Creating and Using Support Materials

Creative use of the right educational materials greatly enhances learning by facilitating active participation in the learning process, which supports a higher level of information retention among learners. Trainers use support materials to provide specific documentation, resources and references for participant use beyond the conclusion of the training session.

About Teaching Aids, Tools and Support Materials

Learners process new information in a variety of ways and at different speeds, depending on how the information is presented to them. Effective teaching aids and educational materials are designed to support and reinforce training content for all learners and learning styles.

Thoughtful, well-designed teaching aids and educational support materials should:

☑ Attract learners’ attention, actively engage them in the learning process, assist them in processing information, and help them to remember and recap key concepts.
☑ Support learners in applying training content and information to specific tasks.
☑ Satisfy the needs of both visual and kinesthetic learners.
☑ Emphasize key teaching points and help explain highly technical information or complex concepts.
☑ Give variety to your presentation methods and help improve your teaching effectiveness.
☑ Provide examples, additional information, references, data, and resources for further study and use beyond the training session.

There are many different types of teaching aids and learning tools you can use or create to support effective training and make the learning experience more interesting and memorable for learners:

- Primary Reference Sources
- Resource Packs, Handbooks, and Reference Manuals
- Reading and Resource Lists
- Handouts and Job Aids (tip sheets, clinician support tools, etc.)
- Interactive Worksheets
- Training Manuals and Curriculum Guides
- Flip Charts/Posters
- Samples, Models and Mock-ups
- Media Clips: Trigger Tapes, Audio, DVD, CD-ROM, etc.
- Electronic Presentation Software
When developing teaching and training aids or considering the use of presentation
technology, it is important to be aware of your audience and their expectations (as well
as your own experience and limitations with learning technologies and computer skills!) Remember to select training aids that are best suited for your presentation.

The same guidelines for creating dynamic presentations or training sessions also apply to creating effective support materials:

1. Plan for and prepare your materials well in advance! Avoid the anxiety of last-minute production, technology failures, printing or copying problems, and other unanticipated delays.

2. Identify the major concepts you will be covering and determine which ones require or would benefit from the use of visual aids or support materials.

3. Know your audience, what will work best for them in terms of learning or completing tasks of the training session, and what is required for them to demonstrate they have achieved the desired learning outcome. Analyze your audience and create your teaching materials to support their knowledge and learning interests.

4. Make sure your support materials and presentation aids are relevant to, not a distraction to your delivery of the material.

5. Review, preview, edit, and practice using all support materials and visual aids prior to your presentation session. Make sure copies are legible and equipment works!

Key Questions to Consider When Creating Support Materials


? Who will collect or create the materials? Who pays for them?

? What educational methods are you planning to use? What materials are required to successfully execute planned training activities?

? How will your teaching support materials help you to achieve your objectives or enhance learning about the topic?

? How much time do you have? How many people are in the learning group?

? What is it that you need your audience to learn, and what do they need to take with them in order to reinforce it?

The following diagram illustrates a sample materials development process. In this example, note that both content and design review occur at each stage of materials development, and that materials and experience with their usage are evaluated on an ongoing basis.
Support materials should be an integral part of your teaching strategy. Creating and using teaching aids is more than simple information-sharing: it is also part of the art of learning management. All information you introduce, including handouts and other supporting materials, should relate to your training goals and learning objectives. When developing teaching aids or choosing educational materials, select the right tools to support your message based on your communication needs and the learning environment. Avoid confusing learners with too much material or too many different themes.

Use a "Purpose of Materials Checklist" like the sample provided at the end of this section to help you think through the creation and use of your training materials:

Some development, design and usage considerations for different types of teaching aids and training materials are given below. This is certainly not an exhaustive list, and many successful teachers and trainers constantly invent their own unique educational materials. Do not fear trying new things!

Primary Reference Sources

Primary reference sources may include copies of journal articles or textbook pages or chapters; brief excerpts or quotations from authors; images, pictures and graphics; or sets of figures. Primary reference sources also include information sheets or permanent sources of
reference that can be used as handouts (e.g., copies of new treatment guidelines or recommendations; HIV/AIDS Fact Sheets from the Centers for Disease Control and Prevention [CDC].)

Ideally each learner should be provided with an individual copy of primary source material, although trainers should be mindful of copyright and usage regulations.

