SURVEY

Impact of Training: Functional Excellence Leads to Operational Productivity

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IDC OPINION

All companies increasingly rely on technology — some to manage their business, and others to compete in a technology industry segment. Relying on technology creates dramatic growth in demand for skilled IT professionals. As technology becomes indispensable to businesses, effectively managing technology becomes essential. In addition:

☑ Turbulent economic times highlight how companies depend on their IT teams. In response, the IT industry must act to develop teams that can perform at the highest levels. At the same time, IT managers and IT trainers must understand their corporation's goals and tailor their IT system and IT teams to respond to new objectives. This must include a consistent way of validating and leveraging IT talent.

☑ Certifications represent rigorous and meaningful bodies of knowledge and deliver tremendous value to near-term organizational success for companies using them as a component of talent development. And while each new certification increases team performance, "average" functional proficiency only occurs when a team has more than 40% of the team certified. At the same time, high-performing teams spend less time deploying and fixing solutions and spend more time maintaining and improving the systems they operate.

IN THIS STUDY

This document summarizes a number of related research projects IDC recently completed. This research consistently finds that corporate management expects IT departments to do more than support computing and communications infrastructure. Basic IT equipment and applications installation and maintenance are baseline functions; IT teams must now make sure every new investment supports the company's overall business objectives.

To accomplish this, IT managers must train and certify their team members in the use of new tools, technologies, and techniques. IDC research indicates IT teams with high concentrations of certified technicians perform with greater effectiveness than teams with fewer certifications.

Methodology

Over the past 24 months, IDC has surveyed more than 800 IT managers responsible for more than 2,000 teams. The survey's focus was to uncover the relationship between training, certification, and functional performance on more than 80 different IT performance metrics in 26 functional domains.

The functional domains covered the breadth of IT activities, including:

☑ Deployment

☑ Development

☑ Management

☑ Security

☑ Storage

☑ Support

IT managers were asked questions related to their team's performance on each of the performance metrics, and that information was plotted against the percentage of the team with relevant technology certifications.

SITUATION OVERVIEW

Most businesses rely on IT infrastructure to help:

☑ Drive new revenue streams

☑ Accelerate growth

☑ Reduce operational costs

Meeting these objectives requires an IT staff to understand the relationship between technology and business. IT managers who balance their team's technology and business acumen can build on their infrastructure foundations of "business transformation" and "cost reduction" to improve the services their internal and external clients demand.

Enterprises and their IT leaders that have recently used technology to respond to and transform their business can now focus IT on improving existing processes and the resulting services delivered. IT executives and managers can then assess their team's skills and make investments to improve them. This tactic also helps them respond to staffing pressures — to do more with fewer people — created by current economic conditions.

Managers who focus on their IT team's skill improve infrastructure maintenance and deployment. By leveraging the features built into the technologies, IT organizations can deliver services efficiently. Skills related to the function of the embedded technology enable teams to:

☑ Manage risk

☑ Use standards consistently

☑ Implement projects successfully and efficiently

☑ Execute new business models

Organizations focused on driving growth, managing risks, and cutting overhead expenses rely on IT departments to manage convergence complex infrastructures and the proliferation of sophisticated edge devices (e.g., notebooks and PDAs). IT talent must combine technical capabilities with the ability to manage projects and complex situations that bring alignment with business goals.

IDC research indicates that every increase in team skill improves organizational performance. Therefore, increasing the overall capability of key teams will improve both service delivery and corporate performance. Emphasizing IT service delivery excellence requires IT organizations to measure their teams' ability to perform functional tasks.

Training and certification are effective measures of how well team members can work with specific technologies, hardware, and software.

Used properly, certifications play key roles at the convergence of business and IT trends. IDC research shows a direct relationship between higher levels of certification and improved performance — when team skills improve, organizational performance increases proportionally (see Figure 1).

