



ESG RESEARCH INSIGHTS PAPER

Training and Certification Help Learners Thrive in an Increasingly Cloud-first World

Skilling Up and Validating Capabilities with AWS Training and Certification Drives Job Effectiveness, Career Growth, and Job Satisfaction

January 2022

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Executive Summary

The rapid and broad adoption of public cloud services has transformed how organizations design, manage, develop, and secure business-critical applications and workloads. This has created skill gaps at many organizations and put a premium on individuals with a strong understanding of cloud architecture and operations. Even those in line-of-business roles need to increase their cloud fluency as their business operations become more reliant on cloud services. Employees in both technical and business-focused roles (referred to as cloud “Learners” in this report) have both an opportunity and an imperative to skill up their cloud capabilities to enable their organizations’ business objectives and to be seen as highly strategic resources—increasing their influence, responsibilities, and professional advancement.

AWS’ Training and Certification programs enhance Learners’ cloud skill development by assisting them to learn how to better use AWS Cloud services and validating their abilities. AWS believes Learners’ participation in these programs benefits them both in terms of their ability to use AWS services and in terms of their career. To test this belief, AWS partnered with ESG to conduct a survey of 1,000 end-users (Learners) across the globe who have taken AWS Training courses, earned AWS Certifications, or both. The survey focused on Learners employed in one of four functional areas: IT operations, cybersecurity, application development, and stakeholders in lines-of-business (LOBs) like sales, marketing, finance, and product teams. This survey was also complemented by a set of in-depth, 60-minute interviews with 10 Learners.

Overall, the results strongly supported AWS’s hypothesis and also uncovered the additional advantage that employers greatly benefit from their employment of cloud-trained staff.

Key Findings

- AWS Training and Certification increases Learners’ productivity.
 - More than four out of five Learners say AWS Training improved their on-the-job efficiency (84%) and effectiveness (83%).
 - Similarly, Learners feel AWS Certifications boost their efficiency (80%) and effectiveness (82%).
- Learners who receive AWS Training and Certification report an increase in their operational skills that far exceed their expectations.
 - Across the cloud operational competencies included in the research (e.g., the ability to build, secure, and troubleshoot projects in the cloud), 85% of Learners *experienced* improvement in their skills as a result of participating in AWS Training and Certification, compared to 49% who *expected* to see an improvement in these capabilities before participation in the programs.
 - Of the 85% of Learners who experienced operational skill improvement, 49% report seeing a “dramatic” improvement.
 - As a result, it is not surprising that 90% of learners report a positive return on investment (ROI) from AWS Training and 91% from AWS Certification.
- AWS Training and Certification improves the career outcomes of Learners.
 - AWS Training has helped Learners increase their job security (82%), organizational influence (77%), ability to focus on more interesting projects (74%), and earnings (69%).

- Similarly, AWS Certifications have increased Learners' job security (83%), organizational influence (79%), ability to change their focus area to something more interesting (75%), and earnings (74%).
- 90% of Learners credit AWS Training and Certification programs as a reason they were selected to work on special cloud projects at their organization in the past 24 months, thereby improving their job satisfaction. Notably, 66% said they had been selected for such projects more than once during this period.
- High participation in AWS Training and Certification is associated with greater earning potential for Learners.
 - Learners who have consumed the most AWS training (8 or more days over the past two years) earn more than those who consumed the least (2 or fewer days) in IT (19% increase in earnings), application development (29% increase), and LOB roles (13% increase).
 - Learners with multiple AWS Certifications earn higher salaries than those with none—across IT (19% increase in earnings), application development (20% increase), and line of business roles (32% increase).
- Learners want to be guided by continuous learning. They view skills development and validation as a journey, not a destination.
 - Learners are looking forward to receiving additional AWS Training (79%) and AWS Certification (77%), with 90% believing that these programs would improve their ability to build services and solve business problems using AWS Cloud services.
 - Almost 90% of Learners plan to pursue AWS Training (88%) or AWS Certification (87%) in the coming 12 months.
- Organizations that support AWS Training and Certification enjoy higher employee loyalty and satisfaction. By reducing churn, organizations can minimize and alleviate potential cloud skill gaps.
 - Learners at organizations that always fund AWS Training are 3.9x more likely to be “very satisfied” with their employer and 84% say they are less likely to look for another job.
 - In a similar vein, Learners at organizations that always fund AWS Certification exam fees are 4.4x more likely to be “very satisfied” with their employer, and 87% are less likely to seek employment elsewhere.

Detailed Findings

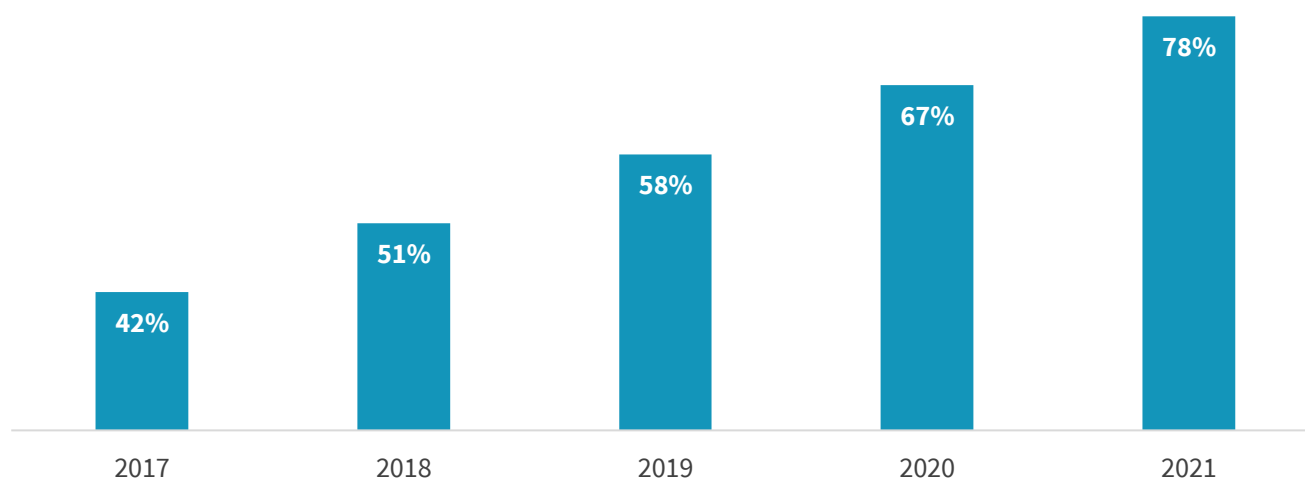
Key Motivations for Participating in AWS Training and Certification

The use of public cloud infrastructure services offers many advantages to organizations. The ability to procure infrastructure on-demand and pay only for what's used helps organizations avoid significant capital outlays and lengthy deployment cycles often associated with traditional IT environments. By right-sizing technology, organizations increase their agility and can take advantage of rapid or unforeseen shifts in the market. Similarly, public cloud providers allow organizations to scale infrastructure almost without limit as their requirements grow. Cloud environments also give organizations access to innovations they may not be able to develop on their own, including enabling cloud-native application architectures, machine learning model training, internet-of-things monitoring and analytics, among others. Cloud providers develop a host of services that customers find valuable but simply don't have the time, skills, or funding to develop in-house.

These innovations and competitive advantages resulting from cloud environments are fueling broader and deeper adoption of cloud services in organizations. This is supported by prior ESG research showing that the percentage of organizations using public cloud infrastructure services has nearly doubled over the last five years (from 42% to 78%, see Figure 1). This trend is likely to continue according to ESG's *2021 Technology Spending Intentions Survey* report. In that study, 45% of organizations surveyed take a cloud-first approach to deploying new applications and workloads. That is, these organizations will default to using cloud services unless there is a compelling case not to. Another 45 percent of firms equally consider both cloud and on-premises settings when deciding how to run new applications. Only 10% of businesses operate in an on-premises-first mode of operation.¹

Figure 1. Adoption of Public Cloud Infrastructure Services Over Time

Penetration rate of IaaS at organizations, five-year trend



Source: Enterprise Strategy Group

This growth in cloud use has created a commensurate increase in the demand for individuals with cloud skills. More and more, employees in technical roles need to understand the myriad of cloud services available to them and when to use them. Additionally, key tasks related to data migrations, distributed system design, automation, change management, economic modeling, and security best practices are significantly different when comparing cloud and on-premises

¹ Source: ESG Research Report, [2021 Technology Spending Intentions Survey](#), January 2021.

environments. Even line-of-business (LOB) roles need to increase their understanding of cloud services and operational models as the business becomes more strategically linked to the public cloud.

The rising demand for cloud skills and the desire for organizations to ensure that their staff have up-to-date cloud capabilities are key drivers for cloud professionals to take part in AWS Training and Certification. Furthermore, in order to help their organizations optimize the use of their cloud resources, these individuals must continue to enhance their cloud knowledge. But are the cloud training and certifications offered by AWS worthwhile investments of time and money?

"We have a big knowledge gap in the industry. New graduates might know application development, but they lack the cloud integration skills needed. "

Principal Solutions Architect, healthcare and insurance, >300,000 employees

To find out, AWS collaborated with ESG to conduct a survey of 1,000 Learners who have completed AWS Training, achieved AWS Certifications, or both. The purpose was to examine whether Learners in these programs improved their cloud skills and jobs significantly. This survey was supplemented by a series of 60-minute in-depth interviews with ten Learners to add context and depth to the quantitative findings. All data and insights referenced in this report come from these two data sets.

The Effects of AWS Training and Certification on Learners' Cloud Skills

As the demand for cloud capabilities grows, many Learners are participating in AWS Training and Certification to get cloud skills or to increase their cloud competencies. This current study sought to understand if these expectations were being realized. AWS Training participants (N=914) were asked about the benefits they experienced on the job as a result of their training. More than three-quarters said they had increased their job effectiveness and efficiency (83%, 84%). Many (77%) also said they had increased their influence and credibility among coworkers.

