



TRAINING AND DEVELOPMENT
INSTRUCTOR'S MANUAL

SHRMTM

SOCIETY FOR HUMAN
RESOURCE MANAGEMENT

Using Technology for
Communication and Training

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Using Technology for Communication and Training

OVERVIEW

This module is designed for graduate students studying human resource development (HRD). It investigates the current technology available to support training and communication within an organization. The use of technology for training is increasing, and the cost to conduct these trainings is becoming a significant amount of an organization's budget. Trainers must be aware of the technology available and know how to stay current with emerging technology.

Note: this is not a “how to use technology” module. It is intended to increase awareness of and access to resources that provide current information about technology for communication and training. It does not cover the use of specific human resource management software.

This module consists of two 50-minute sessions.

PREPARATION NOTES

Before teaching this module, instructors should:

1. Check all URLs to ensure they are still active.
2. Review the articles provided in the reference list. It is recommended to start with the article by Karrer.
3. Review the Web sites to become familiar with their content.
 - a. For organizations: Learn about their vision/mission statement; dates for their annual and/or regional conferences; and current topics they are covering.
 - b. For technology: Review current offerings such as webinars, training opportunities, etc. Review current topics being discussed on examples such as blogs.
3. Review current journal articles: Free journals typically share practical use; research journals share information on current and emerging topics. Become familiar with the current topics and new uses for technology.

4. If you are not fluent with the technology discussed in the second session, review the examples provided.
5. If you want to use the optional learning activities that provide opportunities for hands on use, it is recommended that you create a class blog and class wiki before beginning the module.

Student assignments before the class:

1. Give students the list of organizations and journals.
2. Ask them to review the organizations and note their vision/mission statements; conferences and other resources; current topics or events.
3. Ask them to access and review two recent journals and be prepared to share the intended audience, current article topics, and two articles they find pertinent to the field of communication and training. Students should write a summary of the articles and post on the course Learning Management System for peers to review or be prepared to share in class. They can work from the list of journals included in Session 1, from the bibliography, or from their own sources.

Session 1

2 minutes:

Slide 2 – Objectives

Slide 3

Intro/Attention-Getting Slide: Refer to ASTD's *State of the Industry* report.



INSTRUCTOR'S NOTE: It may be helpful for instructors to review the full report. The report is updated annually and is available in the fall. To access it, please visit the ASTD website [here](#).

The report is free to members, \$149.00 for non-members.

ASTD reports that BEST organizations link learning to critical business concerns. They report improvement in employee and customer satisfaction, the quality of their products, cycle time, productivity, retention, revenue, and overall profitability.

In 2007, the report indicates:

- The use of technology-based training increased to 30.28 percent in 2006, up from 11.47 percent in 2001.
 - Nearly 40 percent of Bench Marking Forum (BMF) organizations said they used technology-based training.
 - Nearly 36 percent of the BEST (determined by enterprise-wide success as a result of employee learning and development) organizations said they used technology-based training.
 - The average direct expenditure for training, per employee, was \$1,040, or 2.33 percent of payroll.

Of the training topics covered by these companies, the second most covered content was information technology and systems skills.

Slide 4

Technology is being used in organizations to:

- Create communities of practice and facilitate collaboration.
- Develop knowledge management systems.
- Develop online documentation systems.
- Provide easy access to standards and manuals.
- Reduce training costs.

15 minutes:

Slide 5

Globalization, where companies have one main office and many satellite offices, has played a major part in driving the use of technology. Staying up-to-date with instructional and communication technology is important for a number of reasons:

- Technology reduces the cost of training and/or the cost and time required to travel to training events.
- Distributed training provides professional development for all employees, thereby supporting commitment to employee growth. It can also shorten the time required to bring a new employee up to speed in an organization.
- Technology such as training via simulation reduces wear and tear on equipment and improves time to efficiency.
- The use of technology for instruction and communication can increase an organization's ability to share information quickly and efficiently, and to stay current in their particular field.
- Technology allows for rapid content development and easy updating. User-generated documents allow subject matter experts (SMEs) to develop content that is more exact and designed from experience.
- It allows for bringing in expert speakers.

