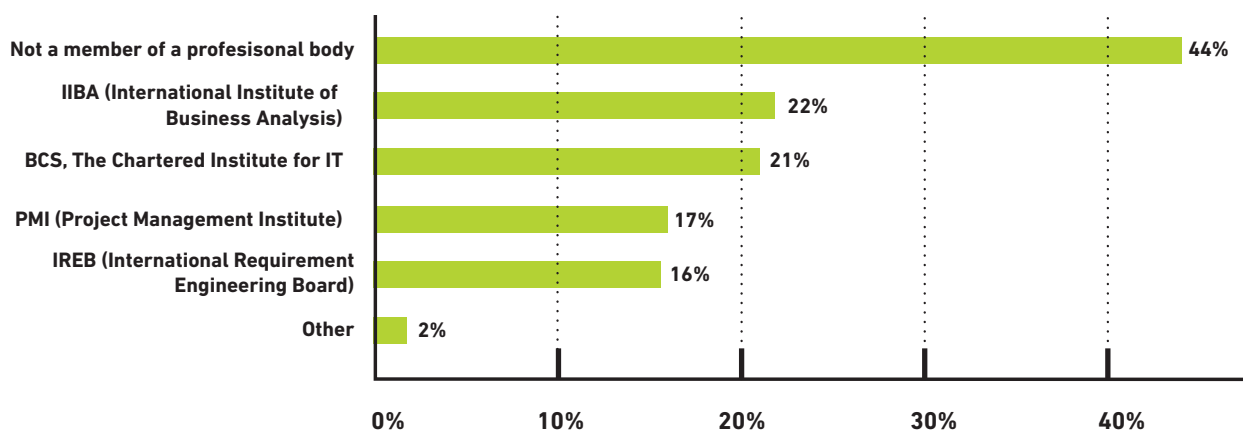
Interestingly, these numbers are significantly higher than the respondents of the UK study.

UK respondents gave the following results:

› Business analysts – 47%

› IT service management – 47%

› Software testing – 39%

› Information security – 55%

Figure 10:

WHICH OF THE FOLLOWING ARE YOU A MEMBER OF? (BUSINESS ANALYSIS)

Source: Professional Certifications Market Research 2019 – India

Figure 11:

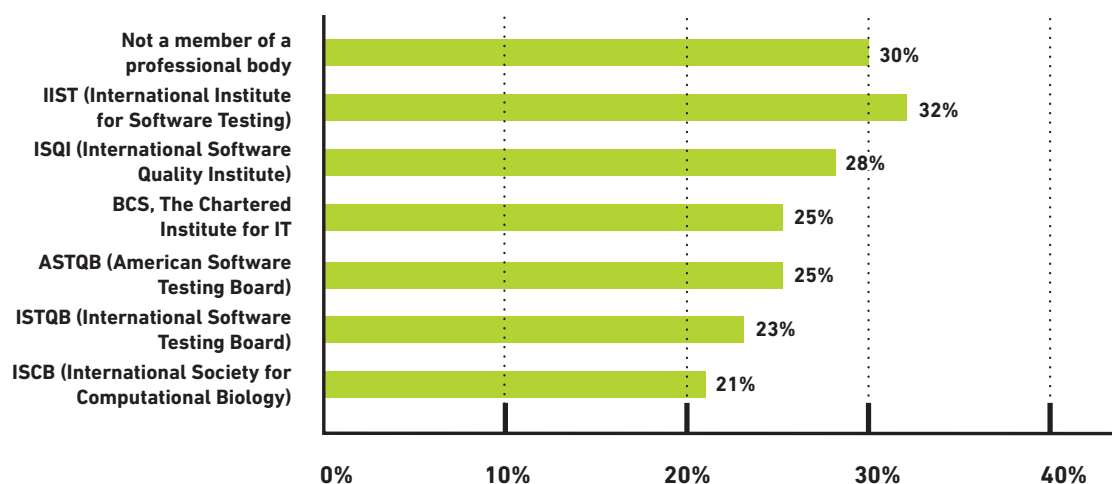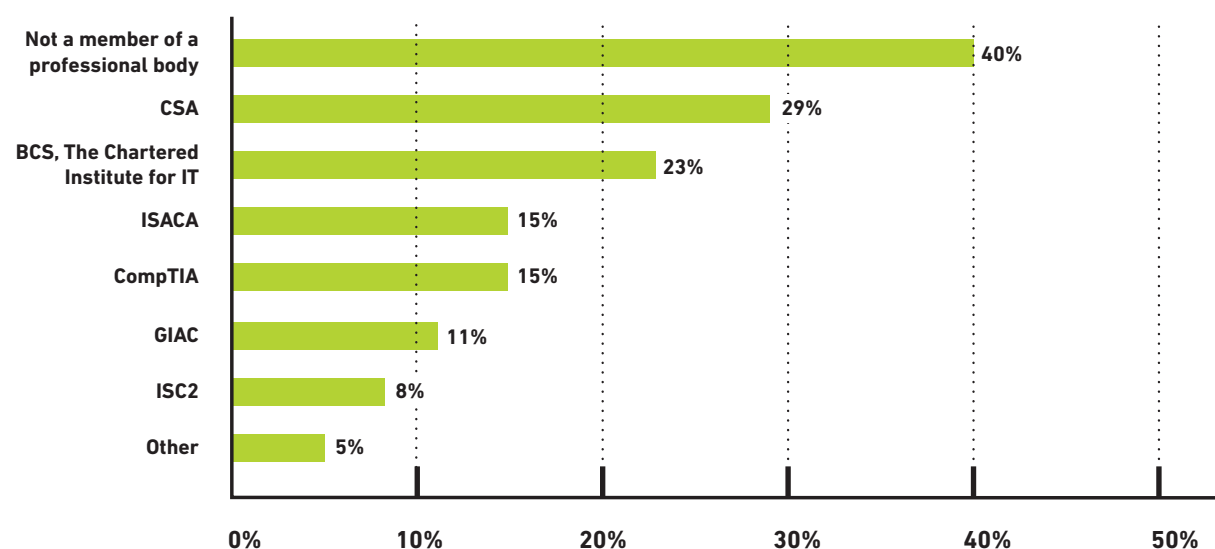## WHICH OF THE FOLLOWING ARE YOU A MEMBER OF? (SERVICE MANAGEMENT)

Category	Value
Not a member of a professional body	35%
BCS, The Chartered Institute for IT	33%
BRM Institute (Business Relationship Management)	27%
LITA (Library and Information Technology Association)	27%
ISACA	16%
DevOps Institute	16%
SDI (Service Desk Institute)	16%
IAITAM	14%
ITAMOrg	11%
IQC	10%
Axelos	8%
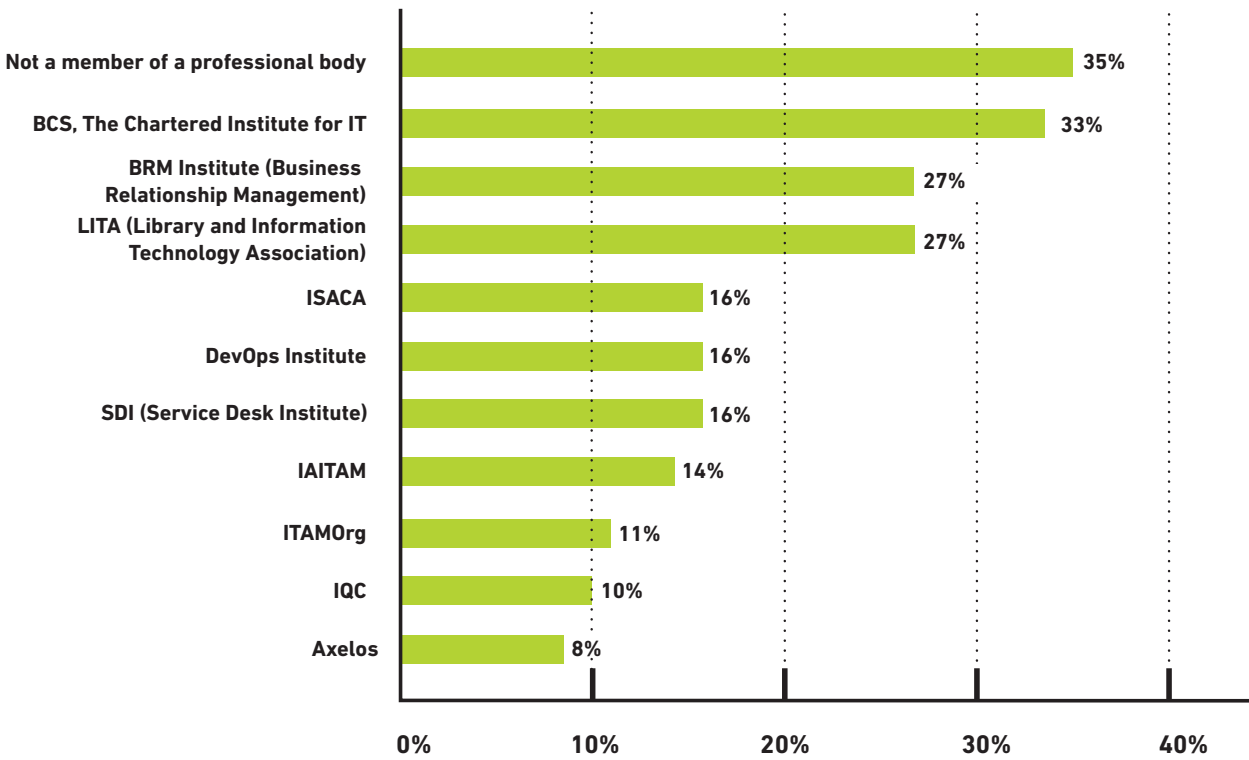
Source: Professional Certifications Market Research 2019 - India

