

Graduate Teaching Assistants



Session 4

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Enhancing learning and Motivation

Here's something for you to try. (C'mon, I'll wait for you to get out of your chair!)

Stand up and stretch your right arm out behind you, as far as it will go. (You may turn your body as you do so.) Now, come back to center and relax your arm.

Next, visualize doing this again. Think about taking your arm further back. Then do it again, but really "stretch" your arm back as far as you can as you do it.

Did you notice this time that you could take your arm back much further? To many, this exercise illustrates the powerful force that our intent exerts over perceived reality. (It can change or "stretch" our limits.) To me, as a teacher of adults, it serves as a metaphor for adults and learning. As learners, we thrive on challenges that are slightly beyond our reach, but reachable. In fact, research is clear that adults learn best when provided with learning tasks that really make them stretch.

Here are ways trainers can help adult learners *stretch*.

Make it challenging, but present it simply. One of the biggest challenges we have as trainers is to present complex subjects simply. Strive to say things in the simplest possible way. This involves real practice for trainers, not just a quickie "run-through." One way to challenge learners is to periodically "shut up" during the training. Provide opportunities for learners to discover things themselves. Don't feel compelled to explain everything. Act as a facilitator to their process.

The excuse trainers often give for lecturing is "I have to cover the material!" Interestingly, this phrase can be taken in two ways. One of the meanings of "cover," after all, is to "cover up". By trying to cover everything, we confuse, muddy and even lose the core, "must-know" content elements.

I encourage you to use the **Acid Test** when developing a workshop or session: When time limitations and a desire for simplicity mean you can only include the "must know" elements of a topic, first figure out what those are. Then identify the "nice to know" elements. Strip them out. Leave them behind. You can inject meaningful small-group activities into the class time you gain at the end.

Make it fun. A inspirational trainer once said to me: "I make 'em laugh, and when their mouths are open, I throw something in for them to chew on!" Humor and creativity come from, and create, the same chemicals in the brain. People are much more open to learning when they're having a good time.

How to ensure the learning process is fun? Part of the answer is to have a good time yourself. If you consistently don't enjoy what's happening in the classroom, something's wrong. When you provide engaging, relevant learning activities (NOT "fluff") students have more fun. You will, too.

Organize chunks of material into one larger chunk.

Research shows that people's brains can only hold on to a maximum of nine items at a time. So trainers need to create meaningful chunks of training that condense several pieces of information into one. In their excellent book, "Telling Ain't Training," Stolovitch and Keeps provide this example:

- The four cardinal points of a compass are north (N), east (E), west, (W), and south (S). (*four items to store in memory.*)
- Remember this acronym: NEWS (*one item to store in memory, so it's easier to retain.*)

Identify which parts of your training you can "clump together" to make easily-managed, larger chunks.

Helping adult learners successfully stretch directly correlates to the amount of preparation we do. How willing are you to truly think things out, develop helpful metaphors, and ensure your own thinking is clear and logical? If you experience any "fog" about any portion of your topic, your learners will, too. One of Malcolm Knowles's essential principles for adult learning is "Respect." We, as trainers, must respect learners by truly being prepared--not only to "cover the material," but also to help them *stretch* their limits.

As a trainer, have you ever wondered why the information you provide often doesn't "stick?" Memory is more complicated than most of us think.

Think of an acronym for something you have learned:

Take this quiz to find out what you already know.

True or False?

1. Learners who can perform a new learning task well are likely to retain it. (T/F) ____
2. Immediate memory will dump input in 30 seconds or less. (T/F) ____
3. Aerobic exercise improves memory and cognitive function. (T/F) ____
4. Lifting weights improves memory and cognitive function. (T/F) ____

How well did you do? Here are the answers.

1. FALSE. Even if a learner performs a new learning task well, chances are, it will not be permanently stored in memory.
2. TRUE.
3. TRUE. Aerobic exercise builds grey and white matter in the brains of older adults. Research has also shown that more aerobically fit students perform better on cognitive tests.
4. FALSE. No studies have found a link between weight training and cognitive function.

3 Types of Memory

As a trainer, you want your participants to store important material into their long-term memories. But to get there, data must first pass through at least two other brain “portals.”

Immediate memory is simply how the brain deals with all the sensory input we receive. We can think of it as a temporary “clipboard.” Picture yourself calling the local pizza parlor. Chances are that after you dial, you forget the number—there is no reason to keep it on the clipboard.

We’d go crazy if we held onto all the data we receive. Immediate memory gives us the chance to receive it, then dispose.

Working memory is also a temporary memory. It’s where we consciously process the input we receive. We can think of it as a worktable where we take apart and re-arrange input in order to eventually delete or store it somewhere else. Conventional wisdom holds that we can process up to 7 chunks of data at a time.

