HR Perceptions of IT Training and Certification

February 2015
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About this Research

CompTIA’s HR Perceptions of IT Training and Certification was conducted to further explore how employers perceive and use certifications, more specifically from the human resources (HR) point of view. The objectives of this research include:

• Assess employer understanding and perceptions of professional certifications
• Evaluate how certifications are used in the hiring process
• Assess how certifications factor into advancement opportunities and career development
• See how perceptions compare to past findings

The study consists of four sections.

Section 1: Hiring Overview
Section 2: Certification Awareness and Usage
Section 3: Value of Certification
Section 4: Organizational Support for Professional Development

This quantitative study consisted of an online survey fielded to HR executives, managers and professionals in the U.S.* during September 2014. CompTIA employed the services of a dedicated research panel provider to procure the sample. A total of 400 organizations participated in the survey, yielding an overall margin of sampling error at 95% confidence of +/-4.9 percentage points.

Sampling error is larger for subgroups of the data. As with any survey, sampling error is only one source of possible error. While non-sampling error cannot be accurately calculated, precautionary steps were taken in all phases of the survey design, collection and processing of the data to minimize its influence.

CompTIA is responsible for all content contained in this report. Any questions regarding the study should be directed to CompTIA Research & Market Intelligence staff at research@compia.org.

CompTIA is a member of the Marketing Research Association (MRA) and adhere’s to the MRA’s Code of Marketing Research Ethics and Standards.

*See Appendix for Respondent Profile details
Key Summary Points

• The Association for Talent Development (ATD, formerly known as ASTD) estimates that organizations in the U.S. spent $164.2 billion on employee learning and development in 2012, up from $156 billion in 2011. Note: this figure includes expenditures on things such as operations, trainer salaries, and administrative costs. More than half ($100.2 billion) was spent on the internal learning function, such as staff salaries and internal development costs, with the remaining allocated toward external services such as workshops, vendors, and external training sessions ($46 billion) and tuition reimbursement ($18 billion). It also found that U.S. organizations spent $1,195 per learner on employee training and development in 2012, slightly up from the $1,182 reported in 2011.

• Regarding the IT education market size, IDC pegs this U.S. market at about $6.5 billion for 2014. This includes vendor training (training provided by Microsoft, Cisco, etc.) and training offered by for-profit training companies.*

• Finding the right candidate to fill job openings continues to pose a challenge for a great majority of HR managers (93% NET). About two-thirds found the task very challenging over the past 12 months (68%); even higher among small-size organizations (83% for those with 5-99 employees). However, likely due to sheer numbers, large employers (500 or more employees) are more often impacted by factors such as finding candidates with the right level of experience or right “hard” skills. Nonetheless, the adverse effects caused by hiring delays are typically unwelcomed by organizations of any size.

• Most employers report frequently using IT certification as a requirement for certain jobs (72%), professional development / training tool (72%), measure of a candidate’s willingness to work hard and meet a goal (67%), and to confirm subject matter knowledge and expertise (60%).

Key Summary Points Cont.

• HR executives increasingly recognize the value of IT certification. For instance, nearly two-thirds indicate IT certifications are very valuable (66%) compared to only 30% three years ago. Their outlook of IT certification importance has risen as well, as 94% NET expect it to grow significantly (43%) or somewhat (51%) over the next two years, an increase from 84% NET a few years ago (32% and 52%, respectively). Additionally, they place a higher value on IT certifications vs. certifications in general (66% vs. 53% very valuable, respectively).

• Benefits HR professionals realize of having IT job candidates with IT certification include saving time and resources in evaluating candidates, ensuring credibility, providing a baseline set of knowledge, and learning faster once starting a job. Reported benefits of having certified IT employees include longer retention, higher likelihood of being promoted, and better job performance than non-IT certified staff.*

• Furthermore, most HR managers believe it is important to test after training to confirm knowledge gains (88% NET). And nearly all (98%) cite at least one specific benefit of certification testing rather than training by itself such as a better validation of knowledge learned / skills, increased value / credibility of the training, increased / improved knowledge, demonstration of abilities / skills, and knowledge retained for a longer period of time.

• Organizations are fairly split on their level of support for employee professional development. Nearly half have a formal professional development program with a set amount of budget for it (47%), while another 46% of employers indicate professional development is handled on a more informal basis, but they cover some expenses. The remaining either recommend it without covering expenses (5%) or provide no support (2%).

• Again, nearly all employers (98%) recommend at least one type of training for IT employees to improve their IT skills. While half of HR managers report instructor-led training (ILT) off-site is encouraged, a mix of others are recommended by at least one-third such as ILT on-site (39%), conferences (36%), IT certification (34%), and tuition reimbursement (33%). Large firms (500 or more employees) are much more likely to recommend IT certification (63%) than their smaller counterparts or even other training methods.

*See IDC white paper for more data: IT Support and Security Performance: The Impact of CompTIA Certification on Organizational Performance http://www.comptia.org/resources/the-impact-of-comptia-certification
Section 1: Hiring Overview
Most HR Professionals Report Experiencing Challenges in Filling Job Openings

About 9 in 10 (93% NET) found it challenging to fill openings with the right candidates over the past 12 months.