Resource Packs, Handbooks, and Reference Manuals

A resource pack (or reading packet) is simply a collection of documents which further supports the teaching or training content. A handbook or reference manual is also a collection of supporting documents, with the material usually bound together in book fashion. They are both integrated and comprehensive so that the learner has all the materials together, and are generally distributed all at once, usually at the beginning of the training session. Resource packs and other reference materials may also contain additional information on subjects not covered in the presentation or training session.

Reading and Resource Lists

Provide a list of web sites, books or articles to give learners more detailed information and resources for further inquiry. This is especially helpful when information overload is a potential problem. If you are using presentation slides, consider handing out an annotated bibliography or reading list that includes all the data sources cited in your slide set.

Handouts

Trainers create handouts (documents) to help illustrate and support key concepts, engage learners in interactive exercises, and provide additional information for future reference. Use handouts to increase your audiences’ attention to the topic, interest in your presentation, and ability to comprehend and apply what they are learning.

When creating your own handouts for use as educational support material, you should choose a format that best supports the objectives of your presentation:

- *Reiterative handouts* generally restate or summarize your material. They may include content or items such as a presentation outline; fact and data sheets;
- case studies; primary reference sources (journal articles, etc.) in support of your training content and topic; charts; copies of graphics and images; and a bibliography.

- **Interactive handouts** are documents designed to engage learners by encouraging the sharing of experiences, concerns and ideas; or giving them the opportunity solve a problem or apply content information to different scenarios. These can include case study worksheets, problem-based learning or small-group activity guides, workbooks, and practical guides to particular resources.

- **Job aids** are handouts, tip sheets, or clinician support tools designed to be used by learners as quick-reference guides following the training session.

### Creating Quality Handouts

Quality, effective handouts are current, accurate, visually pleasing, and practical. A good handout complements your training session or presentation and helps learners take away your key messages. Creative use of well-designed handouts enhances engagement with learners as they interact with the handout material.

Good handout design reflects your approach to teaching and helps you establish credibility. Outstanding teaching materials can help create a positive impression even before a presentation begins. Fortunately, advances in desktop publishing and inexpensive printing options make it easy to create and produce high-quality handouts. Design handouts to support the purpose of your presentation and what you know about the audience and their learning needs.

Handouts should be attractive to the eye and make information stand out quickly. Include enough white space to help the eye to search for and find critical information. If you are creating interactive handouts for use with learning activities, make sure there is ample space for learners to write answers or take notes.

**Choose and employ handout design elements and text styles thoughtfully:**

- No more than two fonts in a document. For instructional materials, use at least 12-point font.
- Use **bold**, *italics* or underlining to focus attention but never all three at once!
- Text should be left-justified and margins should be wide enough to create sufficient white space.
- Use column layout (two or three columns) for large amounts of text.
- Use graphics and images to break up large amounts of text, and place them above text whenever possible.
- Use icons or symbols to help learners locate key information quickly.

If you are creating handouts for use as convenient, quick reference material after the training ("job tools" such as tip sheets, clinician support tools, etc.), make sure they are
simple and clear. Present information in sequence or step-wise fashion to help learners organize important details, concepts or protocols.

If you will be making handouts available for electronic distribution, make sure your materials are in a format that will easily accommodate conversion to a format suitable for electronic posting and distribution, such as Adobe Portable Document Format (PDF).

Finally, consider preparation time, production costs, and copyright clearance or content approval issues: would it be more cost effective or efficient to purchase training materials?

Creative Ways to Use Handouts

Use Handouts as Interactive Teaching Tools
Create and use interactive handouts to provide opportunities for active learning during the training session (see “Interactive Worksheets,” below.) Leave blanks for learners to fill-in, or insert a ‘question’ slide into your electronic presentation and ask them to make appropriate notes on the handout. This helps students engage with the material and encourages critical thinking.

Vary Distribution
Give out only a brief outline or skeletal handout at the beginning. You may hold learners’ attention more effectively if you include a few surprises in your training delivery! Or, consider providing handout material in advance to establish expectations among learners about what they will be expected to do. Provide support material at a resource table for learners to take only what they want to use. If taking notes would help learners understand your material better, consider distributing your handouts at the end of your session. Distributing handouts to a large group can cause considerable disruption: make sure you plan ahead for how you will handle distributing (and carrying!) large amounts of material.

Use Color
Color impacts reading, comprehension, learning and promoting ideas. Handouts can be improved when printed in color or reproduced on colored paper. Use matte-finish paper in cream or pastel colors.