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Key Success Factors for Critical IT Functions

Q. Which of the following factors contributed most to the success of technology function?

n = 224
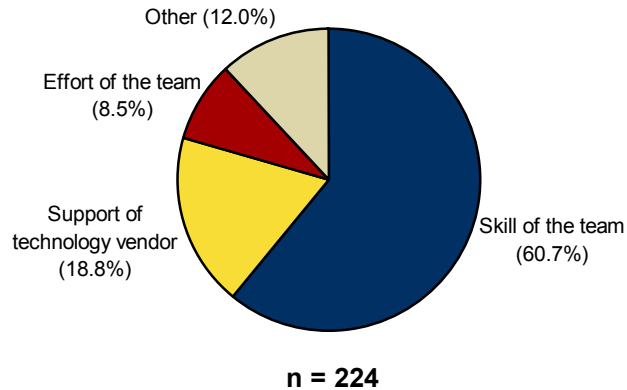
Source: IDC's *Training Impact Survey,* 2008

Certification Matters: Functional Certification and Organizational Performance

IT managers work in environments that force them to maximize their team's ability to improve service delivery and performance. In recent surveys, 80% of IT managers report their team requires a significant amount of task-specific skills to perform assigned duties. IDC examined the relationship between team performance and the percentage of each team that had certifications from vendors on a variety of technologies. Unequivocally, certification, as a measure of skill, showed a positive correlation to performance improvement.

The research examined both general service excellence and specific measures of task-level performance. In both cases, certification matters. Certified skills of IT staff members will continue to reign as the single biggest predictor of IT project success for the foreseeable future.

Managers striving for high performance must aim at team skills as targets for improvement by focusing on individual functional skills returns investments with increased team performance.

Certifications Enable Agility and Security

Performance improvements within IT organizations typically focus on the following seven general goals:

☑ Agility — rapid alignment between requirements and capability

☑ Customer access to Internet-based apps to improve self-service

☑ Employee access to Internet-based apps to leverage corporate data and for self service

☑ IT efficiency — improving service levels at reduced costs

☑ Response time for standard or routine tasks

☑ System/information security

☑ Risk mitigation

While general excellence in "agility" or "IT efficiency" is a manager's primary objective, functional excellence in areas like "network security," "application development," or "IT help desk operations" creates the ability for an organization to meet its "agility" or "efficiency" goals. Functional elements combine to develop more general expertise. The percentage of relevant certifications a team has is anecdotally considered a reliable tool to measure an IT team's functional capability.

So IDC decided to test the relationship between certifications and functional excellence. In several studies, IDC has found functional excellence increases either when an organization is well trained or when a team increases its percentage of certified members.

Each new certification increases team performance. Even when incremental improvement is relatively small, overall performance increases (see Figure 2). It is also important to note that "average" functional proficiency only occurs when more than 40% of the team is certified.

FIGURE 2

Relationship Between Performance and Percentage of Team
Certified Covering All IT Functions
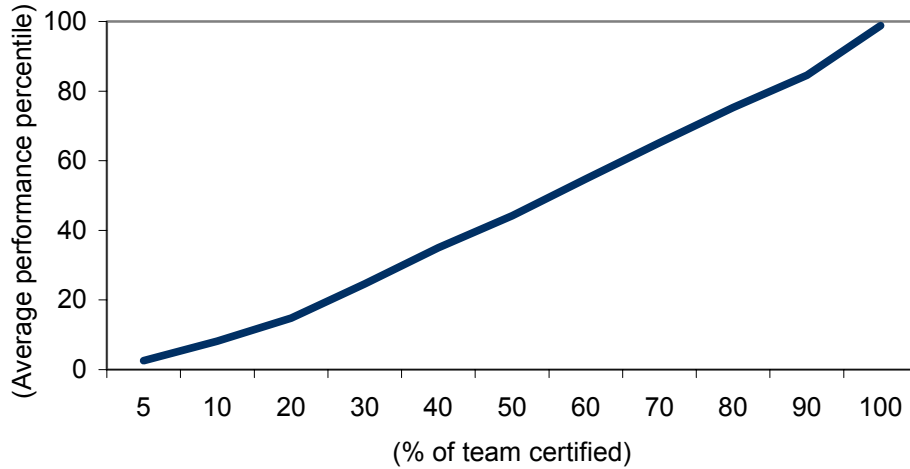
n = 5,534

Source: IDC's *Training Impact Survey,* 2008

Also impressive about these findings is that for each major function examined —
development, deployment, management, support, storage, and security — the impact
was the same. The impact as reflected in the curves changes somewhat, but overall,
the value of each additional certification improves team performance. As an example,
Figure 3 illustrates the difference in impact between security and database
administration functions.