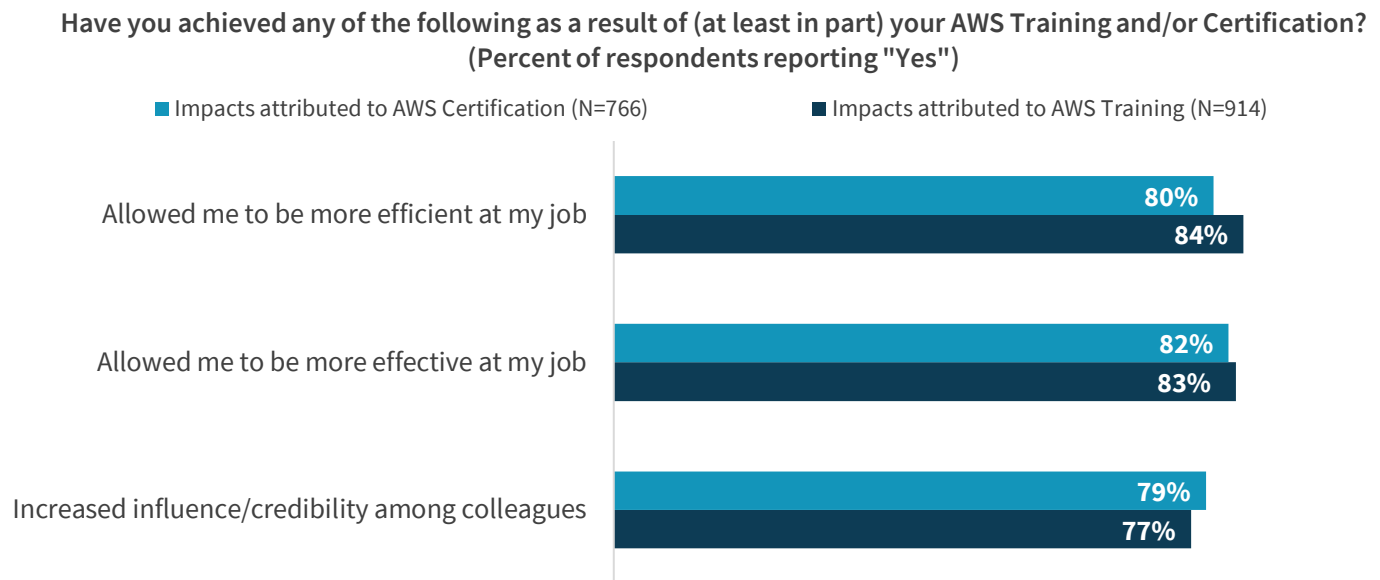
Similar positive outcomes were observed from respondents who had earned an AWS Certification (N=766). More than three-quarters reported that they were able to increase their influence among coworkers (79%), while also increasing their efficiency and effectiveness (80% and 82%, see Figure 2).

These findings demonstrate that the vast majority of Learners who take part in AWS Training and Certification gain valuable benefits.

"I personally have more confidence working in AWS. Even just taking that foundational training and earning that first AWS Certification was extremely helpful for me. "

IT Manager, Technology Company, \$1.4B annual revenue

Figure 2. Impact of AWS Training and/or Certification on Learners' Skills



Source: Enterprise Strategy Group

Realized Benefits from AWS Training and Certification Outpace Expectations Regardless of Function

In addition to evaluating the types of benefits that Learners received through AWS Training and Certification, the study compared Learners' expected benefits versus the actual benefits that they received (realized benefits). Comparisons were conducted across four functions: IT operations, cybersecurity, application development, and line-of-business (LOB).

The study found that a much larger proportion of IT operations respondents saw skill gains after participating in the AWS programs than those who expected to see skill gains before participating (see Figure 3). For example:

- Before participating in AWS Training and Certification, 43% of IT operations Learners *expected* to see improvement in their ability to troubleshoot faster as a result of the AWS programs. After participating, 81% *experienced* improvement, with 40% describing it as “dramatic.”
- 48% expected to see improvement in their ability to accelerate cloud migrations. Interestingly, 84% actually saw skill improvement, with 40% reporting dramatic improvement.
- The most commonly mentioned expected benefit from these AWS programs—increased efficiency and productivity on AWS (61%)—was also realized by more IT operations Learners (85%), with 47% reporting dramatic improvement.

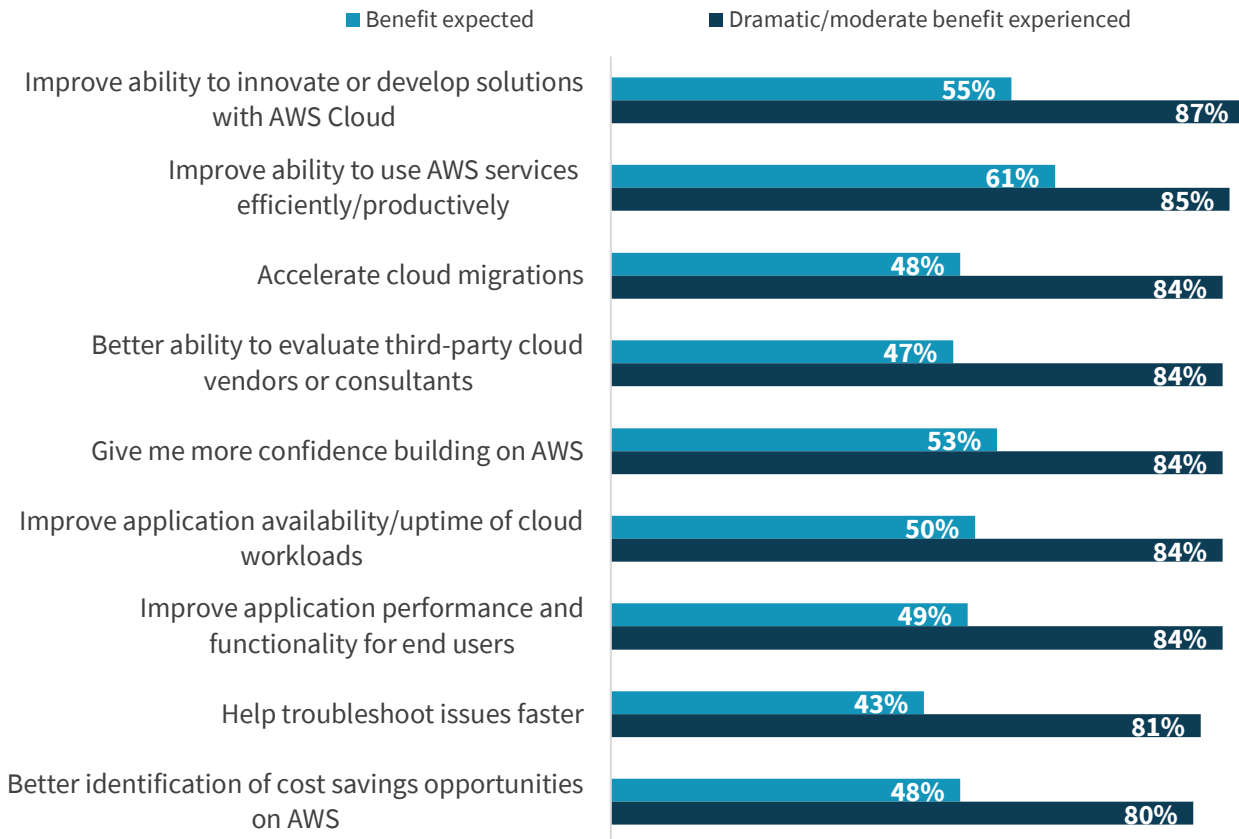
“Over the past three years, we have taken three and a half full racks of physical servers and put them on AWS. The training and certifications our team has taken and earned via AWS gave us the confidence to make that leap and helped us avoid issues along the way.”

CIO, Higher Education, 3,000 employees

Figure 3. Benefits Attributed by IT Operations Personnel to AWS Training and/or Certification Participation

Which of the following did you expect your AWS Training and/or Certification to help you with in your day-to-day responsibilities? What has been the impact of your AWS Training and/or Certification on your capabilities in the following areas?

(Percent of respondents in an IT operations role, N=315)



Source: Enterprise Strategy Group

Similar findings were observed among **cybersecurity professionals**. The proportion of respondents who saw skill improvement as a result of participating in AWS Training and/or Certification outnumbered those who expected to see improvement before participating (see Figure 4). For example:

- 49% of cybersecurity Learners expected that AWS Training and/or Certification would help them identify and remediate security incidents faster. After participating, 84% saw skill improvement, with 40% describing the improvement as “dramatic.”
- 46% expected that AWS Training and/or Certification would help them improve the security of cloud workloads. However, 84% actually saw improvement, with 40% saying the improvement was dramatic.
- 46% expected that the AWS programs would help them better ensure governance and regulatory compliance. However, a higher proportion (81%) actually achieved this result, with 35% saying the improvement was dramatic.

Figure 4. Benefits Attributed by Cybersecurity Personnel to AWS Training and/or Certification Participation

Which of the following did you expect your AWS Training and/or Certification to help you with in your day-to-day responsibilities? What has been the impact of your AWS Training and/or Certification on your capabilities in the following areas?