Level of Difficulty in Finding Right Candidates Over the Past 12 Months

- Very Challenging: 68%
- Somewhat Challenging: 25%
- Manageable: 7%

Smaller organizations are much more likely than their large-size counterparts (500+) to have difficulty in filling openings with the right candidates.

Very Challenging:
- 83% Small (5-99 employees)
- 64% Medium (100-499 employees)
- 49% Large (500+ employees)

Source: CompTIA’s HR Perceptions of IT Training and Certification study
Base: 400 U.S. HR professionals
## Large Organizations Are Especially Impacted by Hiring Challenges

<table>
<thead>
<tr>
<th>Challenges Organizations Face in Filling Openings with the Right Candidates</th>
<th>Overall</th>
<th>Small 5-99 employees</th>
<th>Medium 100-499 employees</th>
<th>Large 500+ employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finding candidates with the right level of experience</td>
<td>44%</td>
<td>35%</td>
<td>45%</td>
<td>57%</td>
</tr>
<tr>
<td>Finding candidates with the right “hard” skills</td>
<td>37%</td>
<td>31%</td>
<td>30%</td>
<td>52%</td>
</tr>
<tr>
<td>Pool of quality candidates in the local region</td>
<td>37%</td>
<td>32%</td>
<td>37%</td>
<td>43%</td>
</tr>
<tr>
<td>Filling openings in a timely manner</td>
<td>37%</td>
<td>24%</td>
<td>40%</td>
<td>53%</td>
</tr>
<tr>
<td>Finding candidates in the right salary range</td>
<td>36%</td>
<td>28%</td>
<td>29%</td>
<td>53%</td>
</tr>
<tr>
<td>Finding candidates with the right “soft” skills</td>
<td>36%</td>
<td>31%</td>
<td>27%</td>
<td>49%</td>
</tr>
<tr>
<td>Competing with large employers that can make more enticing offers</td>
<td>33%</td>
<td>29%</td>
<td>32%</td>
<td>41%</td>
</tr>
<tr>
<td>Costs associated with recruiting (e.g. job board fees, headhunters)</td>
<td>32%</td>
<td>28%</td>
<td>35%</td>
<td>35%</td>
</tr>
</tbody>
</table>

See CompTIA’s *IT Industry Outlook 2015* for staffing and skills data specific to U.S. IT companies where 43% NET report being understaffed. [http://www.comptia.org/resources/it-industry-outlook-2015](http://www.comptia.org/resources/it-industry-outlook-2015)

Source: CompTIA’s *HR Perceptions of IT Training and Certification study*  
Base: 400 U.S. HR professionals
Use of Emerging Hiring Tools / Resources on the Rise

Most companies report using a range of tools to help with recruiting, screening, or identifying candidates. As the data suggests, however, HR professionals have not fully embraced all available tools yet. Small firms (5-99 employees) frequently use social networks (60%) and diversity agencies (56%) at higher rates than larger companies. While medium firms (100-499) frequently use skills assessments (50%) much less than small and large firms (63% each).

<table>
<thead>
<tr>
<th>Tool</th>
<th>Not at All</th>
<th>Sometimes</th>
<th>Frequently</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skills assessment</td>
<td>4%</td>
<td>36%</td>
<td>60%</td>
</tr>
<tr>
<td>Applicant tracking system</td>
<td>7%</td>
<td>35%</td>
<td>59%</td>
</tr>
<tr>
<td>Intelligence or problem solving assessment</td>
<td>8%</td>
<td>38%</td>
<td>54%</td>
</tr>
<tr>
<td>Personality or work style assessment</td>
<td>6%</td>
<td>41%</td>
<td>53%</td>
</tr>
<tr>
<td>Diversity agency</td>
<td>11%</td>
<td>39%</td>
<td>51%</td>
</tr>
<tr>
<td>Social networks</td>
<td>9%</td>
<td>42%</td>
<td>49%</td>
</tr>
</tbody>
</table>

Source: CompTIA’s HR Perceptions of IT Training and Certification study
Base: 400 U.S. HR professionals
Section 2: Certification Awareness and Usage
HR Professionals Very Familiar with Certifications

Note: most survey respondents (92%) hold an HR certification such as SPHR, GPHR, PHR, or CPC

- Very familiar with certifications: 65%
- Mostly familiar: 29%
- Somewhat familiar, somewhat unfamiliar: 5%
- Not that familiar: 1%
- Not at all familiar: 1%

HR professionals with stronger familiarity tend to:
- Work at small or medium-size firms vs. large (500+ employees)
- Hold an HR certification themselves
- Value certification and IT certification more highly
- Believe it’s very important to test after training
- Be more likely to cite certification in job ads
- Have a formal professional development program at their firm

Source: CompTIA’s HR Perceptions of IT Training and Certification study
Base: 400 U.S. HR professionals
How IT Certifications Factor Into Hiring

Small firms (5-99 employees) especially often use IT certifications as a requirement for certain jobs (82%), professional development (80%), to measure willingness to work (82%), and to confirm subject matter expertise (65%). Whereas medium (100-499) and large (500+) firms use IT certifications more often to differentiate between candidates (37% and 55%, respectively), and as screening criteria (32% and 50%, respectively).