Figure 12:

WHICH OF THE FOLLOWING ARE YOU A MEMBER OF? (SOFTWARE TESTING)

Not a member of a professional body	30%
IIST (International Institute for Software Testing)	32%
ISQI (International Software Quality Institute)	28%
BCS, The Chartered Institute for IT	25%
ASTQB (American Software Testing Board)	25%
ISTQB (International Software Testing Board)	23%
ISCB (International Society for Computational Biology)	21%

Source: Professional Certifications Market Research 2019 - India

Figure 13:

WHICH OF THE FOLLOWING ARE YOU A MEMBER OF? (INFORMATION SECURITY)

Not a member of a professional body	40%
CSA	29%
BCS, The Chartered Institute for IT	23%
ISACA	15%
CompTIA	15%
GIAC	11%
ISC2	8%
Other	5%

Source: Professional Certifications Market Research 2019 - India

56% SAY THAT TECHNICAL SKILLS ARE NEEDED IN THEIR BUSINESS TO AID IN IMPLEMENTING ARTIFICIAL INTELLIGENCE AND IN TURN, BUSINESS SUCCESS.

70% CLAIM THAT THEIR ORGANISATION USES ARTIFICIAL INTELLIGENCE

8. CHALLENGES AND NEW TECHNOLOGIES

New for this year's *Market Research Report*, we asked our respondents to think about the implications and challenges they face with the influx of artificial intelligence (AI) within the IT industry. We asked them to think about current and future uses of artificial intelligence within their organisation and the skills gap that may ensue.

When asked 'does your organisation currently use artificial intelligence?', 70% of respondents claimed that their organisation uses AI or machine learning applications.

For business analysts this was 65%, for IT service management professionals this was 65%, for software testers this was 74% and for information security professionals this was 76%.

Again, these numbers are significantly higher than the UK counterpart where an average of 46% of respondents claimed that their organisation was currently using AI technology.

It's clear to see the difference in focus on AI in different areas of the world here, with India seemingly far more progressive and interested in new technologies and implementing them into the workplace.

When looking at uses for artificial intelligence within an organisation, there is a relatively even split across several areas.

See below responses:

› Personalised customer experiences – 46%

› Automating business decision-making – 42%

› Augmentation of processes (e.g. AI to enhance safety) – 40%

› Predicating outcomes based on business data – 35%

› Automation of repetitive / mundane tasks – 33%

› Conversational interfaces – 33%

› Marketing / advertising – 28%

It's apparent from this information that artificial intelligence is being used across a wide range of tasks within an organisation. As artificial intelligence is relevant to any intellectual task and has applications across every sector, including healthcare, automotive, finance, advertising, government and military, it is interesting to see this also reflected in this research.

