Chapter 9

Identify Training and Awareness Methods

“Before you become too entranced with gorgeous gadgets and mesmerizing video displays, let me remind you that information is not knowledge, knowledge is not wisdom, and wisdom is not foresight. Each grows out of the other, and we need them all.”

— Arthur C. Clarke

“You don’t understand anything until you learn it more than one way.”

— Marvin Minsky

Adult Learning

Malcolm Knowles, one of the foremost authorities on adult learning, did considerable research on the most effective adult learning methods. He found that adult learning should follow four basic principles. With this in mind, you need to consider the types of training and awareness methods you may choose to best meet your education goals.
Readiness

Your training content should show the participants that the training will show them how to solve or avoid a problem, provide a chance for opportunity or increased status within the organization, and result in professional advancement or personal growth. To do this, you need to focus on the learners' needs and be able to answer one basic question each participant has: “What's in this training session for me?”

Sample Scenario

The group of participants is comprised of UNIX administrators. They are not happy to be in training, they have much work to do, and they believe that they already know everything there is to know about security. The topic of the training is configuring a CISCO PIX firewall router. Present them with the scenario of an active-network intruder attack. Ask them to demonstrate how they would react and what they would do.

Experience

Remember that your participants are coming into your training with prior experiences and knowledge, which will influence what they think about the training content. Some of this existing experience and knowledge will facilitate their learning, but keep in mind that it can also inhibit their learning as well. The more you consider the experience of your participants, the more effective is the learning outcome. With this in mind, be cognizant of the following points:

- If you treat your participants as though they have little or no experience when they really do, then you will probably insult them and lose their interest. Acknowledge that participants have experience, perhaps different from the topic but yet no less valuable.
- Help participants contribute not only to their own learning but to the learning of the others.
- Always remember that previous experiences can create a resistance to learning something new for similar topics.
- Check the backgrounds, aptitudes, attitudes, prerequisite skills, culture, and other related experiences of your participants. This will help ensure you do not aim your training either too high or too low.
- Use familiar language, examples, and references without being patronizing.
If you are covering a topic in which the participants have had bad experiences, let them know you are going into uncomfortable and possibly negative territory. This will demonstrate your empathy for their past experiences and help to diffuse any resistance they may have. It may also help prevent the situation from reoccurring.

Ask participants to share their examples and experiences. Not only will this make your session more interesting, you will also likely learn something new and useful.

Sample Scenario
In a training session with customer service personnel, ask which of the participants have had the experience of speaking to an irate customer with a complaint about a privacy or security issue. Ask how they handled the situation, what they learned from the experience, and what they would do differently if they had the chance to go through the experience again.

Autonomy
Adults will acquire knowledge and understand best if they are able to take charge of their own learning. Involve your participants. Allow them to contribute and actively participate. Provide instruction in a way that allows your participants to make their own decisions regarding the information you are giving them. Always treat your participants as the capable intelligent people they are; show your participants respect, and they will feel more in control of their own learning. Consider the following:

- Build many opportunities for participation into your training. Use exercises, hands-on exercises, case studies, games, discussions, brainstorming, etc. Such activities are discussed in detail in Chapter 13 and Chapter 16.
- Create your training so that participants have many opportunities to share their experiences, ideas, examples, and suggestions. The more they are allowed to contribute, the more they will feel ownership of their learning. Plus, the participation will help the learners to stay focused and pay attention.
- Reward and encourage independent ideas and innovations. This will prompt your participants to learn in ways that will enhance their learning experience.

Sample Scenario
In a training session with law department personnel and compliance officers, hold a brainstorming session to ask all the possible ways in which
the participants can try to keep up-to-date with all the new and emerging information security and privacy-related laws and requirements. List all the ideas on a flip chart. Copy and distribute to participants following the class.

**Action**

The participants want to use the training you give them to improve or alter their job performance. For them to buy into your training session, you need to focus immediately on the goals of learning within the session. You must show them how they will be able to take and put into action what you give them as soon as they go back to their jobs; otherwise, you will see their interest and attention decrease.

**Sample Scenario**

You have a training session filled with systems administrators. The topic is patch management. Cover the procedures and organizational expectations with the participants. Provide printed copies of the procedures for the participants to take with them. Review scenarios related to patch management. Consider dividing into teams and having a competition modeled on *Jeopardy* or *Concentration*, covering all aspects of patch management.