Effective Handout Checklist

- Emphasizes important knowledge; makes clear what is important
- Presents information in a logical sequence
- Clear and easy to understand: no jargon
- Scientifically accurate, up-to-date, and reflective of current clinical practice
- Uses active verbs as much as possible
- Legible: copies will reproduce clearly
- Easy to read: clear, uncluttered layout; pages not too full of print; sufficient white space
- Interactive worksheets include enough space for learner notes
- Striking and interesting: appropriate use of fonts, text styles and contrast
- Graphics (pictures, diagrams, images, etc.) are clear, relevant, useful and accurate
- Complies with accessibility requirements; electronic copy available
Post Handouts Online
Provide access to your handouts from a web page so your audience can refer to them after the presentation. You can also take advantage of Internet technologies to provide multiple resources, create online discussion forums, and distribution lists.

What about Presentation Slide Set Handouts?
Should you provide a copy of your electronic presentation slides as a handout? The answer to this question generally depends on how you are using the slide set. For didactic presentations, learners generally like to take notes, so provide them with a handout (e.g., in PowerPoint “3-per-page” format) at the beginning of your presentation.

For more in-depth or interactive training sessions, a handout of your presentation slides may not be appropriate, especially if providing it would “give away the answers” or invite any potential for misunderstanding of material that needs to be presented in context. In these cases, make your slide sets available after the presentation as appropriate, or consider instead providing a printed text handout that contains all of the information covered in the slides: “All of the information covered in the presentation and on the slides is included in your handout.”

Interactive Worksheets
Interactive worksheets are handouts designed to encourage assimilation of your material via hands-on exercises and learning activities. Interactive handouts used as teaching activities directly involve learners with the material and help them apply what they are learning in a problem-solving or skills-testing scenario.

Interactive handouts may be designed for individual or group use, and they should be reflective of the tasks that learners will be expected to perform. Examples include workbooks or “gapped” worksheets to be completed as a session progresses; checklists; surveys; decision trees, flow charts, diagrams and tables; action plans; self-assessment quizzes; and anything else that helps learners actively organize and apply information:

<table>
<thead>
<tr>
<th>Type of Training and Task</th>
<th>Interactive Handout Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Skills Training</strong></td>
<td></td>
</tr>
<tr>
<td>Hands-on practice</td>
<td>• Process Worksheets (fill-in-the-blank; interpret lab results or supply missing lab values; etc.)</td>
</tr>
<tr>
<td></td>
<td>• Examples to be completed and then discussed in class</td>
</tr>
<tr>
<td></td>
<td>• Case Study Worksheets</td>
</tr>
<tr>
<td><strong>Knowledge Training</strong></td>
<td></td>
</tr>
<tr>
<td>Test learner understanding and ability to recall</td>
<td>• Self-assessment Quiz / Practice Question Set</td>
</tr>
<tr>
<td></td>
<td>• Pre- and Post-Tests</td>
</tr>
<tr>
<td></td>
<td>• List of Questions for Group or Self-study</td>
</tr>
<tr>
<td><strong>Attitude or Behavior Change Training</strong></td>
<td></td>
</tr>
<tr>
<td>Role play, discussion, action planning</td>
<td>• Case Scenarios and Role Play Instructions</td>
</tr>
<tr>
<td></td>
<td>• Closing Statements Handout</td>
</tr>
<tr>
<td></td>
<td>• Action Planning Worksheet</td>
</tr>
</tbody>
</table>
Creating and using interactive handouts effectively is a time-consuming process that requires giving thoughtful attention to some important details:

- What is your purpose for doing an exercise? How will it fit with other teaching activities of the training session?
- What do you want learners to accomplish by completing the interactive handout? Will learners have the appropriate tools or knowledge to complete the exercise and interactive handouts?
- How much time do you have? How will you distribute interactive handouts at the right time? How long will it take a variety of learners to complete the activity?
- Will learners work individually or in teams? How will you encourage and manage collaborative learning with the exercises and handouts?
- How will you include processing of the interactive handout within the activity? How will you identify and address any difficulties learners may experience with the handout or exercise? If there are no single “correct” answers, how will you deal with alternatives?

Remember to carefully plan the creation and use of your interactive handouts as you are planning the preparation of your learning session. Also, regularly ask for feedback from your audiences on how to improve the quality and effectiveness of your interactive teaching materials.