Slides 6 and 7

How to stay up-to-date

There are professional organizations whose purpose is to bring people together to share knowledge, experience and research regarding information and instructional technologies. Frequently, individuals who have used technology for communication and learning will present their experiences at conferences or share them in journal articles and case studies. Many of these organizations also offer hands-on workshops, either during a conference or through technology delivery throughout the year. Attending these sessions and workshops can provide valuable information regarding the use of various technologies. Finally, many of these organizations publish journals

where authors share their experiences in case studies and research reports. Let's review some of these.

- Society for Human Resource Management (SHRM). SHRM has chapters locally and internationally and has offices in Alexandria, Virginia; China; and India. www.shrm.org. SHRM is the world's largest professional association devoted to human resource management. Its mission is to serve the needs of HR professionals by providing the most current and comprehensive resources, and to advance the profession by promoting HR's essential, strategic role. Founded in 1948, SHRM represents more than 250,000 individual members in over 125 countries, and has a network of more than 575 affiliated chapters in the United States, as well as offices in China and India.
- American Society of Training and Development (ASTD). ASTD has local chapters and a national office. www.astd.org. ASTD is dedicated to workplace learning and performance professionals. ASTD's members come from more than 100 countries and connect locally in almost 140 U.S. chapters and 25 global networks. Members work in thousands of organizations of all sizes, in government, as independent consultants, and suppliers.
- Association of Educational Communications and Technology (AECT), www.aect.org. AECT's mission is to provide international leadership by promoting scholarship and best practices in the creation, use, and management of technologies for effective teaching and learning in a wide range of settings.
- International Society for Technology in Education (ISTE); www.iste.org. ISTE is "the trusted source for professional development, knowledge generation, advocacy, and leadership for innovation." A nonprofit membership organization, ISTE provides leadership and service to improve teaching, learning, and school leadership by advancing the effective use of technology in PK-12 and teacher education. ISTE represents more than 85,000 professionals worldwide.
- American Association for Adult and Continuing Education (AAACE); www.aaace.org. AAACE is dedicated to the belief that lifelong learning contributes to human fulfillment and positive social change.
- Association for the Advancement of Computing in Education; www.ace.org. Founded in 1981, AACE is an international, educational and professional not-for-profit organization dedicated to the advancement of the knowledge, theory, and quality of learning and teaching at all levels with information technology. This purpose of AACE is accomplished through the encouragement of scholarly inquiry related to information technology in education and the dissemination of research results and their applications through publications, conferences, societies and chapters, and inter-organizational projects.

- EDUCAUSE: Transforming Education Through Information Technologies, national; www.educause.edu. EDUCAUSE is a nonprofit association whose mission is to advance higher education by promoting the intelligent use of information technology.



NOTE: If you are aware of other organizations and resources, add them here. Before teaching this module, check to ensure that the URLs are still current.

ACTIVITY

Slide 8

In small groups of two to three students, discuss the information you found about the organizations you researched. Be prepared to report on some of the key points you discovered about the organizations.

Key point areas might include:

- Regional and annual conferences, if any.
- Discussion groups/forums and their topics.
- Publications and journals.
- Webinars and training sessions offered.
- Cost to join.
- How long the organization has existed (stability).