**Training Delivery Methods**

Educating with formal training is generally for those within the organization whose roles require special knowledge and following specific policies and procedures for addressing information security and privacy issues and events. Training is focused on providing knowledge, skills, and abilities specific to a person’s job responsibilities and roles. Training is a targeted, interactive event requiring the participant's full attention to benefit.

The size of your training groups may vary greatly. Large organizations may have as many as 50 personnel in a classroom-setting training session. However, for the most effective training, it is best to try to keep the number to 25 or less in this type of face-to-face training to promote the most interaction and also to help reduce side discussions and maintain attention. Another good option for training, especially for the initial all-employee sessions, is using a computer-based training (CBT) method, an online interactive method (such as a “Webinar”), or a conference call training session. The most effective delivery method will largely depend
on your target audience and the topic. Budget may also be an issue. Don’t purchase an inexpensive, poor quality option for a delivery method just to stay within budget. If you cannot afford quality, then choose an effective delivery method you can afford. Chapter 16 discusses delivering the training in detail primarily for in-person training, but many of the concepts can be carried into the other methods as well. The following are some methods for you to consider:

**General Lectures: Small- to Medium-Size Groups**

Lectures can be effective, if the topic is right, and if the length of the lecture is right. Because of the limited amount of information most people can take in at any one time, lectures are generally most effective if they last from 10 to 20 min. Any longer, and the learners will likely lose interest after they have reached their information overload limit. This amount of time works well for lunchtime training or during the day to keep work interruption to a minimum. Use lectures when there are just a few important, basic points you want to get across to your learners.

Consider using a lecture for hitting upon current and critical topics in which you want to be able to personally discuss the issues and gauge by the learners’ reactions the areas where you may need to expand or explain more. Some audiences who are good candidates for lectures include:

- Departmental members
- Team members
- Management
- Board members

**Auditorium Presentations to Large Groups**

Inviting guest speakers and presenters to your organization can be a very good way to communicate a message to a very large group and make it a special event. Such an event can be structured as a training session or as an awareness event. It all depends on whether the presentation topic is specific to one of your training goals, and you want to see the behavior of the participating learners changed as a result, or if you just want to raise awareness of a certain topic. However, a training session generally lends itself well to some learning goals and objectives. Giving such presentations is especially good for special information security-related days (see Appendix N for a list of designated privacy and security-related days).
Choosing a guest speaker who is a known authority on the topic is a good way to pull your learners into listening to the topic at hand. Consider inviting not only well-known information security and privacy experts but also:

- Politicians
- Local or national celebrities
- Law enforcement representatives
- Security or privacy experts from other companies
- Speakers from the NSA or the DoD (including military). They may be able to demonstrate nonclassified spy gadgets to whet the audience's appetite for the topic. Although some of the devices may not be relevant to the organization (small cameras and privacy), the devices will make the talk entertaining.

Good to consider for training:

- Large groups
- All employees
- Visitors from satellite offices

**Classroom**

Classroom training can be a very effective way to ensure that learners truly grasp the concepts and obtain proficiency in the topics being covered. The keys to successful classroom training include a well-planned instruction experience, including effective content and clear goals, and a great instructor who knows how to engage the learners as well as effectively and accurately communicate the topic details. Too often organizations try to quickly throw together a training class, with little or no thought about the training goals, audience, or topic, and ultimately end up with a disappointing session as well as disappointed participants.

Good to consider for training target groups who need to practice or participate in doing activities or procedures, or who potentially need much interaction and contact with the instructor, are topics such as:

- Call center and customer care
- Systems administrators
- Marketing and sales
- Human resources
- Public relations
CBT Modules

Because of the popularity of using CBT instruction, I want to go into a little more detail with this topic than some of the other topics. There are many different types of CBT modules, and many different potential costs involved. Developing your own modules and hiring your own staff can be quite an expensive venture, but may result in a module of very high quality and completely unique to your organization. If your training needs can be met using a more generic course for a common information security or privacy topic, though, you can probably obtain a very good off-the-shelf course for a fraction of the cost. For something in between, you can consider purchasing off-the-shelf material and then either modifying it yourself in-house or hiring a training-content specialist to modify it to meet your organization’s needs.