<table>
<thead>
<tr>
<th>Category</th>
<th>Rarely / Never</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirement for certain job roles</td>
<td>3%</td>
<td>26%</td>
<td>72%</td>
</tr>
<tr>
<td>Professional development / training tool</td>
<td>4%</td>
<td>24%</td>
<td>72%</td>
</tr>
<tr>
<td>Measure of a candidate’s willingness to work hard and meet a goal</td>
<td>6%</td>
<td>28%</td>
<td>67%</td>
</tr>
<tr>
<td>Confirming subject matter knowledge and expertise</td>
<td>3%</td>
<td>38%</td>
<td>60%</td>
</tr>
<tr>
<td>Differentiate between otherwise equally qualified candidates</td>
<td>4%</td>
<td>65%</td>
<td>32%</td>
</tr>
<tr>
<td>Screening or hiring criteria</td>
<td>4%</td>
<td>69%</td>
<td>27%</td>
</tr>
</tbody>
</table>

Source: CompTIA’s HR Perceptions of IT Training and Certification study
Base: 400 U.S. HR professionals
Most Companies Have IT Staff that Hold IT Certifications

At least half of the IT staff at responding organizations hold one or more IT certification (53% NET)

Percentage of IT Staff Holding at Least One IT Certification

- 40% for 75% or more
- 13% for 50%-74%
- 7% for 25%-49%
- 40% for Less than 25%

Medium (100-499 employees) and large-size (500+) organizations are more likely than their smaller counterparts (5-99) to have at least half of their IT staff certified.

Most commonly, IT Directors mandate or recommend IT certifications for candidates seeking IT jobs (57%). However, this will depend on company size (see next slide).

Source: CompTIA’s HR Perceptions of IT Training and Certification study
Base: 400 U.S. HR professionals
# IT Certification Decision Makers Depend on Firm Size

Nearly all firms (96%) have someone responsible for requiring / recommending IT certifications for candidates.

<table>
<thead>
<tr>
<th>Who Mandates or Recommends IT Certifications for <strong>Candidates</strong> Seeking IT Job Roles Within Company</th>
<th>Overall</th>
<th>Small 5-99 employees</th>
<th>Medium 100-499 employees</th>
<th>Large 500+ employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIO</td>
<td>34%</td>
<td>28%</td>
<td>46%</td>
<td>35%</td>
</tr>
<tr>
<td>IT Directors</td>
<td>57%</td>
<td>66%</td>
<td>48%</td>
<td>51%</td>
</tr>
<tr>
<td>IT Hiring Managers</td>
<td>32%</td>
<td>18%</td>
<td>38%</td>
<td>50%</td>
</tr>
<tr>
<td>Human Resources</td>
<td>28%</td>
<td>8%</td>
<td>30%</td>
<td>56%</td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
<td>--</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>IT certifications not mandated or recommended</td>
<td>4%</td>
<td>3%</td>
<td>4%</td>
<td>4%</td>
</tr>
</tbody>
</table>

Source: CompTIA’s HR Perceptions of IT Training and Certification study  
Base: 400 U.S. HR professionals
1 in 3 HR Professionals Indicate they **Definitely** Include IT Certification Requirements in Job Postings

- **Definitely**: 33%
- **Probably**: 56%
- **May or may not**: 9%
- **Probably will not**: 2%
- **Definitely will not**: 1%

**89% NET Likely**

Those who think certification will definitely be cited in upcoming job ads are at large firms (500+ employees), highly value certifications in general as well as IT certification and testing, and hold HR certification themselves.

See Appendix for IT jobs postings data

Source: CompTIA’s *HR Perceptions of IT Training and Certification* study
Base: 400 U.S. HR professionals
Reasons Given for Why IT Certifications Are Excluded or Overlooked in IT Job Postings

- It's up to the IT managers to specify which certifications are in the ad (40%)
- It’s more important to include other factors in the ad such as experience and degree (39%)
- Certifications are not included in the ad, but often discussed in the interview (37%)
- Confusion over which IT certifications to include / which ones are most relevant (28%)
- Don’t want to screen out too many candidates on the first pass (26%)
- No specific reason, it’s just not done / often an oversight (4%)
- Not sure (4%)

Top Recommendations to Enhance HR’s Understanding of IT Certifications:
- 49% Work more closely with IT managers
- 45% More information from groups like SHRM
- 39% More handy quick reference guides

From the perspective of HR

Source: CompTIA’s HR Perceptions of IT Training and Certification study
Base: 400 U.S. HR professionals
Other Types of Credentials Considered in Lieu of 4-Year Degree

In place of a bachelor’s degree, 98% of HR managers are willing to seriously consider other credentials / qualifications on a candidate’s resume for positions such as entry-level or staff.