(Percent of respondents in a cybersecurity role, N=223)



Source: Enterprise Strategy Group

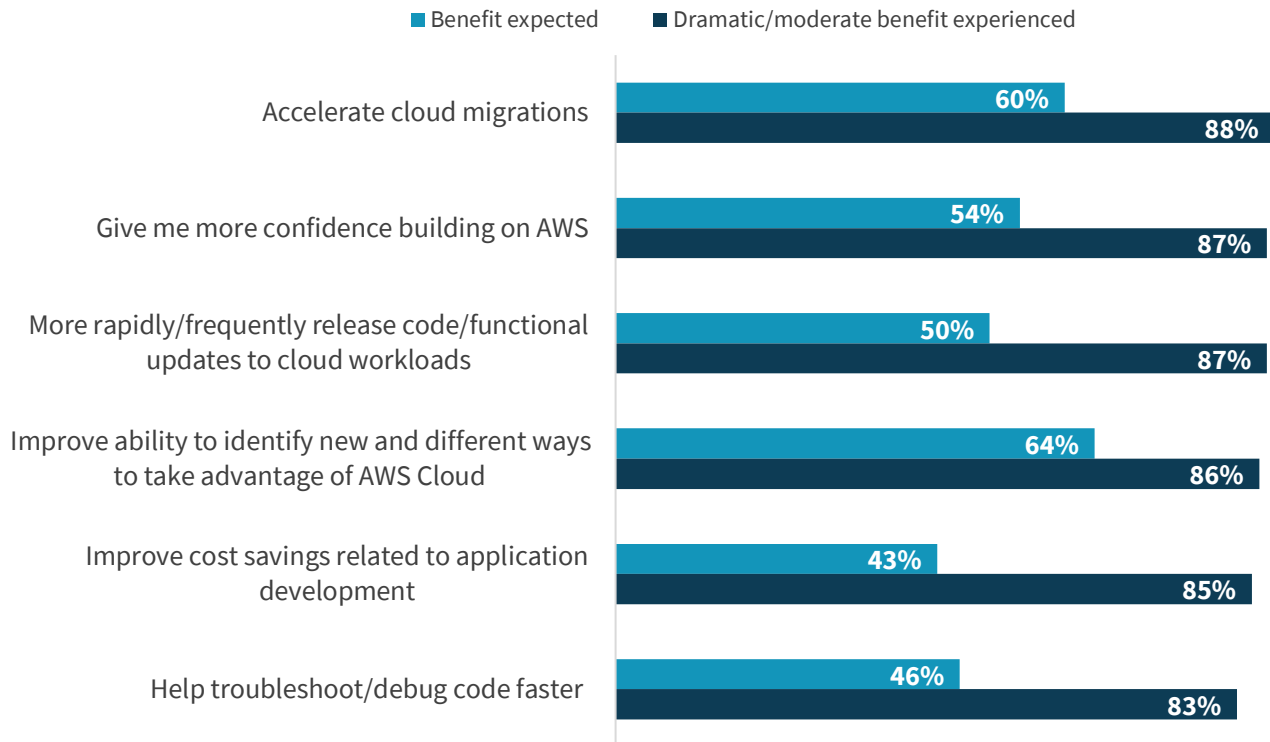
A similar pattern was also observed in the survey results among **application developers** (see Figure 5). For example:

- 50% of Learners expected to be able to iterate and update cloud workloads more quickly as a result of AWS Training and/or Certification. After participating, 87% saw considerable improvement in this capability.
- 43% expected to be able to identify new areas of cost savings related to application development. In reality, 85% saw an improvement in this area, with 45% claiming significant improvement.
- 46% of Learners expected that their participation in AWS Training and/or Certification would help them accelerate code debugging processes. In actuality, 83% saw improved proficiency in this skill after participating.

Figure 5. Benefits Attributed by Application Developers to AWS Training and/or Certification Participation

Which of the following did you expect your AWS Training and/or Certification to help you with in your day-to-day responsibilities? What has been the impact of your AWS Training and/or Certification on your capabilities in the following areas?

(Percent of respondents in a developer role, N=262)



Source: Enterprise Strategy Group

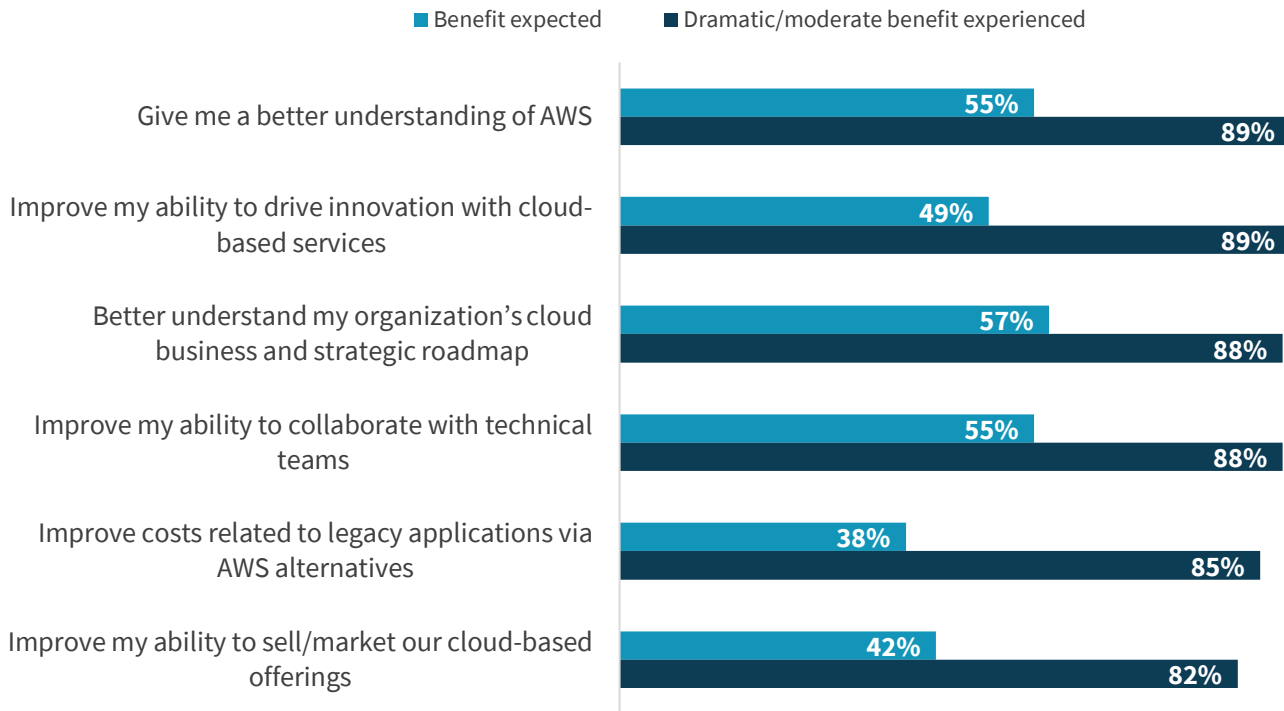
Line-of-business survey respondents (e.g., those employed in a marketing, sales, finance, or product team) were much more likely to say that the impact of AWS Training and Certification outpaced expectations (see Figure 6):

- 49% of LOB Learners expected that participating in AWS Training and/or Certification would help them drive innovation with cloud services. In actuality, 89% experienced this outcome, with 50% seeing “dramatic” improvement in their ability to drive innovation.
- 55% expected that participating in AWS Training and/or Certification would help them better collaborate with their technical teams. A higher proportion (88%) actually saw improvement, with 50% saying their ability to collaborate improved dramatically.
- 55% expected that participating in AWS Training and/or Certification would improve their understanding of AWS. After participating, 89% reported gaining better understanding of AWS, with 55% achieving “dramatic” improvement.

Figure 6. Benefits Attributed by LOB Professionals to AWS Training and/or Certification Participation

Which of the following did you expect your AWS Training and/or Certification to help you with in your day-to-day responsibilities? What has been the impact of your AWS Training and/or Certification on your capabilities in the following areas?

(Percent of respondents in a line-of-business role, N=200)



Source: Enterprise Strategy Group

The overall trend is consistent across job functions and roles: AWS Training and Certification had a higher impact on Learners' skills than they anticipated prior to participation in these programs. This is likely a driving force behind Learners' positive assessment of AWS Training and Certification's ROI. When respondents were asked to consider both the time and financial costs of consuming AWS Training, 90% said the ROI was positive compared to just 1% that said the ROI was moderately negative. Similarly, 91% reported that the ROI achieved from earning an AWS Certification was positive.

"The cloud ecosystem is complex and getting more so all the time. AWS Training helps us better understand all the services available to us and select the right ones for the projects we have under way."

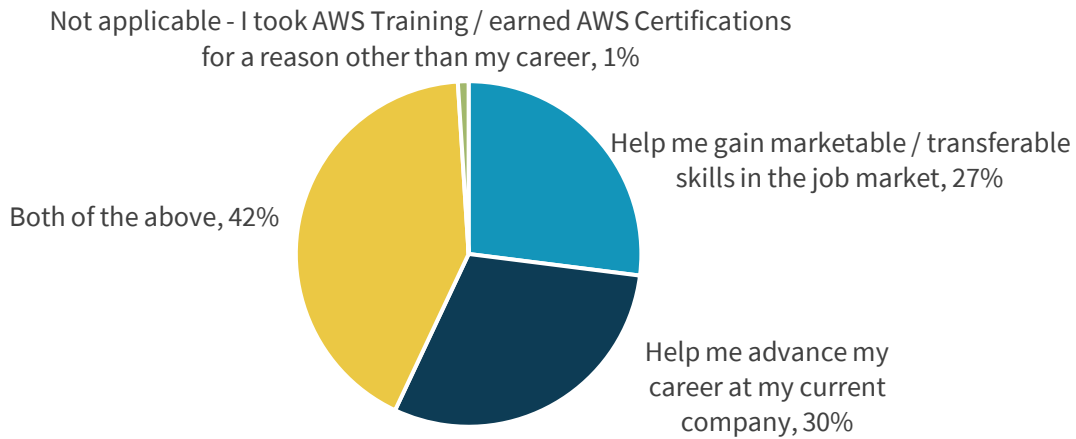
Head of Database Applications, Healthcare Network, >30,000 employees

The Impact of AWS Training and Certification on Learner Success

While improving operational cloud skills is a clear goal for AWS Training and Certification, this recent survey of 1,000 Learners also found that they have personal motivations: 72% reported that participating in AWS Training and Certification programs would help them advance in their current role, while 69% expected to gain marketable or transferrable skills (see Figure 7).