Probably the best reasons for using CBTs are that they allow learners to control their training schedules; facilitate easier distance learning; allow using technology to effectively address varying systems and times availability requirements; and allow for a way to centrally and automatically track learner participation and success with such training. They are also a good consideration when training will occur in a bilingual environment or in non-English-speaking countries.

There are a growing number of information security and privacy CBT vendors. The range of quality between what is available is very wide. Be sure to review any off-the-shelf modules closely to ensure they are of high quality, coincide closely with the message you want to communicate, and can be easily used by your personnel. Also review closely the features offered by the CBT modules. Good modules should include a way to track and measure progress and achievement.

When considering an off-the-shelf CBT, always review a sample of the course, determine if adult instructional experts were used to create the course, and ensure that the vendor will provide support and modify the CBT to best suit your organization’s training needs. Consider using something similar to Exhibit 1 and Exhibit 2, based on what a security officer at a large financial organization used when considering learning about vendors in 2002 and 2003.

There are three basic types of CBTs: Entertaining, Subject-Matter Focused, and Skills-Based.

Entertaining

You will sometimes see these referred to as “sizzle” CBTs. These types of modules focus on giving the learner a fun experience and on making them comfortable with using technology to learn. This is a pretty good
### Exhibit 1 Security Awareness Vendors: Competitive Marketing Analysis

<table>
<thead>
<tr>
<th>Firms</th>
<th>Services</th>
<th>Pros/Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Vendor 1</td>
<td>Web-based interactive medium</td>
<td>Pros: Nearly duplicates Company X's model</td>
</tr>
<tr>
<td></td>
<td>U.K.-based firm</td>
<td>Cons: Too cartoony</td>
</tr>
<tr>
<td></td>
<td>Cost $4 per user</td>
<td>Content U.K./E.U. (too risqué for U.S. audience)</td>
</tr>
<tr>
<td></td>
<td>Total cost estimated at $215,000</td>
<td>Too expensive</td>
</tr>
<tr>
<td></td>
<td><a href="http://www.vendor1.net/">http://www.vendor1.net/</a></td>
<td></td>
</tr>
<tr>
<td>2. Vendor 2</td>
<td>Web-based medium — but not interactive (read HTML pages)</td>
<td>Pros: None identified</td>
</tr>
<tr>
<td></td>
<td>Web-based testing center — but not interactive</td>
<td>Cons: Too expensive</td>
</tr>
<tr>
<td></td>
<td>Cost $170,000 (estimated)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[<a href="http://www.vendor2.com/">http://www.vendor2.com/</a> Index.htm](<a href="http://www.vendor2.com/">http://www.vendor2.com/</a> Index.htm)</td>
<td></td>
</tr>
<tr>
<td>3. Vendor 3</td>
<td>CBT-based medium</td>
<td>Pros: Low cost (to be confirmed)</td>
</tr>
<tr>
<td></td>
<td>$1,500 flat fee (per Company Y)</td>
<td>Cons: CBT-type medium. Too tedious. Audiences lose interest</td>
</tr>
<tr>
<td></td>
<td><a href="http://www.vendor3.com/contact.htm">http://www.vendor3.com/contact.htm</a></td>
<td></td>
</tr>
<tr>
<td>Vendor</td>
<td>Website</td>
<td>Features</td>
</tr>
<tr>
<td>----------</td>
<td>--------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>4. Vendor 4</td>
<td><a href="http://www.vendor4.org/">http://www.vendor4.org/</a></td>
<td>Learning topics PDF or print booklet-based medium Quiz auto-generated based on topics selected Status reporting Cost $2 per user Total cost estimated at $80,000</td>
</tr>
<tr>
<td>8. Vendor 8*</td>
<td><a href="http://www.vendor8.com/">www.vendor8.com/</a></td>
<td>CD-based medium $4.63 per user per year A total price of $125,000 for 27,000 users</td>
</tr>
</tbody>
</table>
### Exhibit 2  E-Learning Vendors: Competitive Marketing Analysis