- Significant amount of experience: 42%
- Certification from a reputable organization: 38%
- Internship or apprenticeship: 35%
- Two-year associate’s degree: 33%
- Skills listed: 31%
- Some college completed (no degree): 31%
- Professional association membership: 31%
- Multiple certifications: 28%
- None of the above / it’s company policy to require a bachelor’s: 2%

Source: CompTIA’s HR Perceptions of IT Training and Certification study
Base: 400 U.S. HR professionals

Large firms (500+ employees) seriously consider all of these credentials significantly more than their smaller counterparts. And medium firms (100-499) also favor certification, internship, and skills at higher rates than small firms (5-99 employees).
Section 3: Value of Certification
HR Values IT Certification Slightly More than Certifications in General

- **Very valuable**
  - IT Certifications: 66%
  - Certifications: 53%

- **Valuable**
  - IT Certifications: 27%
  - Certifications: 38%

- **Somewhat valuable, somewhat not valuable**
  - 6%

- **Not that valuable**
  - 1%

- **Not at all valuable**
  - 1%

*NET Valuable*
- IT: 93%
- General: 91%

HR managers in small (5-99 employees) and medium (100-499) firms value certifications in general somewhat more than those in larger (500+) organizations (92% and 93% vs. 86% NETS, respectively).

Source: CompTIA’s **HR Perceptions of IT Training and Certification** study
Base: 400 U.S. HR professionals
Value of IT Certification Increasing Over Time

From the perspective of HR

- **Very valuable**
  - 2014: 66%
  - 2011: 30%

- **Valuable**
  - 2014: 27%
  - 2011: 46%

- **Somewhat valuable, somewhat not valuable**
  - 2014: 6%
  - 2011: 23%

- **Not that valuable**
  - 2014: 1%
  - 2011: 1%

- **Not at all valuable**
  - 2014: 1%
  - 2011: 0%

*NET Valuable*
- 2014: 93%
- 2011: 76%

**IT certification used often:**
- 72% Requirement for certain job roles
- 72% Professional development/training
- 67% Measure of willingness to work hard & meet a goal
- 60% Confirm subject matter & expertise

Source: CompTIA’s HR Perceptions of IT Training and Certification study
Base: 400 U.S. HR professionals | 300 in 2011
Growing Importance of IT Certification

The great majority of HR managers expect IT certification to grow in importance over the next 2 years (94% NET), an increase by 10 percentage points over 2011 results (84% NET).

### IT Certification Importance Over Next 2 Years

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growing significantly in importance</td>
<td>32%</td>
<td>43%</td>
</tr>
<tr>
<td>Growing somewhat in importance</td>
<td>52%</td>
<td>51%</td>
</tr>
<tr>
<td>Flat or declining in importance</td>
<td>16%</td>
<td>6%</td>
</tr>
</tbody>
</table>

### Top Benefits of Testing vs. Training Only

- **98%** Cite one or more benefits to certification testing vs. training alone, such as:
  - Better validation of knowledge learned
  - Increases value/credibility of the training
  - Provides test taker with improved understanding of subject matter
  - Demonstrates test taker’s abilities

“It’s a good baseline validation of what was learned that can be looked at against employee’s performance post certification.”

Source: CompTIA’s HR Perceptions of IT Training and Certification study
Base: 400 U.S. HR professionals | 300 in 2011
## Reported Benefits of Having IT Certified Job Candidates

*From the perspective of HR*

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Not Sure / Never</th>
<th>Sometimes</th>
<th>Often</th>
<th>NET*</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT certifications help to ensure credibility of IT employees</td>
<td>3%</td>
<td>44%</td>
<td>48%</td>
<td>92%</td>
</tr>
<tr>
<td>IT certifications provide a baseline set of knowledge for certain IT positions</td>
<td>3%</td>
<td>49%</td>
<td>46%</td>
<td>95%</td>
</tr>
<tr>
<td>IT certifications enable IT employees to learn faster once starting a job</td>
<td>4%</td>
<td>46%</td>
<td>44%</td>
<td>90%</td>
</tr>
<tr>
<td>IT certifications save me time and resources in evaluating a potential IT job candidates</td>
<td>3%</td>
<td>50%</td>
<td>41%</td>
<td>91%</td>
</tr>
<tr>
<td>IT-certified individuals receive higher starting salaries than those without IT certifications</td>
<td>3%</td>
<td>54%</td>
<td>38%</td>
<td>92%</td>
</tr>
</tbody>
</table>

*Source: CompTIA’s HR Perceptions of IT Training and Certification study  
Base: 400 U.S. HR professionals*
Reported Benefits of Having IT Certified Employees

From the perspective of HR:

1. IT-certified employees are more likely to stay with our organization than non-IT certified staff:
   - Not Sure: 6%
   - Rarely / Never: 47%
   - Sometimes: 42%
   - Often: 89%

2. IT certified individuals tend to perform better than non-IT certified individuals in similar IT job roles:
   - Not Sure: 8%
   - Rarely / Never: 47%
   - Sometimes: 42%
   - Often: 89%

3. IT-certified employees are rewarded (via e.g. bonus, pay increase) for obtaining IT certification:
   - Not Sure: 9%
   - Rarely / Never: 47%
   - Sometimes: 41%
   - Often: 88%

4. IT-certified individuals are more likely to be promoted than those without IT certifications:
   - Not Sure: 7%
   - Rarely / Never: 52%
   - Sometimes: 38%
   - Often: 90%

Source: CompTIA’s HR Perceptions of IT Training and Certification study
Base: 400 U.S. HR professionals

*Sometimes + Often
NET 88% of HR Professionals Believe It Is Important to Test After Training to Confirm Knowledge Gains