Figure 7. Learner Motivations for Taking AWS Training and Earning AWS Certifications

Thinking of your career generally, why did you take AWS Training and/or earn AWS Certifications?
(Percent of respondents, N=1,000)



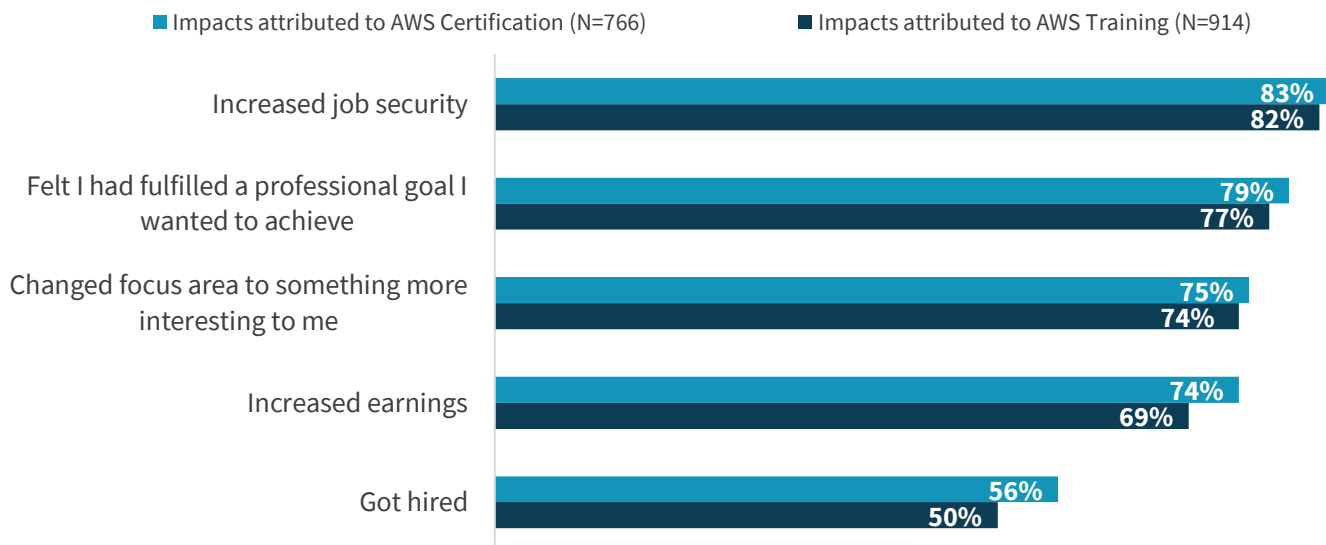
Source: Enterprise Strategy Group

Since gaining AWS Training and Certification improves Learners’ cloud competencies, it is reasonable to assume that it will help Learners' careers in terms of job stability, earnings, and promotion. But is there data to back this up? Does participation in these AWS programs help Learners advance their careers? Findings from this study appear to support it. These are outlined in the following sections.

A good majority of Learners in the study say that AWS Training has increased their job security (82%), helped them change their focus area to something more interesting to them (74%), and increased their earnings (69%). There are similar observations for AWS Certifications. Learners report that AWS Certifications have increased their job security (83%), helped them change their focus area to something more interesting to them (75%), and increased their earnings (74%, see Figure 8).

Figure 8. Impact of AWS Training and Certification on Learners’ Careers

Have you achieved any of the following as a result of (at least in part) your AWS Training and/or Certifications?
(Percent of respondents reporting "Yes")



Source: Enterprise Strategy Group

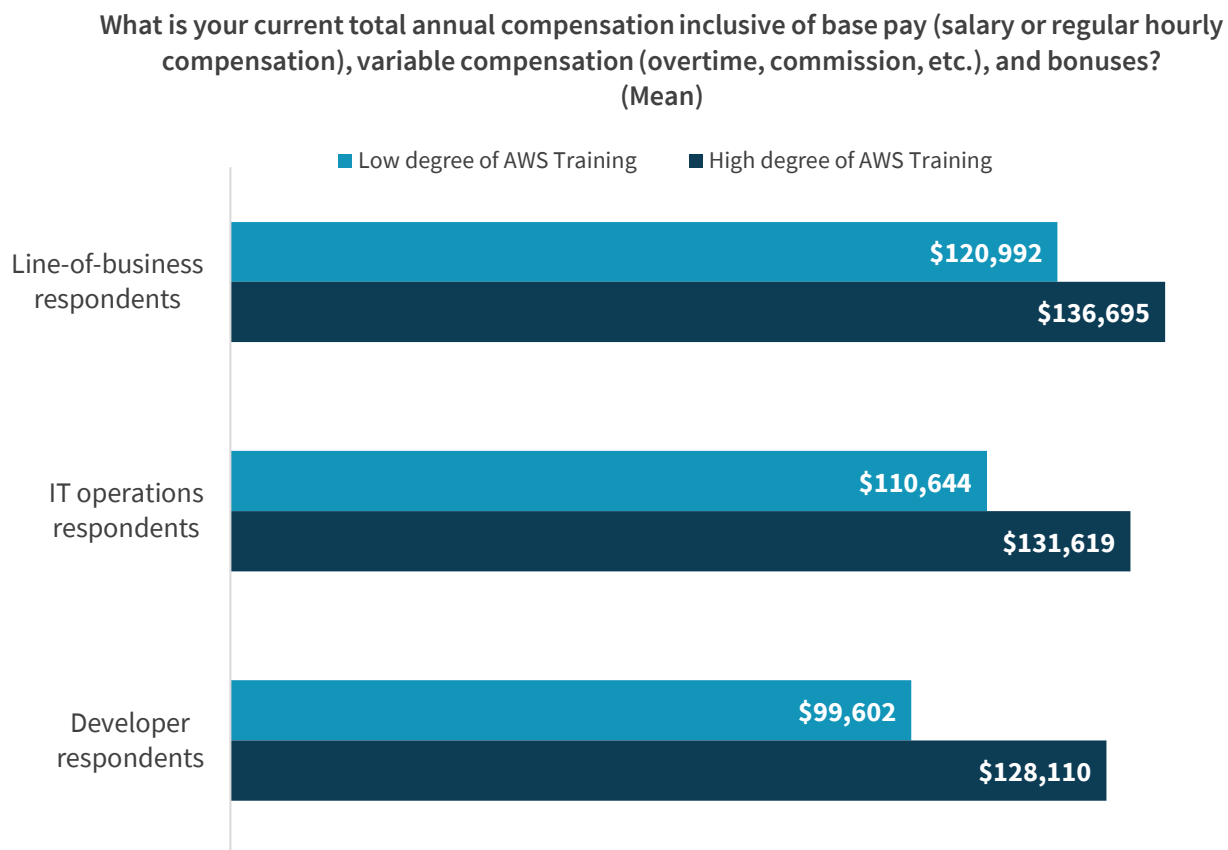
Correlating Learner Earnings with AWS Training and Certification Attainment

As previously stated, the majority of Learners believe that their participation in AWS Training and Certification programs has had a positive impact on their compensation. To investigate this further, we looked at whether there is a link between Learner compensation and the amount of AWS Training or AWS Certifications they have.

In examining the correlation between earnings and AWS Training engagement, ESG segmented Learners into two cohorts: those with a high degree of AWS Training participation (8+ days of AWS Training over the past two years) and those with a low degree of AWS Training participation (2 days or less of AWS Training over the past two years). The analysis found that Learners consuming the most training earn approximately 20% more on average than their counterparts with a low level of AWS Training participation. Specifically:

- Those in an IT role revealed a 19% increase in earnings, developers had a 29% increase, and those in a line-of-business function earned 13% more (see Figure 9).

Figure 9. Learner Compensation by Role and Amount of AWS Training Completed

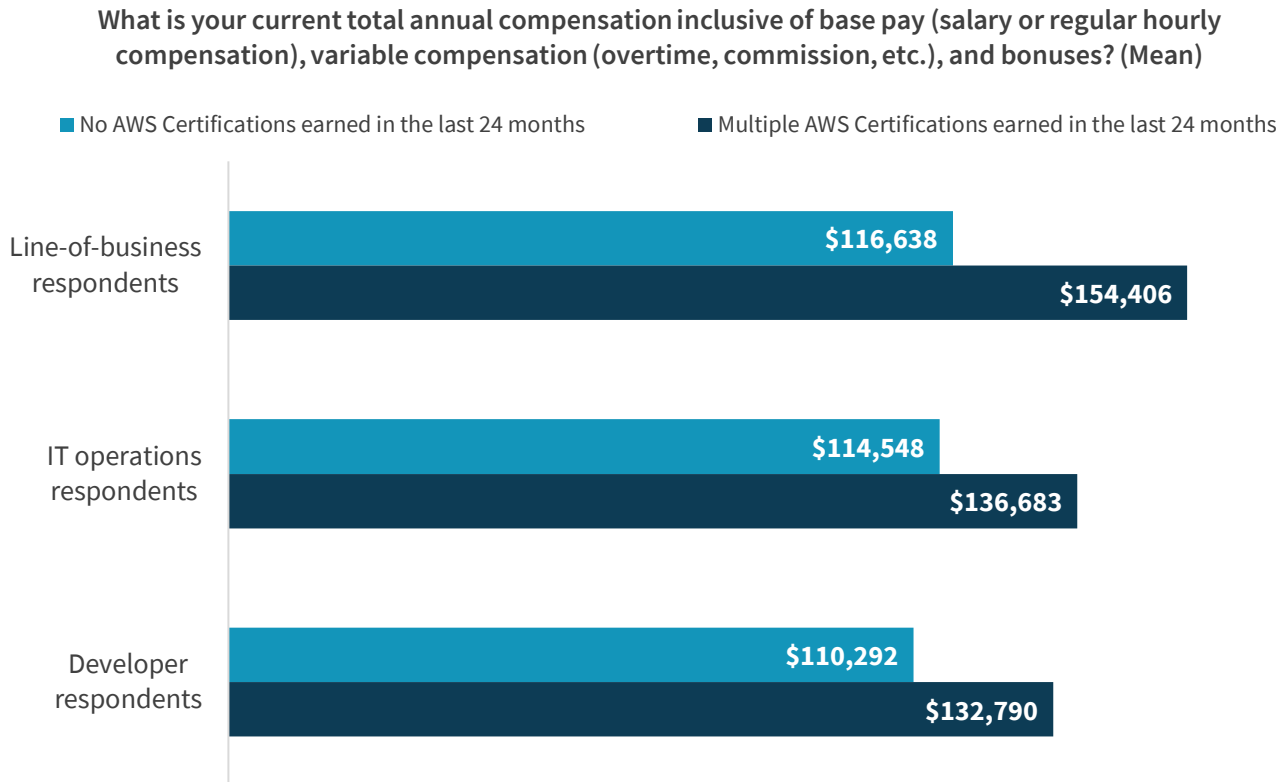


Source: Enterprise Strategy Group

A similar analysis was applied to determine whether any correlation exists between earnings and AWS Certification. ESG compared the compensation of Learners that had earned multiple AWS Certifications in the past 24 months to those that had not earned any. Once again, a positive correlation was observed:

- Learners who earned multiple certifications earn approximately 24% more than those who have none. This is true across IT operations (19% increase in earnings), application development (20% increase), and LOB (32% increase) roles (see Figure 10).