15 minutes:

Slide 9

Refereed or research journals:

- *TechTrends* (AECT): [*TechTrends*](#) is a publication for professionals in the educational communication and technology field. Its purpose is to provide a vehicle for the exchange of information among professional practitioners concerning the management of media and programs, the application of educational technology principles and techniques to instructional programs, corporate and military training, and any other kinds of information that can contribute to the advancement of knowledge of practice in the field.
- *International Journal of eLearning* (IJEL): [*The International Journal of eLearning*](#) serves as a forum to facilitate the international exchange of information on the current research, development, and practice of e-learning.
- *Educational Technology, Research and Development* (AECT): [*Educational Technology Research and Development*](#) is a scholarly journal in the field which focuses on research and development in educational technology. The Research Section reviews manuscripts to rigorous original quantitative, qualitative, or mixed methods studies on topics relating to applications of technology or instructional design in educational settings. Such contexts include K-12, higher education, and adult learning (e.g., in corporate training settings). Analytical papers that evaluate

important research issues related to educational technology research and reviews of the literature on similar topics are also published. The Development Section publishes research on planning, implementation, evaluation and management of a variety of instructional technologies and learning environments.

- American Journal of Distance Education (AJDE): www.ajde.com.
AJDE is an internationally recognized journal of research and scholarship in the field of American distance education. It is intended for use by teachers in schools, colleges, and universities; trainers in corporate, military, and professional fields; adult educators; researchers; and other specialists in education, training, and communications.
- *EDUCAUSE Review*: [EDUCAUSE Review](http://www.educause.edu) takes a broad look at current developments and trends in information technology, how they may affect the college/university as an institution, and what these mean for higher education and society. In addition to EDUCAUSE members, the magazine's audience consists of presidents/chancellors, senior academic and administrative leaders, non-IT staff, faculty in all disciplines, librarians, and corporate staff/leaders.
- Training and Development (ASTD): www.astd.org/TD.
ASTD offers several publications to its members:
 - *Technology and Learning*: www.techlearning.com
 - *T.H.E., Technology in Higher Education*: thejournal.com
 - *Campus Technology*: campustechnology.com
 - *eLearn*: www.elearnmag.org

15 minutes:

Slide 10

In your small groups, discuss the articles you chose to read.

1. Look for common themes.
2. Discuss the primary message in each article.
3. Discuss how the information in the article pertains (or might pertain) to your personal or work environment.
4. Ideas for implementation.
5. Would you recommend the journal?

Be prepared to share the key points.

5 minutes:

WRAP-UP

Slide 11

Review with the class why it is important to stay up-to-date. Ask students to write an action plan they will use to begin the process. Explain that this is a reflective activity and something that they will keep for their own reference.

Ideas include:

- Organizations to investigate.
- Journals to read.
- Workshops/trainings to attend.
- Topics to learn more about.

Optional:

If using a class wiki, post these points on the wiki and ask students to visit the page and to add additional points they may think of.

If using a class blog, ask students to post their articles to the blog, if the articles are available digitally. Also ask them to share their reviews of the articles on the blog. Finally, they should comment on each other's postings.

ASSIGNMENT

Provide students with the list of Internet resources for the technology to be discussed in Session 2. Ask them to review the sites and be prepared to discuss during class.

Session 2

5 minutes:

Slide 12

Instructional and Communication Technology

Two-way communication on the Internet, also known as Web 2.0, has increased the number of options we have for communication and delivery of instruction.

There are two ways of communication: synchronous and asynchronous. Communication that is immediate is *synchronous*. Communication that is delayed (such as e-mail) is *asynchronous*.

- What kinds of technology do you commonly use for communication?
- What kinds of technology do you commonly use for learning?



INSTRUCTOR'S NOTE: This slide is designed not only to catch students' attention, but to open a discussion about different forms of communication. It will also allow the instructor to assess students' level of use of technology to communicate or to learn. If the group appears to be very novice, you may want to eliminate some of the following topics and delve more deeply into the prior topics. For example, stop before covering the section labeled "Other" in the slides and Instructor Guide.

5 minutes:

Slide 13

Synchronous vs. Asynchronous

Synchronous communication occurs live, or at the same time. Two or more individuals are engaged in a real-time conversation. This may be face-to-face or supported by technology.

Asynchronous communication occurs when individuals post their thoughts or comments at different times and from different locations. Other individuals can read or view those postings at a later date and respond. Asynchronous communication allows time for thought, reflection, and gathering of new information before response.