Overall Importance

- Very Important: 41%
- Somewhat Important: 47%
- Not that Important: 12%

Importance by Company Size

- Small (1-99 employees):
  - Very Important: 26%
  - Somewhat Important: 54%
  - Not that Important: 20%

- Medium (100-499):
  - Very Important: 48%
  - Somewhat Important: 48%
  - Not that Important: 5%

- Large (500+):
  - Very Important: 60%
  - Somewhat Important: 34%
  - Not that Important: 6%

Source: CompTIA’s HR Perceptions of IT Training and Certification study
Base: 400 U.S. HR professionals
Main Benefits of Certification Testing vs. Training Alone

Nearly all HR executives (98%) recognize one or more benefits to certification testing versus only training:

- Provides a better validation of knowledge learned/skills: 40%
- Increases the value/credibility of the training: 36%
- Provides test takers with improved/better/more knowledge/understanding of the subject matter: 34%
- Demonstrates test taker’s abilities/skills: 33%
- Certification can be used for external sales & marketing purposes: 31%
- Test taker’s knowledge is retained for a longer period of time: 31%
- None of the above: 2%

Source: CompTIA’s HR Perceptions of IT Training and Certification study
Base: 400 U.S. HR professionals
## Reported Benefits of IT Certifications by Company Size

**From the perspective of HR**

<table>
<thead>
<tr>
<th>Main Benefits of Certification Testing Versus Training Alone</th>
<th>Small 5-99 employees</th>
<th>Medium 100-499 employees</th>
<th>Large 500+ employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provides a better validation of knowledge learned/skills</td>
<td>25%</td>
<td>45%</td>
<td>59%</td>
</tr>
<tr>
<td>Increases the value/credibility of the training</td>
<td>23%</td>
<td>32%</td>
<td>60%</td>
</tr>
<tr>
<td>Provides test takers with improved/better/more knowledge/understanding of the subject matter</td>
<td>24%</td>
<td>42%</td>
<td>42%</td>
</tr>
<tr>
<td>Demonstrates test taker’s abilities/skills</td>
<td>24%</td>
<td>31%</td>
<td>49%</td>
</tr>
<tr>
<td>Certification can be used for external sales &amp; marketing purposes</td>
<td>22%</td>
<td>31%</td>
<td>45%</td>
</tr>
<tr>
<td>Test taker’s knowledge is retained for a longer period of time</td>
<td>23%</td>
<td>29%</td>
<td>45%</td>
</tr>
<tr>
<td>None of the above</td>
<td>2%</td>
<td>1%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Source: CompTIA’s HR Perceptions of IT Training and Certification study
Base: 400 U.S. HR professionals
# Top Benefits of Performance-Based Testing

Nearly all HR managers (98%) realize one or more benefits to performance-based certification testing, especially in large organizations.

<table>
<thead>
<tr>
<th>Primary Benefits of Performance-Based Certification Tests</th>
<th>Overall</th>
<th>Company Size (# of employees)</th>
<th>Percentage of IT Staff Certified</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Small 5-99</td>
<td>Medium 100-499</td>
</tr>
<tr>
<td>Demonstrate test taker’s hands-on/real world ability/skills (vs. memorization/test taking ability)</td>
<td>42%</td>
<td>33%</td>
<td>44%</td>
</tr>
<tr>
<td>Provide a better validation of knowledge/skills vs. multiple-choice questions only</td>
<td>41%</td>
<td>33%</td>
<td>41%</td>
</tr>
<tr>
<td>Provide test takers with improved/better knowledge/understanding of the subject matter</td>
<td>40%</td>
<td>28%</td>
<td>45%</td>
</tr>
<tr>
<td>Increases the value/credibility of the certification</td>
<td>40%</td>
<td>25%</td>
<td>37%</td>
</tr>
<tr>
<td>None of the above</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Source: CompTIA’s HR Perceptions of IT Training and Certification study
Base: 400 U.S. HR professionals
Section 4: Organizational Support for Professional Development
Organizations with formal professional development programs are more likely to be large (500+ employees), more than half of their IT staff certified, view both certifications in general and IT certification as very valuable, cite certification in job ads, and rate testing after training as very important.

- Formal program / set budget
- Informal basis / cover some expenses
- Other / None
HR Typically Responsible for Professional Development Budget

<table>
<thead>
<tr>
<th>Department Primarily Responsible for the Professional Development Budget</th>
<th>Overall</th>
<th>Small 5-99 employees</th>
<th>Medium 100-499 employees</th>
<th>Large 500+ employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Resources</td>
<td>55%</td>
<td>46%</td>
<td>64%</td>
<td>63%</td>
</tr>
<tr>
<td>Training</td>
<td>27%</td>
<td>32%</td>
<td>22%</td>
<td>24%</td>
</tr>
<tr>
<td>Administration, Operations or Executive</td>
<td>14%</td>
<td>20%</td>
<td>10%</td>
<td>9%</td>
</tr>
<tr>
<td>Finance / Accounting</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Other functional departments, e.g. IT, Marketing</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Source: CompTIA’s HR Perceptions of IT Training and Certification study
Base: 345 U.S. HR professionals at firms with a set budget for professional development or cover some expenses
Most Employees Rate Professional Development an Important Value-Add from Their Employer

About 7 in 10 HR professionals believe employees at their organization view professional development as an important benefit and/or important to their career path in comparison to other employment benefits.