Figure 10. Learner Pay by Role and Number of AWS Certifications Attained



Source: Enterprise Strategy Group

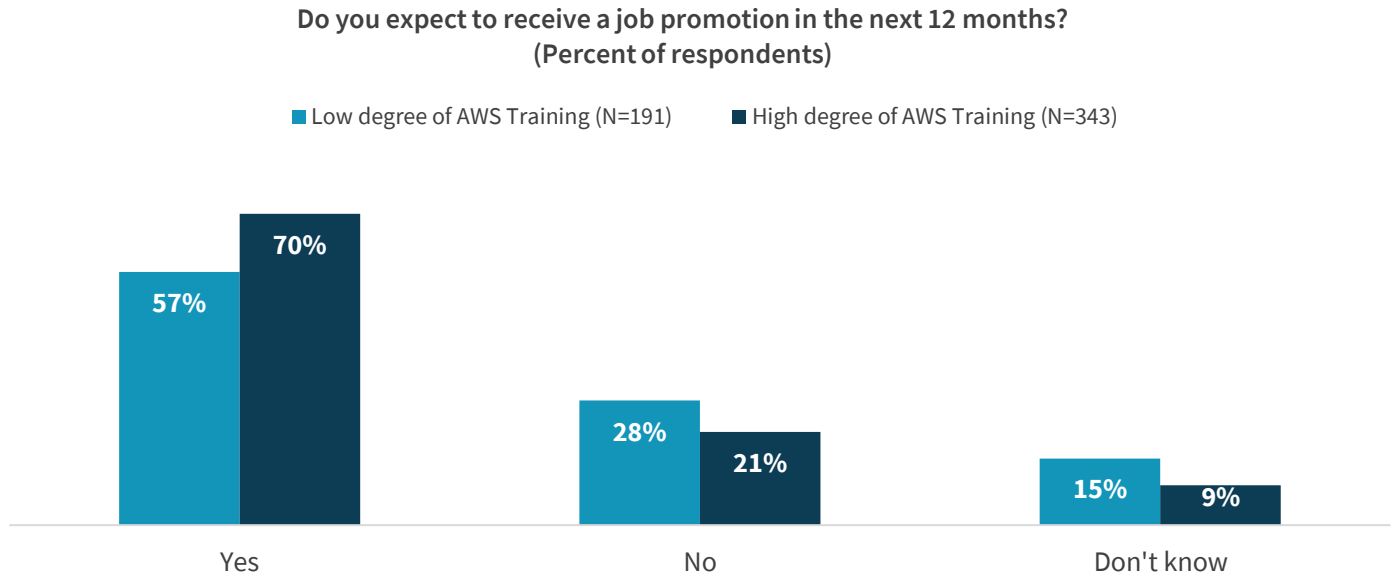
While correlation does not imply causation, and many factors go into determining an individual's pay, it is not surprising for companies to pay a premium for highly skilled employees, considering the value they can provide to the organization. Because Learners report a high level of capability improvement (some even described it as "dramatic") as a result of their participation in AWS Training and Certification, it's reasonable to assume a favorable link between earnings and AWS Training and Certification attainment.

Correlating AWS Training and Certification Engagement with Learners' Prospects for Advancement

With career advancement being one of the motivations for Learners' participation in AWS Training and Certification programs, the research also wanted to explore whether these AWS programs instill optimism among Learners regarding their future possibilities. Analysis was conducted to determine whether an association exists between attainment of AWS Training and Certification and career advancement prospects. Respondents were asked if they expect to receive a promotion in the next 12 months. This was then correlated with participation in AWS Training and/or Certification. Overall, 63% of Learners expect career advancement within a year and further analysis showed a positive correlation between the amount of AWS Training obtained and the likelihood of being promoted.

Those with a high degree of AWS Training completed are more inclined to be optimistic about their prospects for advancement. Specifically, seven out of ten Learners (70%) with a high degree of AWS Training participation were optimistic about their chances for promotion in the next 12 months. This is 14 percentage points higher than Learners with a low degree of AWS Training completion (see Figure 11).

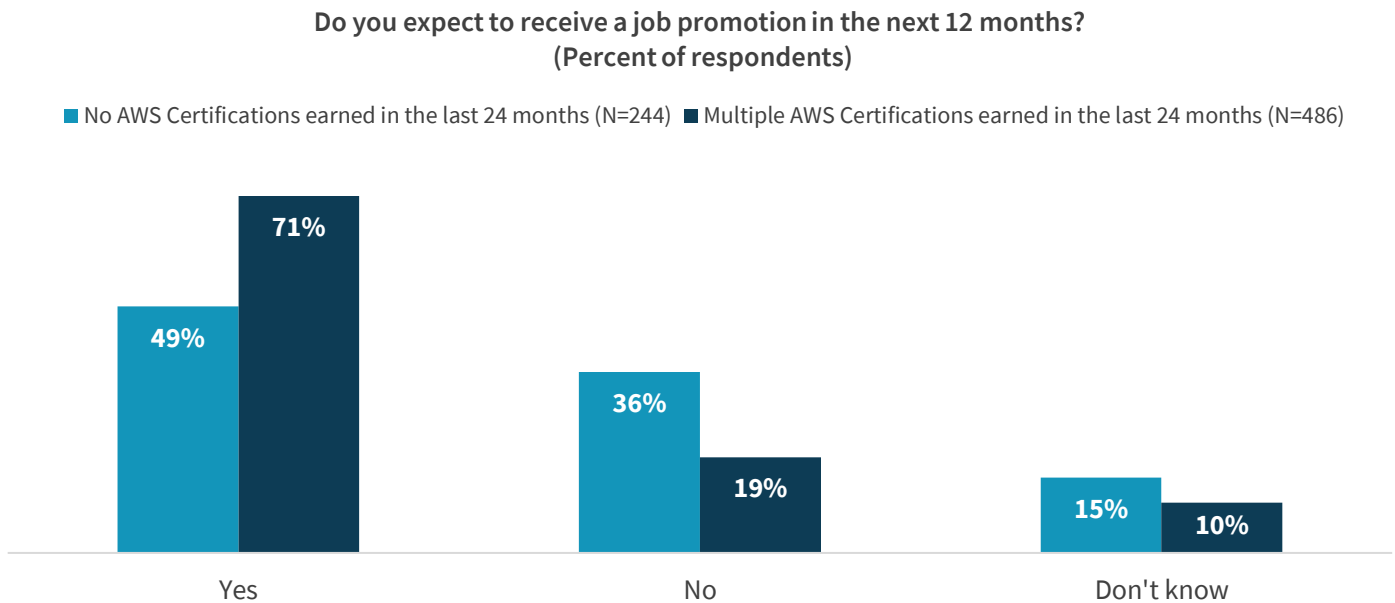
Figure 11. Learners’ Expectations for Career Advancement, by Degree of AWS Training



Source: Enterprise Strategy Group

The link between expected advancement and achievement of AWS Certification is even stronger. Seventy-one percent of Learners that have earned multiple AWS Certifications in the last two years are optimistic about their promotion prospects in the next year, 22 percentage points higher than their peers that have not earned any AWS Certifications (49%, see Figure 12).

Figure 12. Learners’ Expectations for Career Advancement, by Number of AWS Certifications Earned



Source: Enterprise Strategy Group

In both cases, the correlation makes sense. As shown previously, AWS Training and Certification programs help Learners significantly improve their cloud competencies. This gives organizations more confidence in Learners’ abilities to help solve business problems, drive key cloud initiatives, and execute strategies forward. While promotions are not guaranteed, these are accomplishments that could lead to more responsibilities and advancement.

A Noteworthy Link between Job Responsibilities and Job Satisfaction

Being chosen to drive key organizational initiatives or projects forward is an example of how Learners can increase their influence and standing within the organization. The research explored whether respondents had been selected to work on any special cloud projects in the past 24 months as a direct result of the AWS Training they've taken or AWS Certifications they hold. An impressive 66% of Learners reported that they had been selected multiple times while another 24% said they had been chosen once.

Being chosen for these types of stretch assignments is beneficial to a Learner not just because it gives them more visibility within the organization, but also because it gives them more job satisfaction. Our analysis shows that Learners' job satisfaction is positively associated with their frequency of being selected to work on special projects. Specifically, 55% of respondents who had been chosen to work on multiple special projects were very satisfied with their jobs compared to just 17% of those who had not been selected to work on any special projects (see Figure 13).