Training Manuals and Curriculum Guides

Training manuals or curriculum guides are bound documents that include specific training content such as learning objectives; training program outlines or agendas; educational materials; instructions and procedures for teaching activities; standards, diagrams and illustrations; trainer or facilitator notes; and additional resources for follow-up study or reference.

A training manual or curriculum guide can take various forms, and typically covers a defined topic or specific training course:

- **Training manuals** (“participant guides”) are used to provide training participants with the content information and educational materials necessary to support the learning session. They should be designed to support and enhance learning and active participation in the training.
- **Curriculum guides** (“instructor’s manuals”) are used by trainers to facilitate appropriate and effective training planning, design, delivery, assessment and development.

Both versions generally contain the same basic material, adapted and formatted for the different purposes of trainer or participant. Consider who will be using the materials and
for what purpose as you plan how your training manuals will be organized and presented.

Training manuals should be prepared in loose-leaf binders to facilitate easy updating, and the content and sequence of items should be appropriately customized for specific training topics or programs. Some sample content suggestions appear in the following tables.

<table>
<thead>
<tr>
<th>Some Common Elements of a Training Manual</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Element</strong></td>
</tr>
<tr>
<td>Cover and Title Pages</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Table of Contents</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Introduction and Overview</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>How to Use the Manual</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Training Module Contents</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Training Support and Educational Materials</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Resources and References</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
A “trainer’s version” of a curriculum guide should include all of the information and materials contained in the participant version, plus additional instructor-specific elements as appropriate.

<table>
<thead>
<tr>
<th>Additional Common Elements of a Trainer’s Curriculum Guide</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Element</strong></td>
</tr>
</tbody>
</table>
| Training Program Management Notes and Support Tools        | - Checklist/inventory of all necessary training materials and equipment, including audio-visual support  
- Tracking list/management notes on training program logistics, venue, faculty arrangements, etc. |
| Trainer’s Content Notes and Activity Instructions          | - Overview and suggestions for use, describing the purpose, learning objectives, and key concepts to be addressed in each module  
- Training delivery instructions for each module and activity, including options and alternatives for different learning styles and levels of ability  
- PowerPoint presentation slide sets with formatted speaker notes that include Instructions for Slide, Prompt Questions, Discussion Points, and Backup Data and Resources  
- Suggestions and tips for improving training delivery or modifying/varying activities  
- Copies of handouts and interactive worksheets, with answers when appropriate |
| Resources for Trainers                                    | - Suggestions for training program agenda and format  
- Guidelines and tips for developing and leading effective training sessions  
- Learner needs assessment and program evaluation suggestions, tools and resources |
| Master Copies                                             | Master copies of all participant handouts and training support materials |

Formatting Training Manual Contents

Training manual contents may be arranged and formatted in any variety of ways. Choose a format that presents your material in a clear and consistent manner, and meets both the teaching needs of faculty and the learning needs of your training participants. Remember, the purpose of creating learning support materials is to provide your learners with the information that is essential and relevant to your training, in a way that is consistent with the preferred learning styles of your trainees.
Formatting Notes Pages

One simple way to encourage training participants to take notes during the training session is to provide presentation slide handout pages formatted for note-taking (see Microsoft PowerPoint example below.) Keep in mind the quality of your slides when preparing notes pages for printing.

Printing PowerPoint Handouts Formatted for Note-taking

This is one simple way participant training manual contents can be formatted for taking notes.

Print slides “3-per-page” for use as note-taking handouts:

- Choose File > Print from PowerPoint file menu
- Choose 3 slides per page
- Select Scale to Fit Paper
- Select Frame Slides

In the Print dialog box:

Choose “Handouts” Choose 3-per-page
Here is another example of PowerPoint Notes pages formatted for an instructor’s manual, using the Notes Page Master function within PowerPoint to design and apply the formatting elements:

### HIV Screening and Testing

#### Instructions for slide:

**Welcome Slide**

- You may have this slide showing as participants arrive if desired.
- Review with the audience the training program logistical announcements below.