FIGURE 3

Relationship Between Performance and Percentage of Team
Certified Covering Security and Database Administration
Functions

Security functions (n = 652)
Database administration functions (n = 450)
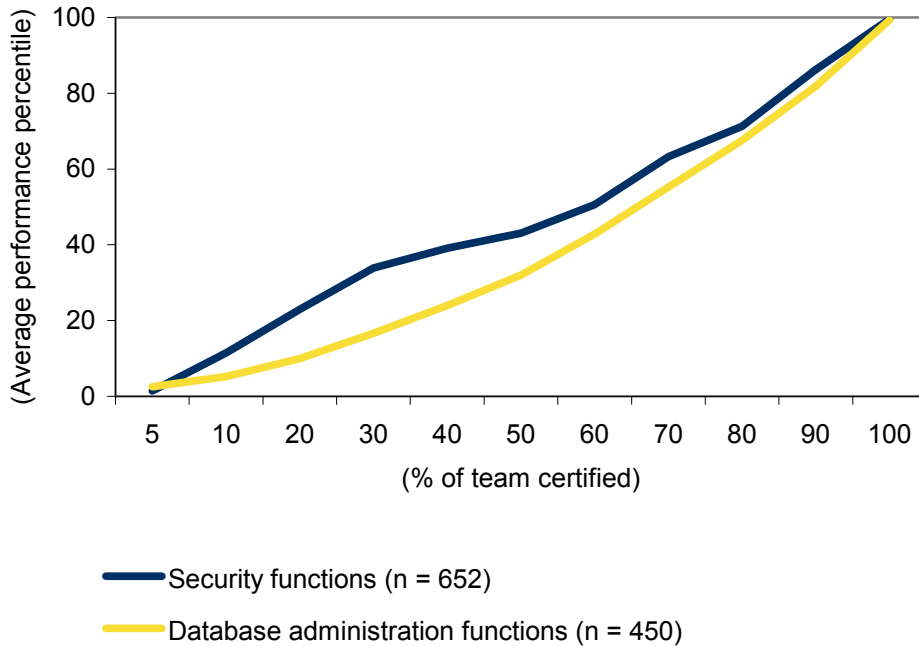
Source: IDC's *Training Impact Survey,* 2008

These data point to the conclusion that general excellence comes from functional
capabilities; without specific functional capabilities, teams can't deliver generalized
results. Functional certification represents a meaningful way to measure a team's
ability to contribute to improved achievements relative to alignment with the seven
targets most IT organizations keep in their sights.

In responses to IDC surveys, 66% of managers believe certifications improve the
overall level of service and support offered to IT end users/customers. Similarly, 75%
say certifications are important to team performance. From a quantitative standpoint,
the research shows that with a sufficient percentage of team members certified, IT
organizational performance can increase by up to an average of 11 percentage
points.

Certification Helps Achieve Business Goals

Quantitative evidence indicates that the greater the percentage of certification, the
better the team performs. Results showing organizations with 40–55% of their team
members certified performed above the average of all organizations. Managers can
use that as a rough benchmark to measure the team's ability to achieve high
performance.

Unequivocally, this research demonstrates that for each new team member certified, team performance increases. This research concludes that:

☑ Team skill is directly responsible for organizational performance.

☑ Concentration of certifications in a team is clearly linked to team capability and performance.