25 minutes:

Describe/discuss each of the examples below or provide selected examples of each. Students should have experience with some of these, or may have other examples to share. Be sure to allow students to include these experiences in the discussion. Note that there are links included on the PowerPoint slides as well.

SYNCHRONOUS

Slide 14

Interactive Video

Interactive video allows for two-way audio and video communication. It is easy to make one-to-one connections if each user has a computer, Internet connection, microphone and camera. To connect multiple sites in a professional conference, additional equipment is needed (such as a bridge, which will allow up to 30 connections).

Interactive video is useful for meetings, conference calls, brainstorming sessions and document sharing. It provides for the visual aspect of a meeting without requiring travel to a single location.

One company which provides the equipment is [Polycom](#).

Voice over IP (VOIP)

[Skype](#) is an example of a free telephone/conference call service that makes connections through the Internet. An unlimited number of people can participate

in chat-based communication. Up to 10 can participate in conference calls. This is a cost-effective way to establish conference calls with employees who are at a distance because there is no cost for long-distance telephone charges. International calls may incur some fees associated with the call.

ASYNCHRONOUS

Slides 15 and 16

Podcasts

Podcasts are digital media files that are shared over the Internet for reception on portable players and computers. It is similar to a broadcast and can include audio and video.

Podcasts can be used for training on an individual basis. They typically include information with voice description and visuals on how to perform a task. The employee can view it on their own time and if using a portable player, can view, practice, stop, rewind and practice again. Examples are viewable at podcast.com.

[Resource for podcasting \(includes a how-to\).](#)

Blogs

A blog is a web site maintained by one or more individuals. They are frequently topic-based, and regular entries and responses are posted. These might be commentaries, events, topic discussions, journals, etc. They can include text, graphics and video. Like a threaded discussion, postings are by date so the reader can follow the conversation.

Blogs are often used as discussion forums and can maintain a record of the discussion, participants and the process. They are used to generate ideas and record thought processes along the way. Multiple people can access, comment, and post their piece of a working discussion or document. For more information about blogs, see <https://www.blogger.com/start>.

Wikis

Wikis can be used as knowledge management tools. They can store terms and definitions, documents, training videos, company policies and more. Intel has created Intelpedia, a wiki for their company. They have used it for a number of years to allow their employees to communicate and collaborate, create training documents and build knowledge sources.

- Other wikis include [Google Docs](#), [Pmwiki](#), and [Wikipedia](#).
- Web-based wiki services include [Pbwiki](#), [Social text](#) and [Atlassian](#).

SYNCHRONOUS AND ASYNCHRONOUS

Slide 17

Webinars

Webinars provide one-way video and two-way audio. These are typically viewed live, but can be saved and streamed for one-way delivery of information. Examples related to classroom technology are available at www.campustechnology.com.

There are also tech webinars, which are more business technology-based. Examples of tech webinars can be seen [here](#).

Learning Management Systems

Learning management systems provide an integrated place to host content, threaded discussions, chats, surveys and tests. They can also be used to post assignments or projects, grades, etc. These are most appropriate for organizations with more than 10,000 employees and can be quite expensive. Costs for licenses, back-end support, and training can range from \$150,000 to \$600,000 per year.

Examples of learning management systems include [Blackboard](#) and [Open Source](#).

Other

NOTE: Stop here if you are running out of time, or the students are not technology fluent.

Slides 18 and 19

Capture Tools

[Captivate](#) allows users to capture live instruction and broadcast as a webinar or distribute as a podcast.

[Camtasia](#) is an example of a screen recorder that allows users to capture information on their screen while narrating the activity. The capture can then be streamed or podcast for access through a computer or handheld device. This can be used to create training documents with step-by-step visuals.



Aggregators

The purpose of an aggregator is to provide a single interface to widely dispersed, frequently changing information. They bring to one location information from many different sources. The information might come from blogs, RSS feeds, e-mail, web sites (such as news sites), etc. To learn more about aggregators, go to www.newsgator.com/individuals.