#### Backup Data & Resources

**Suggested Handouts:**

1. Participant Information Form (PIF)
2. Pre-Test and Post-Test
3. Program Evaluation
4. The Basics of HIV Screening and Testing
6. HIV Screening and Testing Frequently Asked Questions (FAQ)
7. Codes for HIV Testing and Diagnosis
8. Copy of Revised Recommendations for HIV Testing of Adults, Adolescents, and Pregnant Women in Health Care Settings

**TIP:** Copy pre-test questions onto back of PIF form and post-test questions onto back of Program Evaluation Form.

#### Discussion Points

**ANNOUNCEMENTS TO THE GROUP:**

1. Repeat announcement to sign in several times to make sure all have done so.
2. Ask participants to complete PIF and pre-test.
3. Offer brief instructions to group on how to complete the PIF forms (i.e., “bubble in” answers – not [✓] or [x]).
4. Be sure to have audience (and you) silence cell phones and pagers before beginning.
Additional Design Considerations for Training Manuals

Design your training manuals with a professional look and “feel:”

- Create your own standardized template for designing, developing and preparing training manuals and content notes pages. Define and present each element of the training content in clear, consistent sections. Choose a formatting and design structure which supports both the teaching needs of instructors and learning needs of training participants.

- Ensure that both training manual contents and design elements encourage and support active, practical hands-on learning by including participatory exercises, interactive handouts, and other adult learning-based support materials.

- Along with including a table of contents in the front of a manual, use additional indexing methods such as tab dividers and sequential page numbering to facilitate fast, easy location of specific sections or materials.

- Use charts, graphs and images (photos, illustrations, etc.) to communicate or reinforce key concepts and critical content. Graphics help maintain learner interest in and comprehension of educational material.

- Use desktop publishing programs to create customized covers. Make manual covers distinctive so they stand out. Put recipients’ names on the cover to personalize the manual and help convey the message that each participant is viewed as an individual.

Flip Charts/Posters

While “high-tech” electronic presentations are ever-more common, even “low-tech” presentation media like flip charts and posters can be effective when used creatively! Flip charts continue to be one of the simplest and most effective ways to communicate training messages.

Flip charts are economical, simple and easy to use, and do not require any electricity or telecommunications. They may be either prepared in advance or created spontaneously during a training session, for use as a visual aid for the presenter, or as a display of teamwork or small-group problem-solving. Flip charts are also extremely effective and useful for small-group activities that include problem solving, decision making, planning, team building, brainstorming, quality management and reaching consensus.

General Tips for Preparing Flip Charts

1. **Limit use of flip charts to small groups.** As visual aids, flip charts are most ideal for smaller groups of not more than 25 participants.

2. **Prepare visuals well in advance.** Making "prepared" flip charts can take a considerable amount of time, so start preparing them early. Allow enough time to review your charts and make any changes or corrections prior to use in your
training session. For drawings or diagrams that you will construct during your presentation, create light pencil outlines on the chart paper in advance. Use only the top 2/3rds of the paper, and leave at least one blank page between each prepared page for space to add extra details or audience comments during your presentation. Tab the pages with post-it notes for easier turning.

3. **Print neatly and legibly!** Print rather than write. Use chart paper with grid lines to keep text aligned. Lightly write your text in pencil first before using the actual flip chart markers. This will allow you to make any adjustments with text spacing and any figures you will be drawing. If you generally do not print neatly, ask someone who does to prepare flip charts for you.

   a. Use big letters, but not all capitals – a combination of upper- and lower-case letters is easier to read.
   
   b. Make letters large and bold enough to be seen. Each character should be at least three inches tall.
   
   c. Have no more than seven words on each line and no more than seven lines to a sheet.
   
   d. Use whiteout to correct any small mistakes. For larger areas, cover the mistake with a double layer of flip chart paper and correct the error.
   
   e. If you are tasking participants with writing on chart paper for later report-back to the group, provide ruled paper and remind them to print large, legible letters.

4. **Use color appropriately:**

   a. Text should be in a dark color, such as black or blue, so it can be easily seen. Reserve bright colors for charts and diagrams.
   
   b. Use more than one color for contrast and to distinguish systems or types of information. Black and blue are the best; avoid yellow, orange, pink or pastels, which are difficult for the audience to see.
   
   c. Avoid using too many colors. Using one dark color and one accent color works best. Use red only for emphasis.