<table>
<thead>
<tr>
<th>E-learning Vendors</th>
<th>Competitive Market Analysis</th>
<th>Joe Doe Information Security Policy and Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Objective:</strong> Create a Web-based exam with 5 topics @ 10 min each. Total seat time of 1 hr. Use internal SMEs.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E-learning Firms</th>
<th>Miscellaneous</th>
<th>Staffing Team</th>
<th>Number of Business Days</th>
<th>Fixed Bid</th>
<th>Hourly Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vendor A (contracted for the LMS) <a href="http://www.vendora.com">http://www.vendora.com</a></td>
<td>Teleconf 3 phases: analysis, design, development</td>
<td>4–5</td>
<td>20–30</td>
<td>$25–$28,000</td>
<td>$85–$135</td>
</tr>
<tr>
<td>Vendor B <a href="http://www.vendorb.com">http://www.vendorb.com</a></td>
<td>Provided input. New 60-min course based on the existing one, using Company X SMEs</td>
<td>4</td>
<td>23</td>
<td>$15,000 (checking to determine additional costs)</td>
<td>$100–$250</td>
</tr>
<tr>
<td>Vendor C <a href="http://www.vendorc.com">http://www.vendorc.com</a></td>
<td>Teleconf</td>
<td>5</td>
<td>60</td>
<td>$20–$45,000</td>
<td>$250</td>
</tr>
<tr>
<td>Vendor D <a href="http://www.vendord.com">http://www.vendord.com</a></td>
<td>Engaged with since 1998 on 5 versions of the application.</td>
<td>3–4</td>
<td>30</td>
<td>$50–$60,000</td>
<td>$200</td>
</tr>
<tr>
<td>Vendor</td>
<td>Contact Method</td>
<td>Phases</td>
<td>Timeframe</td>
<td>Cost Range</td>
<td>Additional Information</td>
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</tr>
<tr>
<td>E</td>
<td>Teleconf</td>
<td>3 phases: analysis phase; modelization phase, and production phase</td>
<td>3</td>
<td>30–50</td>
<td>$30–$50,000 $70–$170</td>
</tr>
<tr>
<td>F</td>
<td>6/7/02 Teleconf</td>
<td>1–3</td>
<td>15</td>
<td>$175,000b ($5 per user) or $65,500</td>
<td>$95–$175</td>
</tr>
<tr>
<td>G</td>
<td>3/1/02 — completed Web request for information.</td>
<td>No information yet</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>3/1/02 — completed Web request for information.</td>
<td>No information yet</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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a. Pending another estimate based on their hours input to provide only code. They usually provide the host-based environment, usability testing, and help-desk support.

b. May be most useful if a firm does have the time or staff expertise/SME to create content. Also, probably better for larger firms where cost can be spread over a large audience (e.g., 35,000 users/$50,000 cost = $0.70 cost per user).
idea; however, watch out for modules that use flash, bells, and whistles and have little educational value to your learner. Often the content is presented primarily or solely in the form of a game, using cartoons, questionable competitions, and often very poor humor. It has been noted that many people start these types of CBTs but very few finish them. The people taking the module often remember the activities and that it was fun, but usually they do not remember content or messages. In fact, many organizations looking at such modules have considered these types of modules as more marketing schemes than true teaching tools. Review the details of the module carefully and the company selling it. Is a marketing company one of the developers? Do the developers have a background in instructional development?

Subject Matter-Focused

This type of CBT is virtually the opposite of the entertainment-style modules in that they focus almost exclusively on presenting content over everything else. This type of module is based upon a few assumptions, such as that the learner can read, the learner will remember and comprehend, and that the learner will know how to use the information later. What can easily happen with this type of CBT if not constructed properly is that the learner will become overwhelmed with all the information presented to him. Organizations often purchase these types of modules because they want to get all the content possible for their money and hope that it will serve a second purpose, such as a delivery method for the organization’s information security policies. However, when you make your buying decision, you need to remember that if the interaction of the module is not effective, the course will be very boring, and that the typical learner will not retain much of the information presented. Also, be aware that these types of modules may be constructed on more of a typical child-in-school-learning model instead of an adult learning model. By this, I mean that the information is pushed onto the learner and does not allow for interaction, treating the learner, instead, as a passive receptacle. Be sure that any subject matter courseware you create or consider purchasing actually engages your learner and does not just offload information.

Skills-Based

The primary goal of a skills-based CBT should be to provide performance-based training. The CBT should require the learner to give just the right amount of knowledge and information to improve their skills and close any skills gaps for the topic being covered, thus improving their job
performance. The CBT should be constructed in such a way that the learner can take what is learned and apply it to real-life situations right after training.