Looking to the future, respondents were asked what areas of interest their organisations might have when it comes to implementing artificial intelligence.

Personalised customer experiences came top at 44%, closely followed by augmentation of processes (43%) and automating business decision-making (41%).

It's also fascinating to see that 57% of respondents thought that artificial intelligence would be very important in enabling their organisation's long-term goals.
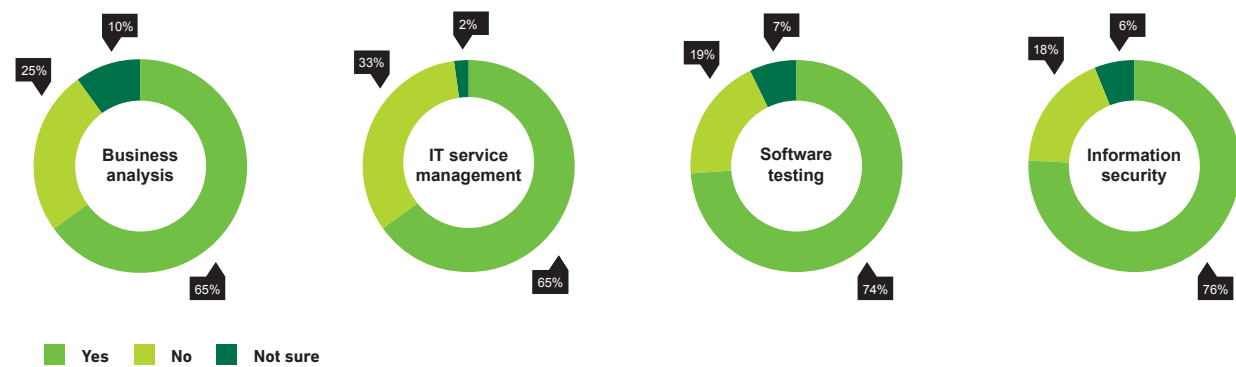
Since more than half of our respondents agree that artificial intelligence is going to be the way forward, the response to the skills gap in artificial intelligence is telling.

When asked 'which skills do you consider are missing from your business today in order to implement AI?' the respondents cited the following:

› Technical skills – 56%

› Data analysis skills – 53%

› Business skills – 42%

› Ethical thinking – 43%

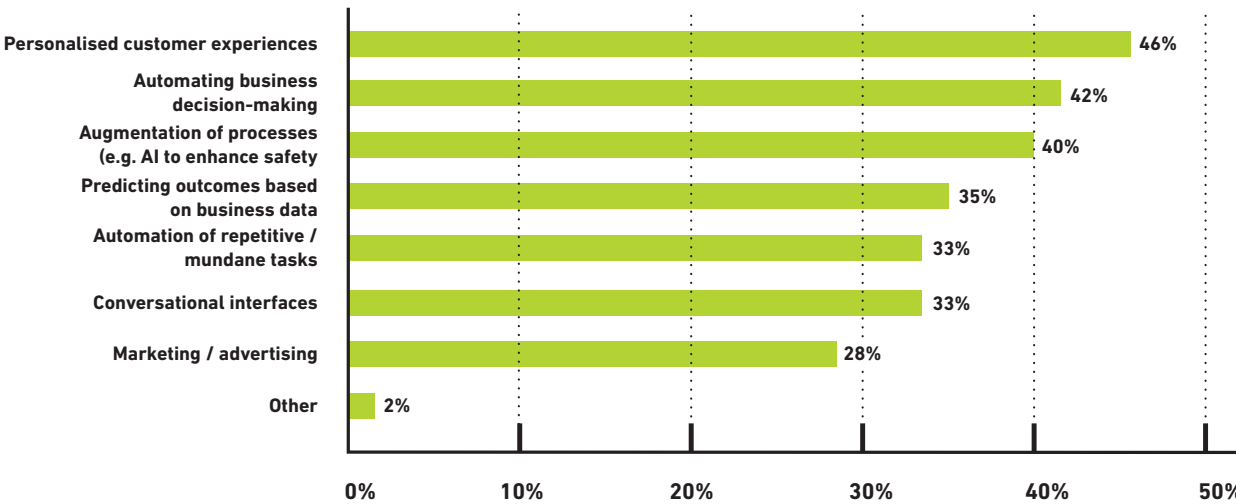› Integration to business processes – 40%

› Purchasing – 25%

So, it would be fair to say that there is a considerable skills gap when it comes to artificial intelligence and training in this area will become vitally important in order for business success.