☑ To achieve "top tier" performance, organizations should strive for most of the team to be certified in relevant technologies and processes.
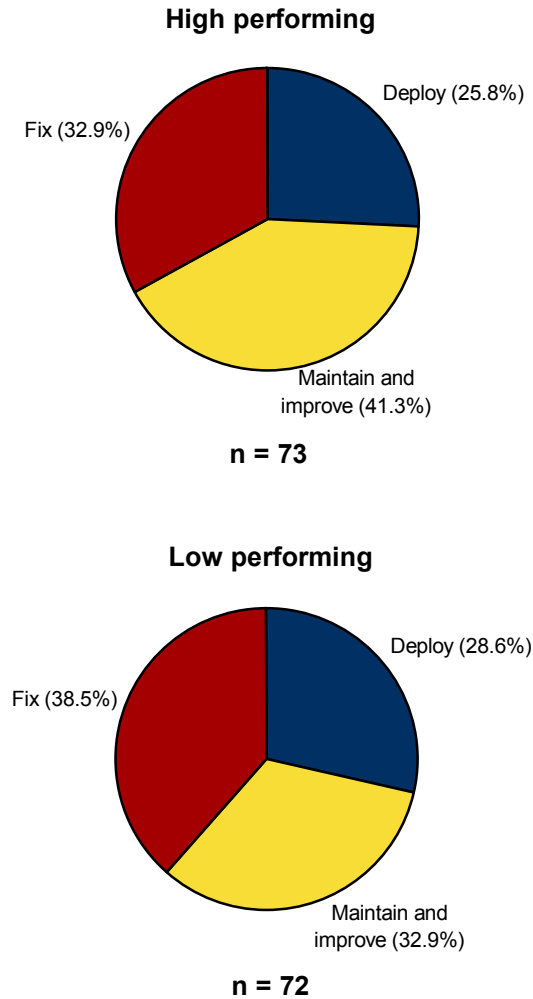
Skill Improves Productivity

Productive teams spend more time on important activities that directly support and enable an organization's primary mission and business objectives. IDC summarized several significant activities performed by five types of IT functional teams into three major activities: deploy, maintain, and improve or fix.

IDC found high-performing teams spend a greater portion of their workdays "maintaining and improving" technology and solutions and a smaller portion of time "fixing" broken tools or processes. Research also found high-performing teams spend less time "deploying" solutions than low-performing teams (see Figure 4).

Comparison of High- and Low-Performing Teams: Allocation
of Time

High performing

Fix (32.9%)

Deploy (25.8%)

Maintain and
improve (41.3%)

n = 73

Low performing

Fix (38.5%)

Deploy (28.6%)

Maintain and
improve (32.9%)

n = 72

Note: Teams spend an average of 191 hours per month on these activities.

Source: IDC's *Training Impact Survey,* 2008

Even when examining specific, important information security and availability
functions, we found the difference in the allocation of time between high- and low-
performing teams to be significant. In more detail:

☑ High-performing archiving and retrieval teams spend 28% less time "fixing"
problems.

☑ High-performing client management teams spend 12% less time "fixing"
problems.

- ☑ High-performing data and backup recovery teams spend 21% less time "fixing" problems.

- ☑ High-performing teams that focus on high-availability solutions spend 10% less time "fixing" problems.

- ☑ Even teams managing endpoint security solutions, which are by nature primarily reactive to threats and intrusions, are able to better allocate their time and have 20% more time to spend helping end users.

Design and Sources of Certification

Certification represents a formal testament to an IT professional's skills in a particular domain or technology. To design a reliable and informative certification, the certification sponsor, often the technology vendor, attempts to isolate particular skills and behaviors that improve (or hinder) performance with product or job role. Sponsors or vendors develop a test that reliably predicts the test taker's ability to carry out those skills and behaviors. Team members that demonstrate proficiency levels high enough to pass the test receive certification. That certification represents a skill level that is intended to contribute to improved team performance. IDC research confirms this conclusion.

Certifications that include practical, hands-on examinations as well as training wherever the skills are required ensure that skills are credible. Therefore, software vendors such as Microsoft and Red Hat as well as hardware manufacturers like Cisco, HP, and EMC offer hands-on training and performance-based testing to increase the relevance and applicability of the acquired skills.

FUTURE OUTLOOK

Training will remain the key enabler to technology utilization and IT organization success. Certification, as the measure of competence, will remain an important element in assuring IT managers that their team has the skills necessary to appropriately develop, deploy, manage, secure, and support business-critical technology.

Training and Certification Are Both Important

This research suggests that about 25% of IT professionals hold some form of relevant certification in their area. However, less than 10% of training annually is focused on preparing IT professionals for certification exams.

Whether preparing for an exam or being trained to operate a new piece of technology, training will represent the best way to maximize the value of the technology deployed in an organization. Certifications on rigorous and meaningful bodies of knowledge or training focused on key activities of success deliver tremendous value to organizational success. Using both training and certification as a component of talent development affects an IT department's ability to improve:

- ☑ Risk management

- ☑ Use of standards

- ☑ IT employee productivity

Worldwide IT Certification Market

Worldwide IT certification training and testing will grow at a compound annual growth rate (CAGR) of 5.2% from 2007 to 2012. Certification areas in emerging technologies continue to gain in popularity. These include wireless integration, VoIP, RFID, and network security.