The type of feedback you should hope to hear after learners have taken this type of CBT is something similar to, “What I learned is what I need to know to do my job better. Now I know how to apply this to my daily job responsibilities.” When doing this type of CBT, success will depend on the design of the instruction and how the training is deployed. Both factors must be effective, not just one or the other. Critical for this type of training is getting the right training topic and information to the right audience.

Using some type of testing is one measurement for the effectiveness of this type of training. Pretesting can establish the learner’s current knowledge and capabilities and can easily be incorporated into a CBT. Pretesting can also be used within a well-constructed CBT to adjust the instruction presented to focus specifically on the skills and knowledge where the learner has gaps. Then, following the CBT, a concluding test can reveal how much the learner closed those gaps, and also provide one type of evidence of the learner’s skill in the topic.

**CBT Audiences**

The use of CBTs should be considered for training and instructing skills such as configuring firewalls, resetting passwords, explaining the organization’s privacy practices, etc., in addition to communicating policies, procedures, and standards to employees. Some of the audiences who are good candidates for CBTs include:

- Systems administrators
- Marketing personnel
- Sales personnel
- Compliance officers
- Law department personnel
- HR staff

**Remote Access Labs**

Performing training through remote access labs can be quite effective for providing personnel in highly decentralized offices with an opportunity to obtain hands-on training when they cannot easily travel to another location for the training. An instructor can administer these types of training
sessions live via conference call or satellite hookup. The live activities can occur through remote connections such as VPNs, or learners can be provided with workbooks and given directions for accessing the remote lab and perform the training according to their own schedule and availability.

Good to consider for training:

- Systems administrators
- Applications programmers
- Help desk operators

Satellite or Fiber Optics Long-Distance Learning

As mentioned earlier, a good complement to the remote access lab is satellite or fiber-optics long-distance learning. It is also a very nice option on its own. You still need to have such instruction well planned and carefully constructed, keeping in mind that this type of delivery does not typically allow for two-way interaction in and of itself. You will need to identify the materials you need to use in conjunction with this type of training. Most likely, you will need comprehensive workbooks for the topic that are designed to make this style of training as interactive as possible. Also, satellite instructors must be well prepared and be cognizant of the fact that there are learners listening and watching whom they cannot see. They will not be able to get the immediate feedback of the learners' reactions and their questions. What helps address this is to have remote site facilitators available to relay questions through a centralized communication path to the instructor, and to assist with the evaluation and feedback process.

Good to consider for training:

- Remote office personnel
- Third-party partners
- Subsidiary personnel in remote locations

Web-Based Interactive Training (such as Webinars)

This type of distance delivery uses computers to either provide the training live with an instructor or through a type of application services provider (ASP) to allow learners to take the training at times that are convenient for them. Typically, this type of learning is less expensive than satellite or fiber-optics-based distance learning. And, depending upon how it is
constructed, it can allow for much more interaction. The key to success, as with the other methods, is careful design of the instructional material and goals. Additional elements include control mechanisms: Will the training be multi-participant, two-way interactive, or something else? Will all the learners’ systems be able to accommodate the technical requirements? And, if it is to be a live facilitated session, is the instructor well prepared?

Good to consider for training:

- Information security department
- HR department
- Legal department
- IT staff
- Help desk staff
- Marketers

**Audio Instruction**

Audio instruction can be provided on a variety of media such as CDs, cassettes, over the network via streaming audio, etc. The cost of producing training on audio is often much less than other types of user-controlled training methods. Targeted learners can listen to audio training in a wider range of situations than other types of methods. For instance, if your target listeners travel frequently, providing audio training is a great opportunity for them to listen while on a plane or in airports and trains. Workbooks can be created to accompany and complement the audio messages and to increase learner interaction. Audio is very good for providing training that includes building interpersonal skills and for covering case studies or narratives of examples.

Good to consider for training:

- Managers
- Sales and marketing
- Executives
- Legal staff

**Video and DVD**

Videos and DVDs (I'll refer to both as videos) work well for groups of any size and also provide a fairly easy way to allow learners to check out the training and take it home or to another location. They can also
view them whenever their schedule allows. Well-produced and well-constructed videos can be amazingly effective. However, a drawback of videos is that there is typically no learner interaction (some DVDs allow for this), and some learners may have a tendency, depending upon where they watch the video, to fall asleep. The cost relative to other training methods for a ready-made video is typically moderate but producing your own video can be quite costly. However, for a large, highly dispersed organization, a custom-made, in-house-produced video can be very effective in that it can be created specifically for the organization and include organization leaders within the video talking directly to the learners.