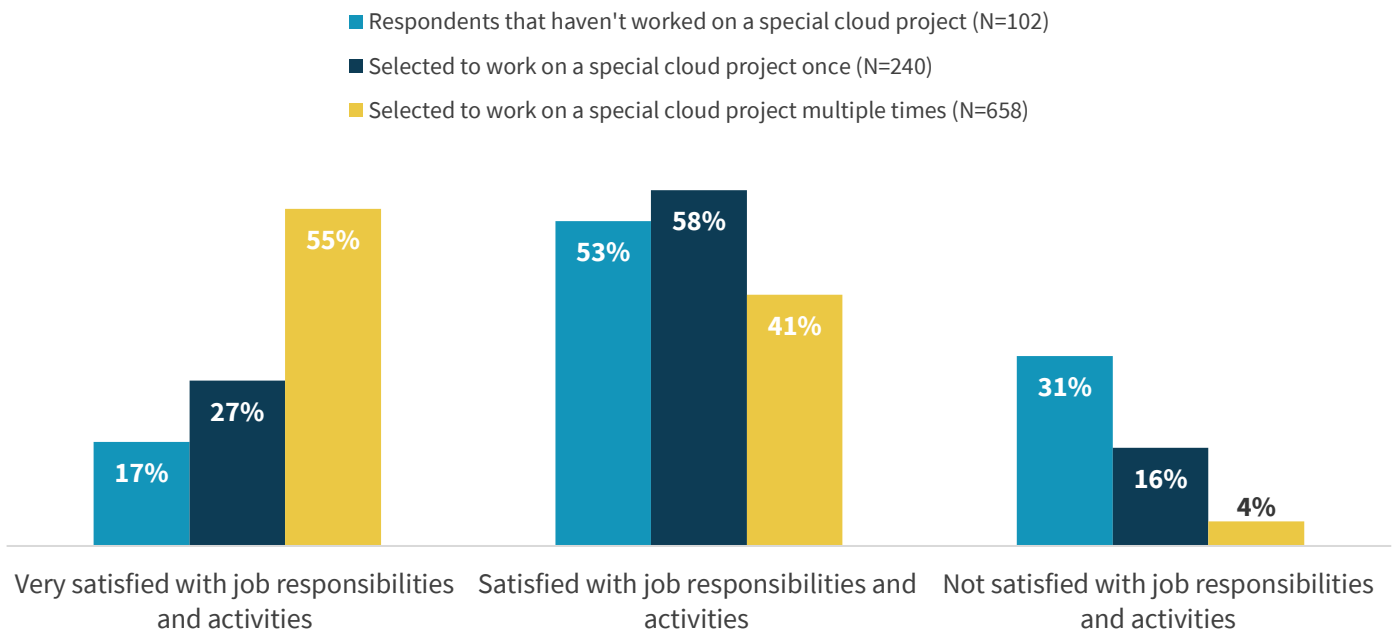
"What I've seen with AWS Certification is that it validates your knowledge and it adds more stars to your name—meaning more opportunities."

Director of IT, Retail, 1,500 employees

To put it another way, learners who are called on to work on special projects on a regular basis are 3.2 times more likely to be highly satisfied in their jobs. With 9 out of 10 Learners citing their involvement in AWS Training and Certification programs as a factor in their selection to work on these types of projects, it's reasonable to assume that these educational programs contribute directly to Learners' job satisfaction.

Figure 13. Learners' Job Satisfaction, by Their Selection to Work on Special Project(s)

Overall, how would you rate your current level of job satisfaction (i.e., satisfaction with your job responsibilities and the activities you spend your time on)?
(Percent of respondents)



Source: Enterprise Strategy Group

Confidence in Employability and Attainment of AWS Training and Certification

With today's high level of macroeconomic uncertainty, many individuals are concerned about their job stability, which is critical to their professional success. The research touched on this theme. Specifically, respondents were asked about their confidence about their employability.

More than four out of five respondents (84%) expressed confidence in their capacity to obtain equal or better work within a few months. Interestingly, we see a difference in Learners' confidence depending on how much AWS Training and Certification they have obtained.

"AWS Certifications are very marketable items. If you put certain certifications on your resume, it answers a lot of questions for me as a hirer without being asked."

Solutions Architect, Financial Services, >\$20B annual revenue

- Nine out of ten Learners with a high degree of AWS Training participation (89%) were more optimistic about their re-employment chances, compared to Learners with a low level of AWS Training participation (74%).
- Similarly, 91% of Learners that have earned multiple AWS Certifications in the last two years also expressed confidence in their employability compared to 83% of Learners who had earned one AWS Certification and 71% of Learners who had not earned an AWS Certification in the last 24 months.
- However, employability confidence does not translate into Learners leaving their current positions. While Learners are confident about their job prospects elsewhere, they are also more likely to stay loyal to their existing employers that build an environment that supports all AWS Training and Certification. This is further explored in the next section.

What Employers Gain by Supporting AWS Training and Certification

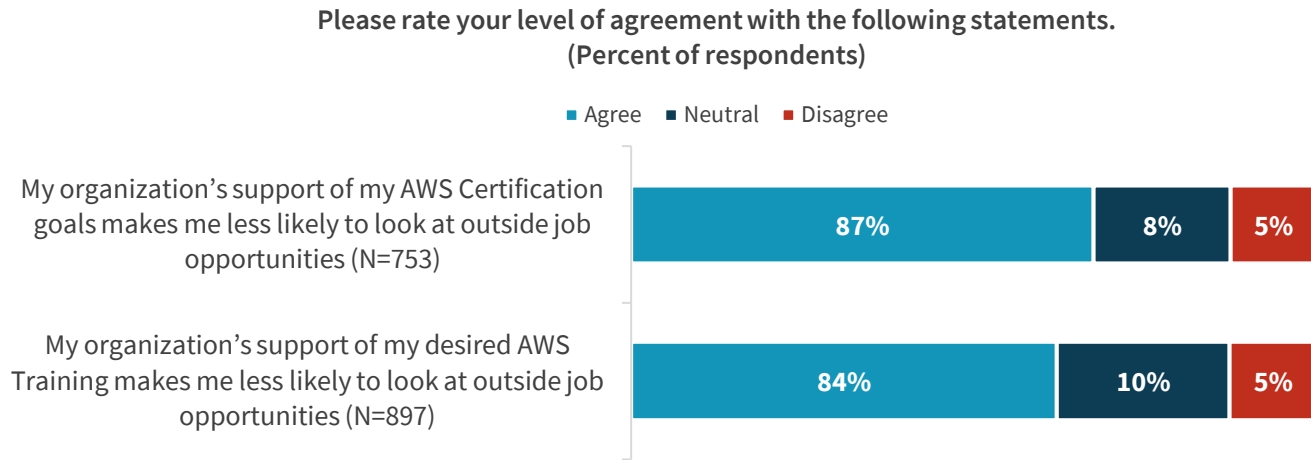
Thus far, this report has focused on the benefits that employees receive as a result of their participation in AWS educational programs. A cynical employer may see the data and wonder, "What's in it for me? Why should I allocate resources and my employees' time to participate in AWS Training and sit for AWS Certification exams if employees may command a higher salary or may become more attractive targets to poaching by competitors?"

This concern, according to the research, is mainly unfounded. First, and most obviously, the chief beneficiary of Learners' improved skills is the employer. Given the constant demand on organizations to advance digital transformation initiatives and accelerate cloud service consumption, employers should be highly motivated to cultivate a workforce with advanced cloud skills. As respondents report, promoting AWS Training and Certification is an excellent way to optimize on-staff skillsets.

Secondly, the data demonstrates that company support for AWS Training and Certification programs leads to a significant increase in employee loyalty, making it less likely that employees will look for work elsewhere. Study respondents were asked if their organization funds AWS Training and Certification costs. Those that reported their employer funds the programs "always," "usually," or "on a case-by-case basis" were also then asked if that support makes them less likely to seek outside job opportunities. The research found that among Learners whose AWS Certification exam fees are paid by their organization, 87% are less likely to look for an outside job, and 85% of Learners whose AWS Training is employer-funded are less likely to look for an outside job (see Figure 14).

When the data was cut by level of employer support, Learners at organizations that always fund AWS Training and Certification were 3.3x more likely to "strongly agree" that they are less likely to seek outside job opportunities than those Learners whose companies only fund training on a case-by-case basis.

Figure 14. Impact of AWS Training and Certification Funding on Learners' Loyalty



Source: Enterprise Strategy Group

The research also correlated employee satisfaction with their employer with their employer's support for AWS Training and Certification. The findings show that organizations that invest in their employees' skill development receive a significant competitive advantage:

- Learners at organizations that always fund AWS Training are 3.9x more likely to be "very satisfied" with their employer.
- Learners at organizations that always fund AWS Certification exam fees are 4.4x more likely to be "very satisfied" with their employer (see Figure 15).

Figure 15. The Correlation between Employer Support for AWS Training and/or Certification and Satisfaction