Figure 14:

DOES YOUR ORGANISATION CURRENTLY USE ARTIFICIAL INTELLIGENCE (AI) OR MACHINE LEARNING APPLICATIONS?

Business analysis
10%
25%
65%

IT service management
2%
33%
65%

Software testing
7%
19%
74%

Information security
6%
18%
76%

■ Yes ■ No ■ Not sure

Source: Professional Certifications Market Research 2019 - India

Figure 15:

FOR WHICH OF THE FOLLOWING DOES YOUR ORGANISATION CURRENTLY USE AI APPLICATIONS?

Category	Percentage
Personalised customer experiences	46%
Automating business decision-making	42%
Augmentation of processes (e.g. AI to enhance safety	40%
Predicting outcomes based on business data	35%
Automation of repetitive / mundane tasks	33%
Conversational interfaces	33%
Marketing / advertising	28%
Other	2%

Source: Professional Certifications Market Research 2019 - India

Figure 16:

TO DEVELOP / IMPLEMENT YOUR AI SOLUTIONS, WHICH SKILLS DO YOU CONSIDER ARE MISSING IN YOUR BUSINESS TODAY?

Technical skills	56%
Data analysis skills	53%
Ethical thinking	43%
Business skills	42%
Integration to business processes	40%
Purchasing	25%
Other	1%
None of the above	1%
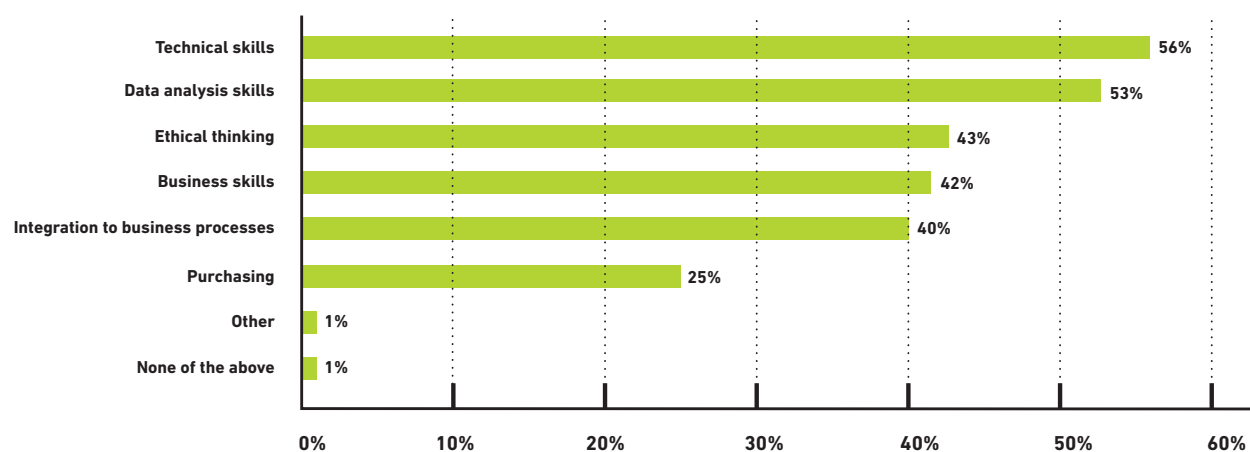
Source: Professional Certifications Market Research 2019 - India

Figure 17:

HOW IMPORTANT DO YOU BELIEVE AI WILL BE IN ENABLING YOUR ORGANISATION'S LONG-TERM GOALS?