5. **Use the right equipment:**

   a. **Paper and pad:** Make sure the pad has perforations at the top to allow easy removal of sheets, especially if you plan on tearing off the chart and mounting it on the wall.
b. **Markers:** Use markers made specifically for flip charts, which do not bleed through chart paper. Avoid scented markers.

c. **Display stand/mounting:** Make sure that your flip chart and the stand match. There are several types of stands available; some chart paper pads have holes to match the stands. The best stands have clamps on the top of them to hold the pad in place. If you plan to mount used pages on the wall, find out what is allowed and what sticks on the mounting walls. (Some wall surfaces repel many kinds of tape.) If you do not know the situation, come with a surplus of tack pins and tape.

d. **Portability:** If you have to travel with prepared flip charts, use self-sticking paper, and carry them rolled up in a mailing tube.

**Using Flip Charts Effectively and Creatively**

Although flip charts are a “low-tech” presentation visual aid medium, you can use them in a variety of ways to support and encourage active learning:

1. When you are writing on flip charts during a presentation: Write, then turn and talk to avoid talking to the flip chart with your back to the audience. Always stand to one side so your audience can see what you have written. Put your marker down when you are not using it.

2. Title each page with a short topical heading. Use different colors for headings and key points you wish to highlight.

3. Consider using two easels – one with pre-prepared charts, and one for extemporaneous use as you go through your training session.

4. Make sure you have plenty of extra paper to write down and respond to input from participants.

5. Use flip charts as “graffiti sheets:” post chart paper prepared with prompt questions around the room, and ask participants to take a marker and respond to the questions.

6. For large groups, post flip chart paper around the room and encourage participants to write down any questions they may have on the posters during breaks. You can then use these questions to begin an informative question-and-answer session.

7. Flip chart paper is indispensable for group activities. Provide groups with chart paper and markers to respond to case study questions, chart progress towards completing a task or activity, or record ideas as an expression of group thinking.

**Samples, Models, and Mock-Ups**

Samples, models and mock-ups are simply objects, pictures, or documentation that may be handed around in class, but which do not
constitute a handout. Instructors may pass around objects for observation to help illustrate key points or concepts. Some examples are:

- HIV life cycle model
- Hepatitis infection liver model
- MRI scans, X-rays and other imaging.

Remember that individuals focusing on the circulated item will miss some of the accompanying lecture – it can be more effective to leave models and samples out for learners to examine during a break.

**Multimedia: Trigger Tapes/Video Clips, Audio, DVD, CD, etc.**

Multimedia such as videos, DVDs and audio tapes can be useful ways of reinforcing, introducing or filling in detail on the subject being taught. Multimedia may be used to supplement a lecture or presentation, with participants free to take notes as they choose. Medic clips can also be used with interactive worksheets which prompt learners to fill in details from the visual or aural experience.

When using media clips as “triggers” always make sure you allow sufficient time for discussion both before and after the showing. Participants should be prepared with discussion questions and key points to look or listen for before they watch a trigger clip.

Multimedia is subject to unanticipated technology failures, so if you are in doubt, leave it out! Always check your equipment and practice running it in advance.

**Presentation Software**

Presentation software (e.g., Microsoft PowerPoint®) is now considered “industry standard” for preparing visuals for electronic projection. Presentation software is particularly helpful for:

- organizing and displaying content, including graphics, text and media;
- preparing speaker notes; and,
- generating documents which may be used as handouts.

In addition to content and design issues, trainers should strongly consider how electronic presentations will be used during the training session. Use electronic presentation software to support the delivery of your message, not to give the presentation for you or demonstrate your ability to use flashy media!

**Guidelines for Effective Electronic Presentation Visuals**

The goal of your presentation is education, so your presentation materials and media
should be prepared and delivered in service to that goal of communicating ideas and information that learner can use. Following are some general rules and helpful tips for preparing and delivering effective electronic slide presentations.

General Design and Usage Considerations
Simplicity is the key to a great electronic presentation. Slides should be simple, direct, concise, and easy to read. They should make a strong visual impact that enhances – not distracts from – the presentation:

- Include only the most vital information: the audience should be able to take in a slides' meaning at a glance.
- Use one slide for every two minutes of speaking time. For example, if you are scheduled to give a one-hour presentation, use no more than 30 slides. When presenting study data, try to limit slides to two slides per study.
- Limit the use of special effects, which tend to distract viewers. Animation should be used only when it has a purpose. Transitions between slides should be kept simple and should be consistent throughout the slide deck. Never use random transitions.
- Keep slide layouts and page orientation consistent: “landscape” orientation is recommended. Standardize text, figures and colors throughout the entire slide deck.
- Use caution when considering or choosing pre-made design templates: many tend to be too busy or intricate for projection.
- Use graphics, images, sounds, and other multimedia content appropriately to enhance your slide contents, not overwhelm it.
- Use sufficient margins and leave ample empty space to avoid overcrowding.
- Use professional language – no jargon or slang. Always proofread slides for spelling and grammar and correct errors before presenting.