- Near the top - viewed as very important: 17%
- Upper tier: 54%
- Mid-level: 28%
- Lower tier: 1%
- Near the bottom - viewed as not that important: 1%

Importance rates higher within companies that have formal professional development policies. From the employees’ point of view, other CompTIA research shows that IT staff want more professional development support and career path resources.

Source: CompTIA’s HR Perceptions of IT Training and Certification study
Base: 400 U.S. HR professionals
Nearly All Companies Require Some Type of Employee Education / Training

Large firms (500+ employees) tend to require training at higher rates than small (5-99) and medium (100-499) firms. Approximately 1 in 3 companies report requiring cybersecurity awareness training among staff.

- HR-related (e.g. harassment, sensitivity, personality): 45%
- Operations-related (e.g. workplace safety): 42%
- Software-related (e.g. desktop software, CRM): 38%
- Cybersecurity awareness (e.g. password best practices, data safeguards): 36%
- Communications or team building-related: 34%
- Career growth: 23%
- None of the above: 4%

Source: CompTIA’s HR Perceptions of IT Training and Certification study
Base: 400 U.S. HR professionals
Types of IT Training Encouraged for IT Staff

Nearly all organizations (98%) recommend at least one type of training/professional development for IT staff to improve their IT skills.

- Instructor-led training class off-site: 50%
- Instructor-led training class on-site: 39%
- Conferences: 36%
- IT certification: 34%
- College tuition reimbursement: 33%
- Online / self-directed training or education: 20%
- Webinars: 13%
- None of the above: 2%

See Appendix for primary training methods diagram.

Source: CompTIA’s HR Perceptions of IT Training and Certification study
Base: 400 U.S. HR professionals
## IT Staff Training Types Recommended by Firm Size and Level of Support

From the perspective of HR

<table>
<thead>
<tr>
<th>Type of Training Encouraged for IT Staff</th>
<th>Company Size (# of employees)</th>
<th>Professional Development Support</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Small 5-99</td>
<td>Medium 100-499</td>
</tr>
<tr>
<td>Instructor-led training class off-site</td>
<td>45%</td>
<td>50%</td>
</tr>
<tr>
<td>Instructor-led training class on-site</td>
<td>29%</td>
<td>39%</td>
</tr>
<tr>
<td>Conferences</td>
<td>30%</td>
<td>31%</td>
</tr>
<tr>
<td>IT certification</td>
<td>15%</td>
<td>32%</td>
</tr>
<tr>
<td>College tuition reimbursement</td>
<td>19%</td>
<td>36%</td>
</tr>
<tr>
<td>Online / self-directed training or education</td>
<td>9%</td>
<td>11%</td>
</tr>
<tr>
<td>Webinars</td>
<td>3%</td>
<td>13%</td>
</tr>
<tr>
<td>None of the above</td>
<td>2%</td>
<td>4%</td>
</tr>
</tbody>
</table>

Source: CompTIA’s HR Perceptions of IT Training and Certification study
Base: 400 U.S. HR professionals
IT Directors Frequently Take the Lead in Pushing for IT Training or Certification for IT Staff

Nearly all firms (97%) require / recommend IT training or certification support for IT employees

<table>
<thead>
<tr>
<th>Who Mandates or Recommends IT Training or Certification Support for IT Employees</th>
<th>Overall</th>
<th>Small 5-99 employees</th>
<th>Medium 100-499 employees</th>
<th>Large 500+ employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIO</td>
<td>35%</td>
<td>29%</td>
<td>44%</td>
<td>37%</td>
</tr>
<tr>
<td>IT Directors</td>
<td>60%</td>
<td>61%</td>
<td>56%</td>
<td>62%</td>
</tr>
<tr>
<td>IT Managers</td>
<td>31%</td>
<td>19%</td>
<td>31%</td>
<td>49%</td>
</tr>
<tr>
<td>Human Resources</td>
<td>25%</td>
<td>4%</td>
<td>33%</td>
<td>52%</td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
<td>0%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>IT certifications not mandated or recommended</td>
<td>3%</td>
<td>3%</td>
<td>4%</td>
<td>3%</td>
</tr>
</tbody>
</table>

Source: CompTIA’s HR Perceptions of IT Training and Certification study
Base: 400 U.S. HR professionals
Support Provided to IT Staff for IT Certifications

Most companies (97%) provide some type of support for IT employees obtaining IT certification.

**Types of Support Provided to IT Staff Pursuing IT Certification**

- **37%** Provide training at work
- **36%** Pay for all certification expenses
- **36%** Pay for all training expenses
- **34%** Offer paid time-off for taking the exam
- **31%** Offer paid time off for studying/training
- **3%** None of the above

Large firms (500+ employees) offer all of these types of support, with the exception of paid time-off, more than small (5-99) and medium (100-499) firms. Also, medium firms are more likely than small to pay for all certification fees.