Social bookmarking

Users save links to web pages they want to remember and/or share. These bookmarks can be saved privately, shared with specified people or groups, shared inside intranets, or another combination of public and private domain.

Social bookmarking is a new technology and is used for easy organization and retrieval of information from disparate places.

Social bookmarking websites:

- Google ([Google Docs](#) from Google) allows anyone anywhere to read, review, and edit documents simultaneously.
- Microsoft ([Popfly](#) from Microsoft) supports creation of “mashups”, which are constructs that let users work together to combine data from different sources.

Second Life

This is a virtual world where users create their own avatar (a digital representation of themselves). The avatar can then travel around in the virtual world communicating with others who are present. It is free for trial purposes, but users have spent quite a bit of money on Second Life.

This is a fairly new technology and a number of institutions have purchased their own islands (\$2,000 for educational institutions) to determine if instruction is feasible. It is important to be familiar with Second Life because many organizations have established a presence in it. Real estate agencies, for example, can list properties across the country and those interested can view them. For more information about Second Life, visit secondlife.com.

10 minutes:

Advantages and Disadvantages

If you have time, ask students to brainstorm the advantages and disadvantages before you show them the slides.

Slide 20

Advantages:

1. Most technology allows for direct sharing of information.
2. Many technologies provide a permanent or storable record of information shared.
3. Information can be retrieved and reviewed again.
4. It can increase communication and productivity.
5. It can reduce training costs.

Slide 21

Disadvantages:

1. Indirect communication can result in misunderstanding.
2. Challenges for asynchronous communication include reaching people in different time zones.
3. Technology and support costs can be significant depending on the skills of the individuals who will be participating.

4. Copyright questions can arise as to who owns the materials you create, and permission to use others' work.
5. Technology problems can interrupt communication.

Optional Activity:

If using a class blog, post these lists on the blog and ask for additional discussion.

It is important to evaluate the effectiveness of technology and delivery mechanisms used for training and communication. There are modules available through SHRM that discuss these topics in more detail. Jack J. Phillips has done quite a bit of work on return on investment in training environments.

One source that the students should become familiar with is Phillips, J. J., Stone, R. D., & Philips, P. P. (2001). *The Human Resource Scorecard*. Butterman Heineman: Boston. This text includes a chapter by R. D. Stone & J. P. Whalen on technology-based learning.

5 minutes:

Slide 22

Brainstorm the following question:

If you were considering adopting or recommending a technology, what information would you need?

- Company name.
- Name and description of the product and its application.
- Contact information (URL, phone number, e-mail).
- Cost (purchase, lease, per person, per month).
- The number of people who can communicate or use at a time.
- Type of support services provided.
- Advantages and disadvantages.
- Other organizations that currently use the product.

Assignment:

Slide 23

From the list generated in class or your own experience, select a technology, product or specific organization. Investigate its capabilities and associated costs.

Write a one-page, double-sided report to share with the class. Be prepared to share:

Company name, contact information, cost (purchase, lease, per person, per month), the number of people who can communicate or use at the same time, support services, product description, uses, and advantages and disadvantages.

If not using a communication technology, ask the students to provide a one-page/double-sided hard copy for each student.

Optional Activity 1

If using a learning management system (LMS), have students post for all to read. If using a wiki, they can each create a new page and post their information there.

Optional Activity 2

Find a webinar that covers training, technology, or human resource management that will be offered in the next week. Register for and attend the webinar. On the class blog, wiki, or LMS, post a brief summary of the content shared in the webinar. Include the topic; the relevance of the topic; and how you might use it in a business environment. Post a second summary regarding your experience with the webinar. Was it well organized? How did participants ask questions and how were they answered? Would you recommend this webinar to a colleague? Would you recommend other webinars from this same organization?

Optional Activity 3

If you want to add a third day to this module, you could ask students to prepare to demonstrate the use of technology during the next session. For example, a group could demonstrate Skype using two laptops with Internet connections. Another example would be to show a webinar (or register for one available during class).

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