Technology vendors and certification sponsors are beginning to market certifications as helping enterprises maximize the value of IT investments. Teams with a higher percentage of certified members outperform teams with fewer certified members.

Regionally, the Americas region, composed of Canada, the United States, and Latin America, represents the largest IT certification market — primarily because it also consumes the most technology.

EMEA represents the fastest-growing region, with a projected growth rate of 5.6% over the forecast period.

Drivers of growth of the IT certification market in the Americas and EMEA continue to be based on the requirements by employers for employee certifications, the value that these certifications hold in the marketplace, and the emerging technologies and related certifications.

APAC remains the smallest market, with a five-year CAGR of 4.4%. As the IT market shifts east, so will the demand for certification and certification training services. Several certification sponsors and training providers continue to report strong certification traction in India, China, Japan, and Korea.

ESSENTIAL GUIDANCE

IDC believes that certifications representing rigorous and meaningful bodies of knowledge are tremendously valuable to organizational success. Simultaneously, the use of certifications as a component of talent development processes will be critical to IT departments meeting the four essential priorities listed above.

Organizations that include certifications as components of the IT staff development programs will see benefits, including risk mitigation and staff efficiencies, as a result of the achievement of the underlying skills the certifications measure.

IDC recommends that IT managers consider their overall performance goals and business objectives to determine if team performance would increase with additional skills. If team performance is important, IDC recommends that IT managers leverage training to certify team members and use that as an effective way to increase organizational performance.

Further, IDC recommends that IT technology vendors increasingly develop strong training programs to help clients maximize the benefits received from their technologies. Not only will this increase their clients' operational success, but it will create loyal, skilled consumers of more technology.

LEARN MORE

Related Research

- ☑ *Worldwide and U.S. IT Education and Training 2008–2012 Forecast Update: Picture Is Clearer and Bleak* (IDC #214700, November 2008)

- ☑ *Worldwide and U.S. Business Process Outsourcing 2008–2012 Forecast: Market Opportunities by Horizontal Business Process* (IDC #214605, November 2008)

- ☑ *Worldwide and U.S. IT Certification Training and Testing 2008–2012 Forecast* (IDC #213828, August 2008)

- ☑ *Worldwide Virtualization Services Spending 2007–2012 Forecast* (IDC #213781, August 2008)

- ☑ *Worldwide and U.S. Corporate eLearning 2008–2012 Forecast* (IDC #212589, June 2008)

- ☑ *IDC's Worldwide Corporate Education Taxonomy, 2008: Framework and Research Guide* (IDC #212334, June 2008)

- ☑ *11 Wishes for Learning Systems: Learnings from Learning Systems 2008* (IDC #212329, May 2008)

- ☑ *Worldwide and U.S. IT Education and Training 2008–2012 Forecast: Growth Though Situation Tenuous* (IDC #211332, March 2008)

- ☑ *IDC MarketScape: Worldwide IT Education and Training 2008 Vendor Analysis* (IDC #209799, December 2007)

Appendix: Functional Domains Covered

IDC has surveyed more than 800 IT managers responsible for more than 2,000 teams. The survey's focus was to uncover the relationship between training, certification, and functional performance on more than 80 different IT performance metrics in 26 functional domains (see Table 1).

TABLE 1

IT Functions Covered

Deployment	Management	Development	Support	Security	Storage
Business application rollout (ERP, messaging, etc.)	Automated asset management	Application development	End-user systems/software	Endpoint security	Archiving and retrieval
Install or change network and system management software	Business and disaster recovery planning	Database development	High availability servers/ infrastructure	Network Security	Backup and recovery
IT consolidation	Client management	Web applications	IT help desk		Storage management
Messaging and collaboration	Compliance management				
Operating system migration	Information life-cycle management				
Operating system upgrade	Network systems and software				
Print servers (shared print services)	Server/network system administration				
Server virtualization (Unix, Linux, Microsoft, and other)					

Source: IDC's *Training Impact Survey,* 2008

The functional domains covered the following IT activities:

☑ Deployment

☑ Development

☑ Management

☑ Security

☑ Storage

☑ Support

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