Five Realities of Electronic Presentations
1. Your presentation will never look exactly like it does on your computer monitor when you project it on a screen!
   ALWAYS “hook and look:” hook up an LCD projector and see what every slide looks like when projected onto a screen. Make adjustments in font size and color as needed.

2. Your audience will never remember anything you say if the technology fails:
   ALWAYS have a backup plan!

3. No amount of expert data, fancy artwork or showy animation can hide presenter inexperience with technology. Always learn the basics of proper use, or consider not using it at all.

4. It is never, ever OK to say, “I know you can’t read this, but….” ALWAYS move excessive slide text into your speaker notes.

5. Slides are only reminders of what and when to speak: your audience is there to listen to and learn from YOU, not read slides off the screen.
Slide Organization and Format

Simple, brief outline formats are easiest to follow - do not overload slides with too much information. Limit each slide to one topic and include only the basic, necessary information. Communicate your presentation material as specifically as possible – your intended content should be evident:

- **Use the “7x7 Rule:”**
  - No more than seven lines of text.
  - No more than seven words per line – less if the slide includes graphics.
- Title each slide and keep titles in the same layout format and location. Titles should be brief, attention-grabbing “headlines” that focus learners’ concentration on the slide content.
- Use key words and bullet points. Bullets imply no significant order or specific preference; use numbers only when ranking or presenting a sequence.
- Limit graphics to one or two per slide – too many images can be distracting.

Font Size and Style

Visibility and clarity are essential for effective presentation slides. Make sure your audience can see AND read your slides:

- Font sizes should be large enough to be viewed comfortably from anywhere in the room:
  - Titles: 48 – 54 points.
  - Text: 28 – 32 points.
- The absolute minimum font size for text is 24-point: Any font size below 24-point will be unreadable.
- Use plain font styles that are easy to read. Avoid using multiple typefaces: choose one font family and stick to it. *“Sans serif” fonts such as Arial, Helvetica, Tahoma or Verdana are best for clarity.* If you *really* need more fonts, use no more than two: one sans serif and one serif (e.g., Times Roman, New York, Book Antiqua).
- Only capitalize the first letter of line of text or bullet point. Avoid using all uppercase letters, which take up more space and are more difficult to read.
- Use font formatting for emphasis (bold, shadow, etc.) sparingly. Use Italics only when essential (e.g., Latin names).
Backgrounds and Color

Visibility and consistency are the most important considerations when choosing backgrounds and colors. LCD projectors do not show colors as clearly or distinctly as computer monitors – what looks nice on your monitor will look completely different when projected, and may not even be suitable for projection at all!

- Choose a plain, solid background that creates high contrast between the background and the text, and keep it consistent throughout the slide deck.

- Choose a selection of standard, complementary (contrasting) colors and keep them consistent throughout the slide deck.

- Avoid using too many different colors or excessive use of color – keep your color palette to no more than two or three colors.

- Choose color combinations that make the text easy to read:
  
  ✓ Solid, dark colors on light backgrounds or solid, light colors on dark backgrounds.

  ✓ Avoid using red! Dark colors like red on a dark background will NOT be readable.

  ✓ Avoid red/green combinations since colorblind people may not be able to distinguish the colors.

  ✓ Avoid color palettes that are too close in hue (e.g., blue text on dark blue background) or too close contrast although they may be a different color (e.g., purple text on dark blue background.)

  ✓ Use solid colors rather than pastels, which will washout when projected. Solid colors convey a clear, bold message.

- Avoid the use of fancy fill patterns, especially on charts and graphs.

Graphs and Charts

Graphs (or charts, as they are called in PowerPoint) are a powerful way to explain data or present information visually. Try to present information in graphical form whenever possible: data presented in visuals is much easier to comprehend and retain than plain text. Once again, to be most effective your audience must be able to both SEE the graphic clearly, as well as UNDERSTAND what it says. Choose the type of graph or chart that is best suited for the information you will present, and use care when formatting graphic design elements. Following are some suggestions and tips for working with graphs and charts:
Visual information should be instantly recognizable. Label all charts and diagrams clearly. Make figures large and bold.