**Average Amount Company Pays IT Employee Annually for IT Training and/or Certification Expenses**

- **25% NET**
  - < $2,000
- **75% NET**
  - > $2,000

**Source:** CompTIA’s HR Perceptions of IT Training and Certification study

Base: 400 U.S. HR professionals | 188 who pay for all training or certification fees
Despite the Threat Level Growth of Cybersecurity, Only 1 in 3 HR Professionals Report Providing Cybersecurity Awareness Training to Staff

- Required
- Not Required

Cybersecurity awareness training is primarily conducted internally

- 57% Internally, with internal materials
- 20% Third-party trainer, with third-party materials
- 22% Combination of the above

Small firms (5-99 employees) are more likely to rely on third-party trainers than their larger counterparts.

Source: CompTIA’s HR Perceptions of IT Training and Certification study
Base: 400 U.S. HR professionals | 126 who conduct cybersecurity awareness training
# Cybersecurity Awareness Training Is Driven Equally by Compliance Needs and Safeguard Needs

<table>
<thead>
<tr>
<th>Primary Reason Why Cybersecurity Awareness Training is Conducted</th>
<th>Overall</th>
<th>Small 5-99 employees</th>
<th>Medium 100-499 employees</th>
<th>Large 500+ employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compliance</td>
<td>29%</td>
<td>50%</td>
<td>18%</td>
<td>24%</td>
</tr>
<tr>
<td>Safety / protect the company</td>
<td>24%</td>
<td>38%</td>
<td>29%</td>
<td>12%</td>
</tr>
<tr>
<td>Both</td>
<td>47%</td>
<td>12%</td>
<td>53%</td>
<td>64%</td>
</tr>
</tbody>
</table>

The CIO / head of IT is the primary decision maker about cybersecurity awareness training (54%)

38% HR
2% CEO / president
6% Joint decision among senior leadership

Source: CompTIA’s *HR Perceptions of IT Training and Certification* study
Base: 127 U.S. HR professionals at firms with cybersecurity awareness training
## Respondent Profile

All respondents are in HR roles and located in the U.S.

### Staff Size

<table>
<thead>
<tr>
<th>Staff Size</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 to 9</td>
<td>5%</td>
</tr>
<tr>
<td>10 to 49</td>
<td>15%</td>
</tr>
<tr>
<td>50 to 99</td>
<td>25%</td>
</tr>
<tr>
<td>100 to 499</td>
<td>25%</td>
</tr>
<tr>
<td>500 to 999</td>
<td>15%</td>
</tr>
<tr>
<td>1,000+</td>
<td>15%</td>
</tr>
</tbody>
</table>

### Types of Job Openings Over Past 12 Months

<table>
<thead>
<tr>
<th>Job Opening Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT or web design</td>
<td>90%</td>
</tr>
<tr>
<td>Operations</td>
<td>87%</td>
</tr>
<tr>
<td>Sales or marketing</td>
<td>81%</td>
</tr>
<tr>
<td>Finance or accounting</td>
<td>81%</td>
</tr>
<tr>
<td>Other type of staff openings</td>
<td>65%</td>
</tr>
<tr>
<td>Not applicable – none during past year</td>
<td>2%</td>
</tr>
</tbody>
</table>

### Job Title

<table>
<thead>
<tr>
<th>Job Title</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR Vice President</td>
<td>65%</td>
</tr>
<tr>
<td>HR Director</td>
<td>17%</td>
</tr>
<tr>
<td>HR Manager</td>
<td>9%</td>
</tr>
<tr>
<td>HR Specialist</td>
<td>3%</td>
</tr>
<tr>
<td>HR Consultant</td>
<td>3%</td>
</tr>
<tr>
<td>Other HR role</td>
<td>3%</td>
</tr>
</tbody>
</table>

### How HR Function is Handled

<table>
<thead>
<tr>
<th>Handling Method</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR department / HR staff</td>
<td>97%</td>
</tr>
<tr>
<td>Other (e.g. CEO, consultant)</td>
<td>3%</td>
</tr>
</tbody>
</table>

### HR Certification/s Held

<table>
<thead>
<tr>
<th>Certification Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior Professional in HR (SPHR)</td>
<td>53%</td>
</tr>
<tr>
<td>Global Professional in HR (GPHR)</td>
<td>46%</td>
</tr>
<tr>
<td>Professional in HR (PHR)</td>
<td>41%</td>
</tr>
<tr>
<td>Certified Personnel Consultant (CPC)</td>
<td>27%</td>
</tr>
<tr>
<td>Certified Temporary-Staffing Specialist (CTS)</td>
<td>8%</td>
</tr>
<tr>
<td>Other certification</td>
<td>1%</td>
</tr>
<tr>
<td>None – no HR certification held</td>
<td>8%</td>
</tr>
</tbody>
</table>

Source: CompTIA’s HR Perceptions of IT Training and Certification study  
Base: 400 U.S. HR professionals
## Number of IT Job Openings – Quarter over Quarter