Very important (5)	57%
4	28%
3	9%
2	5%
Not at all important (1)	1%
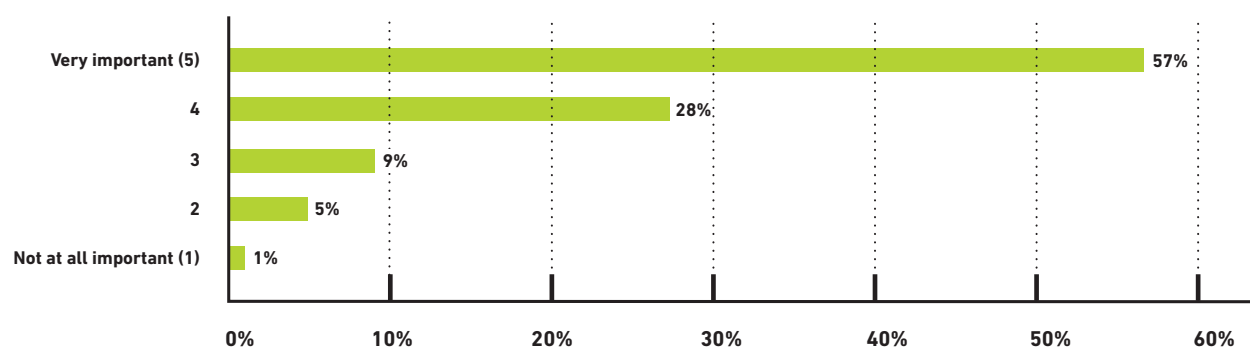
Source: Professional Certifications Market Research 2019 - India

9. RESEARCH NOTES

Two survey-based reports were used to create this document. These were the *Professional Certifications Market Research 2019* and the *Insights Report 2019*, both compiled by BCS.

Professional Certifications Market Research 2019 followed this methodology: 6-minute online survey questionnaire set up by BCS, survey sampling was conducted by Cint who were contracted to provide a panel of respondents who currently work in business analysis, service management, software testing and information security. Fieldwork ran between 23 May to 10 June 2019. The research is based on 364 completes in the UK, and 246 completes in India.

IT leaders survey 2019 followed this methodology: This research was conducted online by BCS during the period 7 December 2018 to 14 January 2019. A total of 366 IT leaders took part in the survey worldwide.

"Our mission is to make IT good for society. We do this through supporting careers, sharing expertise, improving education, influencing practice and driving standards. Research papers like this show our expertise and knowledge of the IT industry as a whole and allow us to showcase to our partners what is shaping the industry we work in."

Michael Grant

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 professional and the interests of individuals engaged in that professional, for the benefit of all. The Institute fosters links between experts from the industry, academia and business to promote new thinking, education and knowledge sharing.

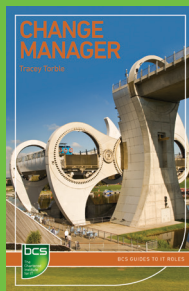To find out more, visit **bcs.org**

10. NEW AND UPCOMING BOOK TITLES

Technical Training Management

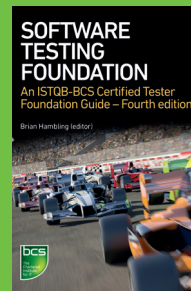Commercial skills aligned to the provision of successful training outcomes
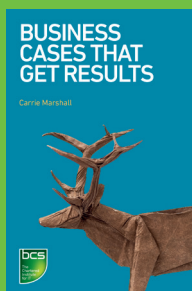
£49.99

Change Manager

Careers in IT service management

£19.99

Software Testing Foundation

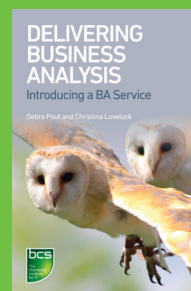An ISTQB-BCS Certified Tester Foundation guide – 4th edition
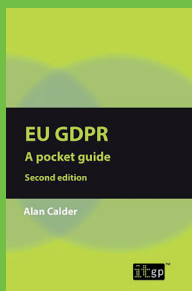
£39.99

Business Cases That Get Results

£9.99

Digital Marketer

£19.99

Delivering Business Analysis

The BA service handbook

£34.99

EU GDPR – A pocket guide, second edition

£9.95
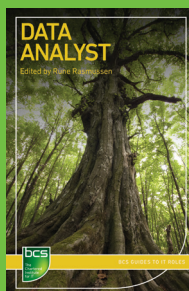
Data Analyst

Careers in data analysis

£19.99

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For further information please contact:

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