Good to consider for training:

- Remote office personnel
- Personnel with nonstandard work hours
- Personnel who travel frequently
- Personnel whose job responsibilities do not allow for them to participate in training during the workday

**Workbooks**

Workbooks for adult education are commonly considered anything from handouts to manuals. Workbooks typically provide information for later reference and, unlike other printed resources, they are reader-interactive. Workbooks can offer the learner ways to interact through exercises such as filling in blanks with correct terminology and resolving complex situations or problems. The learner will be utilizing portions of the brain that are often not used for typical classroom learning. Workbooks can be very simple to very complex and can range from very inexpensive, hole-punched, stapled photocopies to slickly produced, elaborately bound, and custom-printed publications. Workbooks offer good interactivity and provide credibility for the topic covered, in addition to serving as a lasting reference. However, some learners are not successful when they are required to do a large amount of reading.

Good to consider for training:

- Regulatory compliance officers
- HR
- Managers
- Customer service personnel
On-the-Job (OTJ)

On-the-job training is one of the oldest ways of business training, harking back to the days of apprenticeships. It is often most commonly thought of for craft-related jobs, but OTJ training also lends itself well to technical skills training. Forms of OTJ training include mentoring and role-model programs. In general, OTJ takes place when a skilled or experienced person discusses and demonstrates the skills and knowledge needed to discharge job responsibilities to an unskilled and inexperienced person while both are actively working. Of course, informal OTJ takes place in all organizations. However, you can also consider implementing a formal OTJ program for positions that require repetition or practice in performing certain activities such as customer call center areas or systems administrator network monitoring. Important success factors for OTJ include:

- Identifying the skills and knowledge necessary for successfully performing job responsibilities
- Creating performance objectives and measures
- Designing and creating supporting training materials
- Choosing OTJ trainers who have in-depth knowledge and experience, who want to serve as a trainer, and who have themselves received training for effective training and communication skills and methods
- Providing the training on noncritical or development systems

The following materials can greatly improve the success of OTJ training:

- Trainer's guide
- Lesson plans
- Job aids
- Checklists
- Examples
- Demonstrations
- Questions and answers to use during OTJ training

Good to consider for training:

- Call center staff
- Systems administrators
- Incident response team members
- Business continuity planning personnel
- Virus response team members
Conference Calls

Conducting training and awareness through conference calls can be a good option for highly-dispersed target group members. It provides a good way to have interaction among the participants. It is great for brainstorming sessions and, augmented with slides, can provide a good way to give more lecture-style presentations. Conference calls are most successful when an agenda is communicated to all participants ahead of time. Having training facilitators at each location also will enhance the success of the training. When designing such training, keep the following in mind:

- Be sure to have the participants in locations without background noise.
- Have video monitors, flipcharts, and fax machines available at each of these locations.
- Provide objectives for the training to the participants.
- Provide workbooks and guides to the participants, as applicable.
- Ask speakers to identify themselves before speaking.
- Expect that there will be a little dead air time as people think about their responses.
- Ensure that the conference call phone number and password are distributed securely. Otherwise it could be easy for unauthorized personnel to listen in on the calls.
- Discourage using cell phones for the calls. Besides possible poor cell coverage, it is easy to be distracted when driving, etc.

Good to consider for training:

- Field office personnel
- Mobile workers
- Brokers and agents
- Business partners

Outsourced Training and Awareness with Professional Education Services

Probably the most important consideration for going outside your organization to get help with training or awareness is the lack of competency and availability of qualified personnel within your own organization. If you do not have people who are experienced and able to be effective educators internally or if they do not have the time to provide these
services, then going to an outside education vendor is definitely something to consider. When considering outsourcing:

- Consider what the costs would be to produce the training in-house and compare with the costs you are quoted from outsourcing vendors. Internal costs are often underestimated because all time, materials, facilities, and human resource costs are often not considered. This will help you determine if the vendor is giving you a reasonable quote.
- Research the background and credibility of the vendor you are considering. What is their adult education background and expertise? Are their past customers happy with them?
- Determine what specifically you need to have outsourced. What is the range of outsourcing options? What are the benefits? What are the risks?
- Be sure to detail, within your contract and service level agreement (SLA), the scope of the work, the timelines, how to resolve any conflicts that emerge, the quality control process, etc.