Keep graphs as large, simple and easy to read as possible:
- 4 – 6 columns maximum per graph.
- 2 – 3 curves maximum per graph.
- 5 vertical columns or bars maximum per graph.
- Use two-dimensional chart types; 3-D charts are difficult to read on screen.

Use color to differentiate elements, but limit colors to no more than five per chart or graph.

Use solid, primary colors instead of fill patterns for bars or pie slices. Patterns are more difficult to read and cause confusion; solids convey a clear, bold message.

Label all key elements (category names, axes values, etc.) boldly and clearly.

Do not put more than two graphs, charts or images on a slide.

Tables should be simple, neat and uncluttered.

When you project graphics such as charts and tables, explain to the audience what they are seeing: do not assume they will automatically know what you are trying to communicate. In addition to giving details about the data, also be sure to explain the
different elements of the graphic – components, axes values, etc. Make clear the significance of the graphic and how it is related to the key concepts you are trying to teach.

Images
Other images (photographs, illustrations, diagrams, cartoons, etc.) add variety and interest to a slide deck, and should be used judiciously. Try to avoid decorative embellishment just because you can, and remember that if your clip art comes from a standard software package, your audience has seen it before! If you use images:

☑ Choose images carefully, considering:
  ✔ Is it clear and visible to the entire audience?
  ✔ Is it simple, accurate, and relevant to your material/presentation?

☑ Avoid diagrams with massive amounts of text. Keep text to a minimum on slides with images.

☑ Choose clip art from the same family and with the same color scheme as your slide deck.

☑ Demonstrate only one key concept per visual.

Animation and Slide Transitions
Use animated graphics and automated slide transitions carefully: they can easily become too complex and distracting to viewers. Keep to basic animation and slide transitions rather than fancy custom animation. Be consistent with slide transitions throughout the presentation slide deck. Never use "random" transitions.

Using Electronic Presentation Software Effectively
No amount of fancy slide design can hide presenter inexperience with the technology. In addition to slide design considerations, here are some important points about using electronic presentation software effectively:

1. ALWAYS preview and practice with your slide deck hooked up to an LCD projector, not just on your computer monitor. Remember, it will NEVER look on the screen like it does on your computer!

2. ALWAYS test your equipment in advance. Be sure everything is set up and ready before the start of your presentation. Adjust the focus or position of the projector or screen as needed.

3. Find the best place to stand so that everyone in the audience will be able to both you and the screen. Make sure you stand so that learners’ attention is not split between you and the screen. Always face the audience, not the screen.

4. Speak louder than you normally would since the visuals will be competing for your learners’ attention. If the room is darkened, more speaking volume is required in order to hold audience attention.
5. When showing graphic or tabular data, pause and give learners a few seconds to look at the graphic, then direct their attention and provide interpretation: “This (graph, chart, table, diagram, etc.) shows….”

6. Do not let the slides be a distraction or take over your presentation: the audience is there to learn from YOU, not from watching slides.
### Purpose of Materials Checklist

Answer the questions below for all materials to be created or collected, based on what needs to be covered and accomplished in the training session.

<table>
<thead>
<tr>
<th></th>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>What is the material’s primary purpose?</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>What is the material’s secondary purpose, if applicable?</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>What objectives or performance standards should the materials help users achieve?</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Will learners use the material throughout a workshop or course?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>5</td>
<td>If yes, will the material be supplemented with additional tools, resources, media, or interactive activities?</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>After the course, will learners use the material (or parts of) as a reference tool?</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Will this be the sole training tool needed for a short workshop?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>8</td>
<td>Will learners use the material for self-study?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>9</td>
<td>Will materials be used from beginning to end, or for start-and-stop use?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>10</td>
<td>Will materials need to be changed or updated periodically?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>11</td>
<td>Will materials be made available for distribution?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
</tr>
</tbody>
</table>

**Notes:** *Use/purpose; research needed; who will find, create, etc.?*
Resources and References

American Society for Training and Development
http://www.astd.org/

Businessballs Free Work and Life Learning
http://www.businessballs.com/training.htm

Microsoft Office Online: PowerPoint

Public Speaking Tips
http://speaking-tips.com/

http://www.learningandteaching.info/teaching/handouts.htm