Current quarter vs. same quarter last year

<table>
<thead>
<tr>
<th>ONET Code</th>
<th>Core IT Occupations</th>
<th># Postings Q4 2014</th>
<th># Postings Q4 2013</th>
<th># Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>11-3021.00</td>
<td>Computer &amp; Information Systems Managers</td>
<td>9,446</td>
<td>8,903</td>
<td>543</td>
<td>6%</td>
</tr>
<tr>
<td>15-1111.00</td>
<td>Computer &amp; Information Research Scientists</td>
<td>3,481</td>
<td>2,438</td>
<td>1,043</td>
<td>43%</td>
</tr>
<tr>
<td>15-1121.00-.01</td>
<td>Computer Systems Analysts &amp; Informatics Specialists</td>
<td>69,060</td>
<td>45,662</td>
<td>23,398</td>
<td>51%</td>
</tr>
<tr>
<td>15-1122.00</td>
<td>Information Security Analysts</td>
<td>19,710</td>
<td>11,381</td>
<td>8,329</td>
<td>73%</td>
</tr>
<tr>
<td>15-1131.00</td>
<td>Computer Programmers</td>
<td>37,749</td>
<td>23,147</td>
<td>14,602</td>
<td>63%</td>
</tr>
<tr>
<td>15-1132.00</td>
<td>Software Developers, Applications</td>
<td>116,367</td>
<td>142,972</td>
<td>-26,605</td>
<td>-19%</td>
</tr>
<tr>
<td>15-1133.00</td>
<td>Software Developers, Systems Software</td>
<td>18,548</td>
<td>18,139</td>
<td>409</td>
<td>2%</td>
</tr>
<tr>
<td>15-1134.00</td>
<td>Web Developers</td>
<td>25,219</td>
<td>26,507</td>
<td>-1,288</td>
<td>-5%</td>
</tr>
<tr>
<td>15-1141.00</td>
<td>Database Administrators</td>
<td>33,096</td>
<td>26,403</td>
<td>6,693</td>
<td>25%</td>
</tr>
<tr>
<td>15-1142.00</td>
<td>Network &amp; Computer Systems Administrators</td>
<td>31,793</td>
<td>28,459</td>
<td>3,334</td>
<td>12%</td>
</tr>
<tr>
<td>15-1143.00-.01</td>
<td>Computer Network Architects &amp; Telecom Engineers</td>
<td>9,209</td>
<td>10,167</td>
<td>-958</td>
<td>-9%</td>
</tr>
<tr>
<td>15-1151.00</td>
<td>Computer User Support Specialists</td>
<td>62,678</td>
<td>49,027</td>
<td>13,651</td>
<td>28%</td>
</tr>
<tr>
<td>15-1152.00</td>
<td>Computer Network Support Specialists</td>
<td>2,201</td>
<td>3,226</td>
<td>-1,025</td>
<td>-32%</td>
</tr>
<tr>
<td>15-1199.00 -.12</td>
<td>Computer Occupations, All Other</td>
<td>139,713</td>
<td>135,013</td>
<td>4,700</td>
<td>3%</td>
</tr>
<tr>
<td>17-2061.00</td>
<td>Computer Hardware Engineers</td>
<td>1,484</td>
<td>1,567</td>
<td>-83</td>
<td>-5%</td>
</tr>
<tr>
<td>49-2011.00</td>
<td>Computer, Automated Teller, &amp; Office Machine Repairers</td>
<td>1,639</td>
<td>1,409</td>
<td>230</td>
<td>16%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>581,393</strong></td>
<td><strong>534,420</strong></td>
<td><strong>46,973</strong></td>
<td><strong>9%</strong></td>
</tr>
</tbody>
</table>
Total Number of IT Job Openings – Year over Year

Source: Burning Glass Technologies Labor Insights, January 2015
Primary Training / Exam Preparation Methods

Note: This diagram is not meant to describe all the various types of training / tools, but rather display a simplified picture of primary training buckets & defining characteristics.

Instructor-Led
Student attends training conducted by a live instructor via:
• 3rd-party firm
• Internal staff
• Academic institution
Types:
• Classroom
• Online
• Mentored Learning

Self-Study
Learner studies on their own / No opportunity to interact with a live instructor
Tools:
• Book (textbook / eBook)
• Online / eLearning
• Video
• Virtual lab
• Practice test

Experience
Candidate relies on work or personal experience
Types:
• Professional / On-the-Job Training (OJT)
• Employment
• Internship
• Apprenticeship
• Personal

Other
Learner uses other informal training methods
Examples:
• Social media
• Study group
• Webcast / Webinar / Podcast
• Workshop / Seminar / Conference

Instructor-Led Training (ILT) & Self-Study CompTIA courses map to CompTIA certification objectives
Additional Resources

- CompTIA Insights and Tools: IT Workforce and HR
  http://www.comptia.org/insight-tools/business?tags=it%20workforce

- IDC IT Support and Security Performance: The Impact of CompTIA Certification on Organizational Performance
  http://www.comptia.org/resources/the-impact-of-comptia-certification

- CompTIA IT Industry Outlook 2015
  http://www.comptia.org/resources/it-industry-outlook-2015

- CompTIA Cyberstates 2015
  http://www.comptia.org/resources/2015-cyberstates

- Other CompTIA Research & Market Intelligence, for example:
  - Quarterly IT Industry Business Confidence Index
  - Military Career Path Study: Assessing the role of training and certifications
  - Information Security Trends
  - International Technology Adoption & Workforce Trends
  - Generational Research on Technology and its Impact in the Workplace
  - Youth Opinions of Careers in IT

- CompTIA premier members, partners & registered users can access research materials via:
  - CompTIA website http://www.comptia.org/insight-tools
  - CompTIA Partner Portal http://partners.comptia.org/delivery/research.aspx