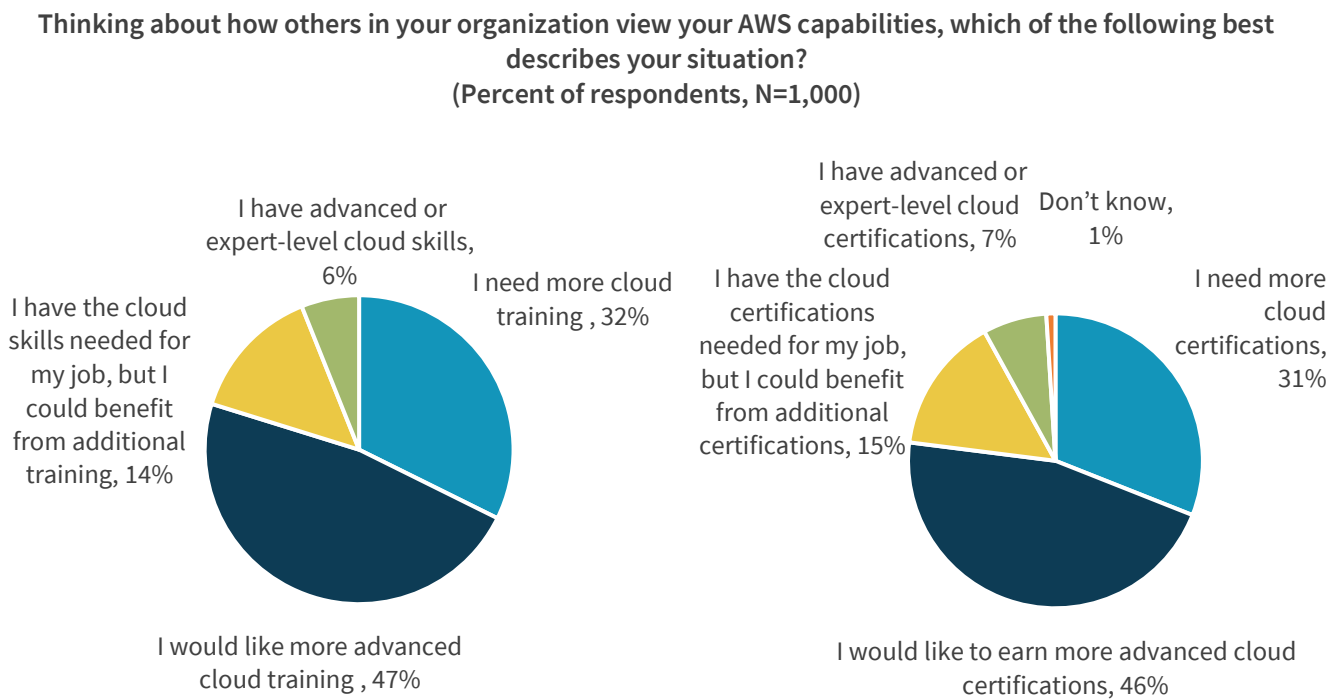
Source: Enterprise Strategy Group

With cloud skills in high demand, employers should not overlook the significance of reducing churn and mitigating the potential cloud skill gaps that can arise from the loss of high-value cloud professionals.

Skills Development and Validation Is a Journey, Not a Destination

As of 2021, AWS comprises over 200 products and services, including computing, storage, networking, database, analytics, application services, deployment, management, machine learning, mobile, developer tools, and tools for the internet of things, with new services being launched regularly. Given the scope of services AWS makes available to its customers, it is not surprising to note that 94% of Learners believe they would benefit from additional training on AWS, and 92% feel they would benefit from earning additional certifications (see Figure 16). Nine out of ten respondents believe this additional up-skilling would help them improve their ability to build new services (90%), learn how to use AWS solutions more efficiently (89%), and solve problems with AWS (89%).

Figure 16. Learners’ Appetites for Additional Cloud Training and Certifications



Source: Enterprise Strategy Group

It is important to note that the Learners surveyed have a high affinity for AWS Training and Certification. Specifically, 88% of Learners say they are likely to pursue more AWS Training in the next 12-24 months, and 87% say they are likely to pursue an AWS Certification (see Figure 17). Learners with prior exposure to these AWS programs plan to continue participating in order to broaden and validate their cloud skills.

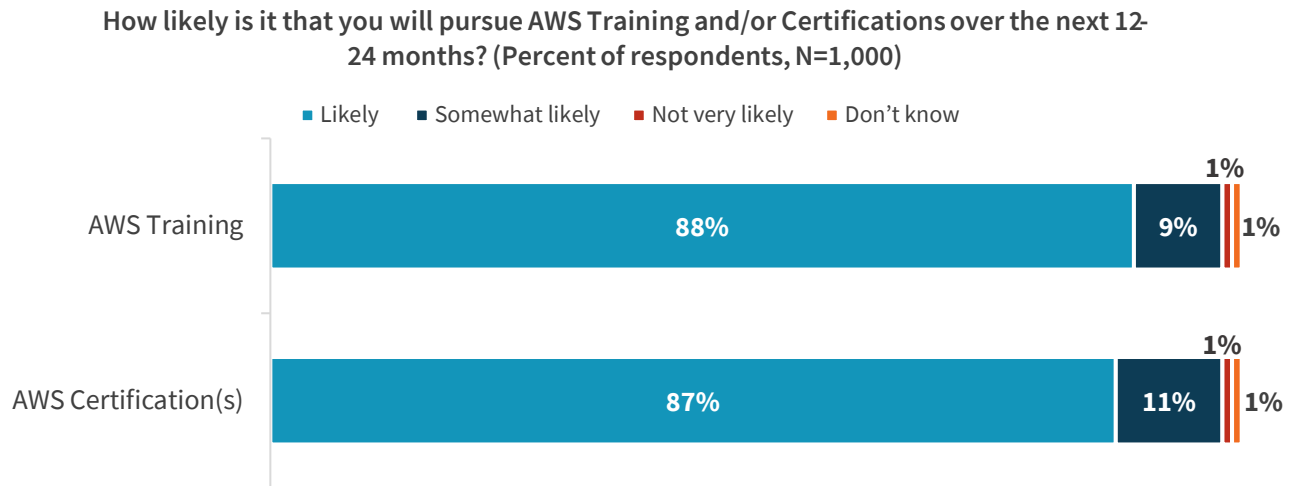
These cloud competency improvements benefit not just Learners. Staff skill improvements boost organizations’ productivity and

“Our opinion is that it is better if we take training authored by AWS rather than a third party. We want to learn the skills first and foremost, but we trust the content coming straight from the source most.”

Application Development and Infrastructure Lead,
Financial Services, >150,000 employees

competitive advantage as well. As a result, it's no surprise that not only learners, but also employers, are favorable towards AWS Training and Certification programs.

Figure 17. Learners' Likelihood of Pursuing Future AWS Training and Certification



Source: Enterprise Strategy Group

The Bigger Truth

The data is clear. Learners, regardless of job function, see dramatic improvements in their cloud skills as a result of taking AWS Training and earning AWS Certifications. The operational competencies they develop (which are a benefit to their organizations) far exceed their expectations. Compared to the number of Learners who expected to see skill improvement before participating in AWS Training and Certification, approximately twice as many Learners saw an improvement in a specific skill after participating in the programs. The data also shows that Learners enjoy a number of career-related benefits as a result of AWS Training and Certification, including increased job security, higher compensation, and the opportunity to work on new and exciting projects. In turn, these benefits lead to greater satisfaction with their current job. As a result, many Learners anticipate pursuing more AWS Training and Certifications in the future.

Employers also benefit from supporting their employees' AWS Training and Certification goals. Not only do they see significant benefits and competitive advantage from an upskilled workforce that is better able to support the organization's cloud goals, but those employees are also more satisfied and more committed to their organization.

Research Methodology and Demographics

To gather data for this report, ESG conducted a comprehensive online survey of individuals in IT operations (N=315), cybersecurity (N=223), application development (N=262), and line-of-business (N=200) roles that had taken AWS Training (N=914), earned one or more AWS Certifications (N=766), or both, in the last 24 months. After applying quality control and data integrity protocols, a final sample of 1,000 total respondents across both surveys was achieved.

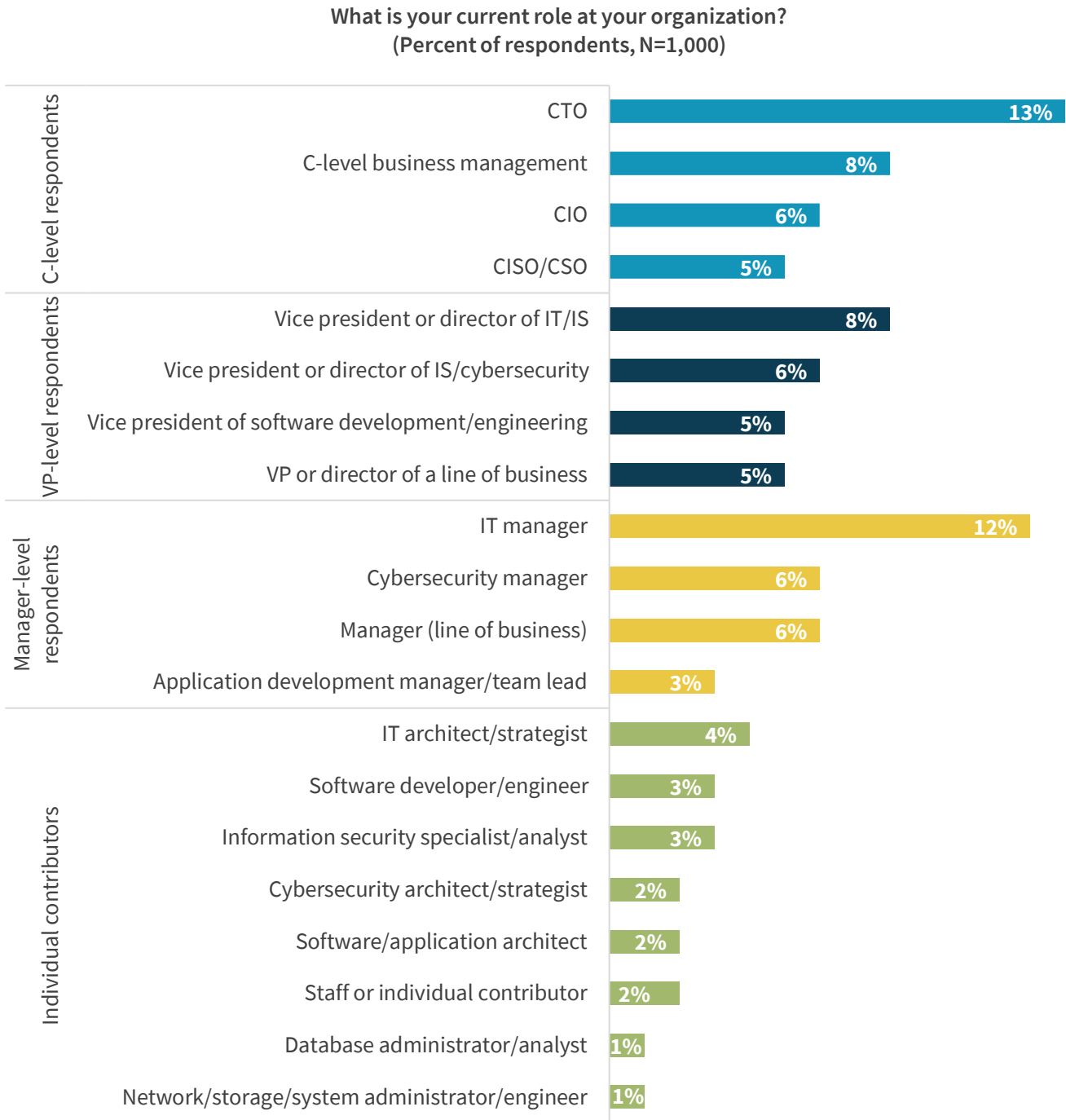
The sample included individuals employed at both midmarket organizations (i.e., those with 100-999 employees, 28%) and enterprises (i.e., those with 1,000 or more employees, 72%). Respondents were distributed globally across North America (30%), Europe (30%), and Asia Pacific (40%). The survey was fielded in April of 2021.