Good to consider for training:

- All employees.
- Targeted training groups.
- Targeted awareness groups.
- Executives. (Some trainers specialize in executive training. Plus, it would be advantageous to have someone who is not in the executives’ chain of command to provide them with security and privacy guidance.)

**Education Provided by Professional Societies**

Professional organizations and societies often provide their members training and awareness opportunities as a service, as well as to preserve, advance, and enhance the reputation of the profession. Such educational opportunities are often provided during monthly meetings, special training workshops, and at regularly scheduled conferences and seminars. Attending such training is a good way for the personnel responsible for the topics covered by the profession to obtain insights from others and receive typically low- or no-cost but quality training. It is also a good way for your certified professionals, such as CISM, CISSP, and CPPs, etc., to obtain the continuing professional education (CPE) credits they need to maintain certification.
Good to consider for training:

- Information security personnel
- Internal audit personnel
- Systems administrators
- Business continuity personnel
- Facilities security personnel

**Government-Sponsored Training**

There are a number of U.S. government-sponsored organizations that support and provide training and awareness opportunities that your organization can consider in your education strategy. A few of these include:

- Infragard chapter events: [http://www.infragard.net/library/combating_cybercrime.htm](http://www.infragard.net/library/combating_cybercrime.htm)

Good to consider for training:

- Government officers
- Information security officers
- Privacy officers
- Compliance officers
- Physical-security officers

**Awareness Methods**

Educating with awareness methods is not training. In contrast to training, awareness can occur at the same time everywhere and on a continuous basis. Information security and privacy awareness activities promote ongoing compliance. Likewise, ongoing compliance helps ongoing awareness.
As business models change, so do compliance needs and awareness activities.

Awareness is typically the “what” component of your education strategy; training is typically the “how” component. To make awareness activities effective, you must know your audience. Awareness audiences are very broad; they include everyone within the organization and all those third parties who do work for, or on behalf of, the organization. The awareness audience has diverse experiences, backgrounds, and job responsibilities. The awareness goal at the decision-making level is to convince the audience that information security and privacy risk reduction is achievable. Awareness goals at the end-user level are generally to help them:

- Understand information security and privacy risks and the actions to reduce them
- Create a demand for risk reduction

Awareness must not be boring. The following is a list of 15 ways to make awareness interesting:

1. Use analogies.
2. Use recent, significant, real-world examples and news events.
3. Explain the importance of your message.
4. Use scenarios and multifaceted situations (e.g., What would you do if ... ?).
5. Use graphics.
6. Use photos and videos.
7. Make it interactive.
8. Make it memorable ... use humor, shock, and wit.
9. Make it personal ... show how it relates to your audience, especially to their personal lives, such as preventing identity theft.
10. Make it fresh ... tie it to something current.
12. Use known people in examples,... celebrities, sports figures, etc.
13. Use animation.
14. Recognize employees who have done an outstanding job.
15. Use games and challenges.

Awareness activities are different from training activities. The objectives for delivering information security and privacy awareness are similar to training options. However, there are some very important differences between training and awareness activities. The options and methods for awareness activities are typically much different from the more formal and structured training. Awareness activities should:
- Occur on an ongoing basis
- Use a wide range of delivery methods
- Catch the attention of the target audience
- Be less formal than training
- Take less time than training
- Be even more creative, memorable, and fun than how you may have your training sessions planned
- Reinforce the lessons learned during formal training
- Be the foundation for preparing for the first level of training for various target topics

An awareness program must remain current. As information security and privacy regulations change and, subsequently, information security and privacy policies and procedures, personnel must be notified. Establish a method to deliver immediate information and updates when necessary. Perhaps new information is sent as the first alert item personnel see when logging into the network for the day. The awareness messages and methods must also be simple. The purpose is to get messages and ideas out to personnel quickly and easily. They cannot be confusing or convoluted, which will dissuade personnel from reading them and eventually not paying attention at all to the messages. Make it easy for personnel to get information security and privacy information, and make the information easy to understand.

Think of positive, fun, exciting, and motivating methods that will give employees the message and keep the information security and privacy issues in their mind as they perform their daily job responsibilities. The success of an awareness program is the ability to reach all personnel using a variety of techniques. Examples of awareness materials and methods are discussed in Chapter 14.

Notes