Survey data was complemented by ten 60-minute phone interviews conducted by ESG analysts with end-users that have taken AWS Training and/or earned AWS Certifications.

Analytical Note: Totals in figures and tables throughout this report may not add up to 100% due to rounding. The margin of error on a sample of N=1,000 is + or – 3 percentage points. Statistical testing was conducted at 95% confidence level.

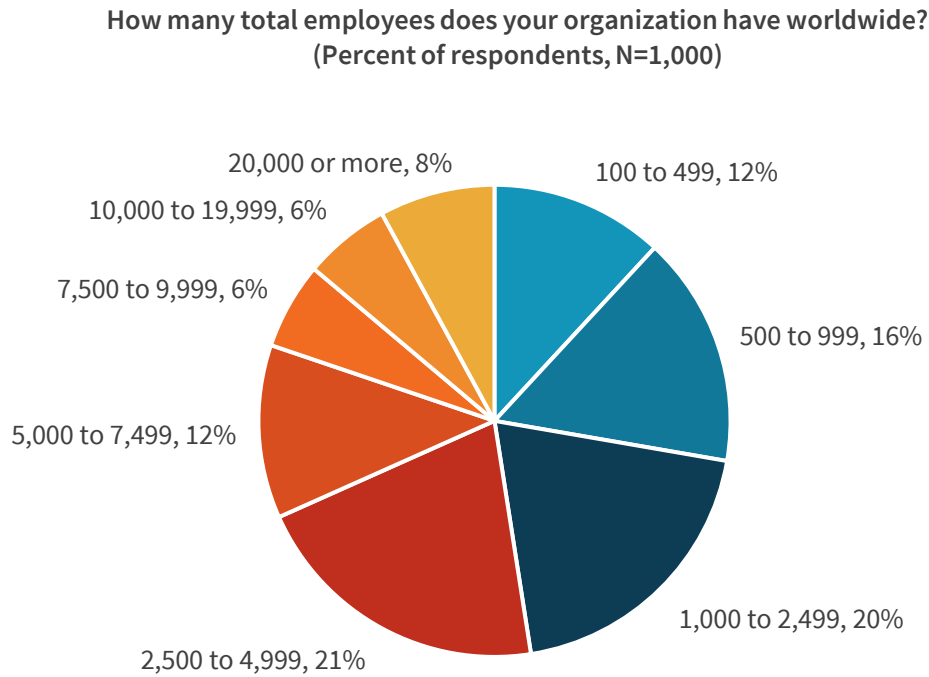
The figures that follow detail the demographics and firmographics of the respondent base: individual respondents' roles, as well as the organizations they represent in terms of total number of employees, annual revenue, and industry.

Figure 18. Learners by Role



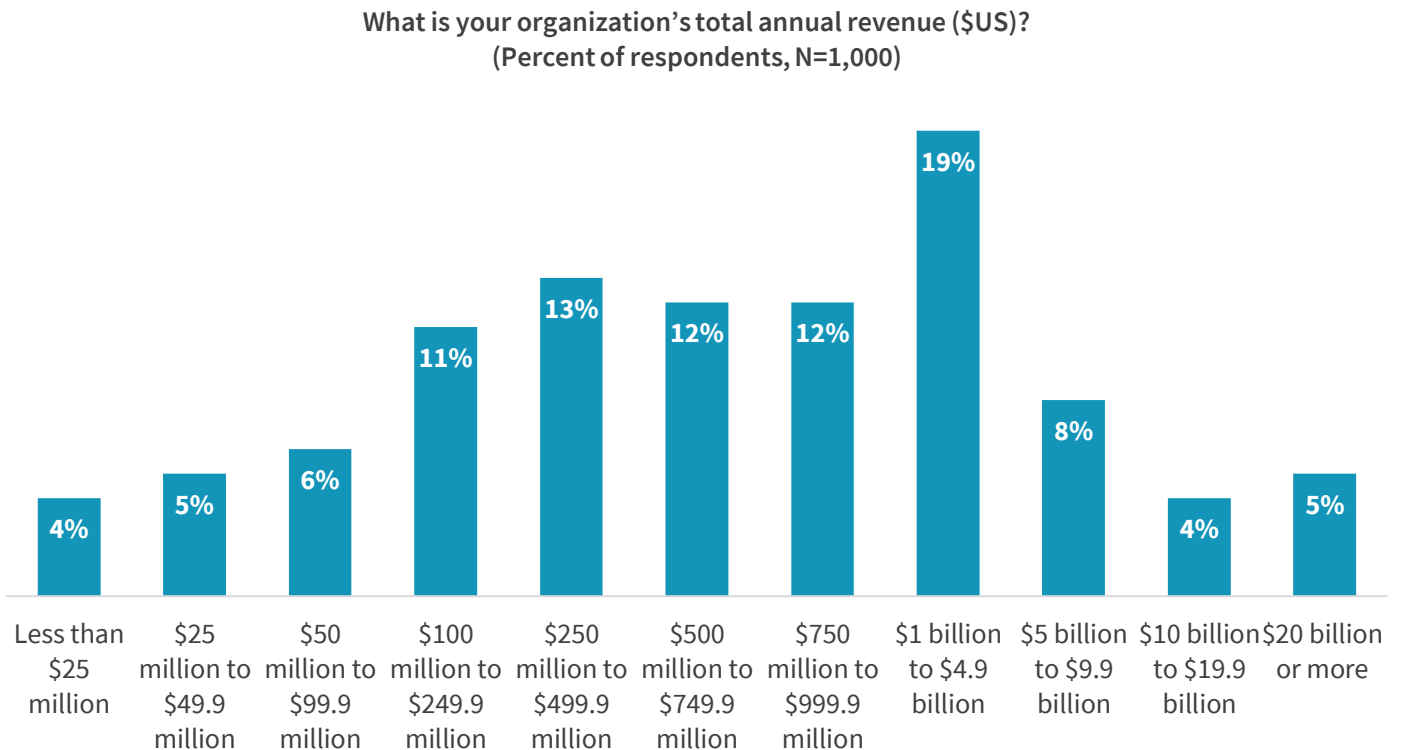
Source: Enterprise Strategy Group

Figure 19. Learners by Organization Size



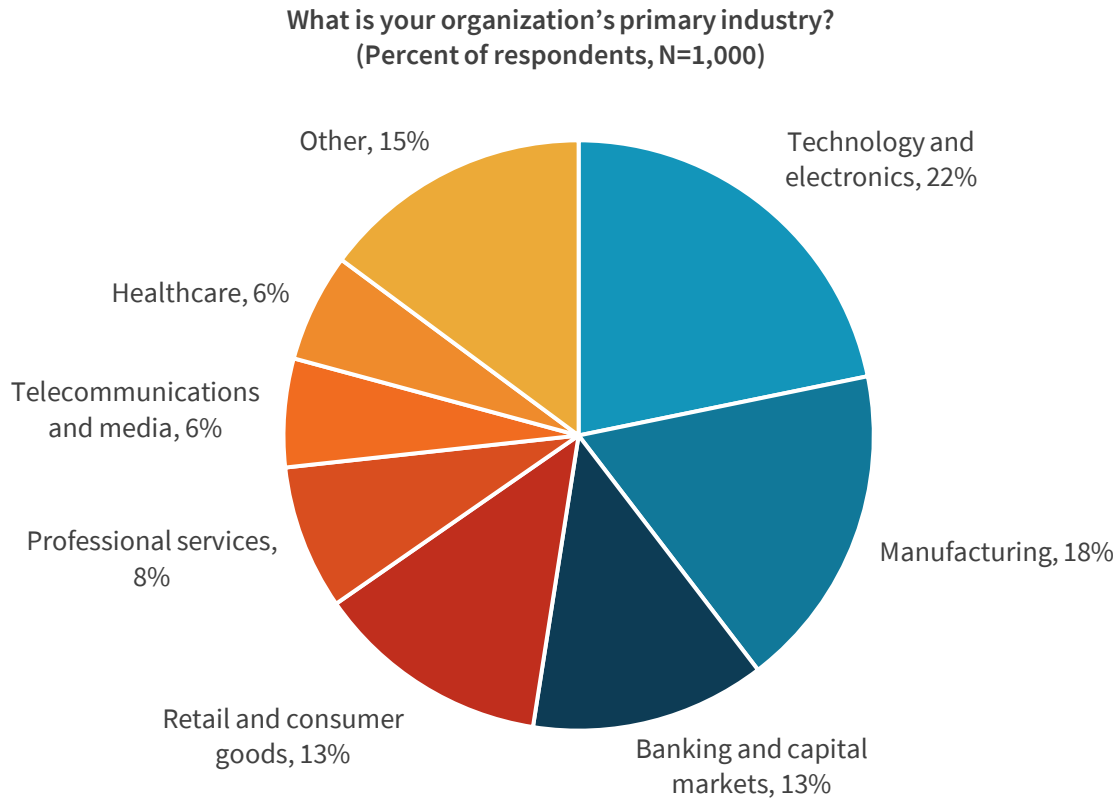
Source: Enterprise Strategy Group

Figure 20. Learners by Organization Revenue



Source: Enterprise Strategy Group

Figure 21. Learners by Industry



Source: Enterprise Strategy Group

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