Typically, we can only process input intently for about 10 minutes in working memory before losing focus. To prevent the material from fading, we must quickly use it in a different way. In a training situation, this could involve applying the information through an activity, like solving a case study, building a model, etc.

In order for information to be encoded into the learner’s long-term storage, it must meet two criteria:

- Does the information make sense? (Does the learner understand it?)
- Is the information relevant? (Can the learner connect it to past learning and current needs or interests?)

Think of the training YOU do. How well does it meet these 2 criteria?

How Can I Increase What My Students Retain?

Sadly, you can probably now guess that the odds are stacked against your learners' remembering everything you teach. Here are helpful techniques to help boost retention:

Make clear what the students will be able to do as a result of the lesson.

State the objectives at the beginning of class, and return to them as you move from one chunk of content to the next.

Provide prompt, specific, and corrective feedback.

Frequent, brief quizzes are more helpful to retention than one large test at the end of the unit.

Use Closures Frequently.

After presenting a chunk of material, use a closure. This helps enhance both sense and meaning, and facilitates the material's ride to long-term storage.

Remember that a closure is not a "review," in which the teacher does most of the work. In effective closures, students mentally rehearse and summarize the concepts you've covered.

Be sure to provide adequate time for reflection. Usually, 1-3 minutes to mentally review is enough.

Important: Follow these moments of reflection by getting students to stand, move, and deliver. Get them out of their chairs, standing face to face. Then instruct them to take turns explaining what they have learned to each other. Also-ensure accountability. Clarify that you will call on several students at random to hear their thoughts.

On your own, think of as many techniques as you can that could possibly make a session more effective for all or as many as possible.

- "Take two minutes to complete the ten true-false items on the questionnaire that I'm distributing. We'll use your answers as part of today's lecture." (psychology lecture)
- "How many of you believe that high-rise housing means high-density housing?" (architecture lecture)
- "Nearly three-quarters of all assaults, two-thirds of all suicide attempts, half of all suicides, and half of all rapes are committed by people under the influence of what drug? How many think crack? Heroin? Marijuana? None of the above? The correct answer is alcohol." (social welfare lecture)

Vary your opening.

Any dramatic technique loses impact upon repetition.

Announce the objectives for the class.

Tell your students what you expect to accomplish during the class, or list your objectives on the board. Place the day's lecture in context by linking it to material from earlier sessions.

Think about the subject you are going to or do teach, suggest a provocative question, startling statement, unusual analogy, striking example, personal anecdote, dramatic contrast, powerful quote, short questionnaire, demonstration, or mention of a recent news event that you could use in your next class.

Discuss with your partner their idea and yours. What do they think and what do you think?

Committing Learning to Long-Term Memory

Have you ever taken a useful training course, read a course book, or learned a new skill, but then forgotten almost everything about it within a few weeks?

When your learners don't have the chance to apply new knowledge, it's easy for them to forget what they have learned. This is why it's so important to get your students in the habit of not only taking notes, but also reviewing what they have learned regularly, so that they can remember it in the long-term.

In this section, we'll look at the benefits of reviewing information, and we will explore several strategies that you can teach your students to allow them to do this effectively.

When students learn new information, they remember it best immediately after they have learned it. They then forget details as time passes. Even after a few days, they may be able to recall only a little of what they initially learned.

So, to remember what they have learned over the long-term, they need to be able to move information from their short-term memory (what we're currently thinking about or aware of) into their long-term memory.

To do this, they need to review what they have learned, and they need to do this often. It takes time to commit information to our long-term memory, and regularly reviewing information helps us do this.

Tip: As well improving their learning, these strategies are also useful in day-to-day life and University situations, such as when they want to remember certain course details or recall information for a presentation, assignment or test.

How to Review Information Effectively

Let us now look at some strategies that you can teach your students to move knowledge from their short-term memory to their long-term memory.

1. Review Immediately

This can be achieved by spending a few minutes reviewing material immediately after they have learned about it. This helps them confirm that they understand the information, and reduces the time needed to "relearn" it when they review it again in the future.

As they re-read material, teach them to use effective **reading strategies** to make sure that they are reading efficiently and intelligently. For example, if they have just read a chapter in a course book, they may only need to review section headings and the conclusion to remember the content of the chapter.

2. Rewrite Materials

Rewriting and reorganising their notes is another great way to review information.

This might seem like a waste of time at first. However, rewriting can be a very effective method for reinforcing what they have learned. Research shows that the act of rewriting notes helps us clarify our understanding.

One way to do this is to put the information they have learned into **Mind Maps**. These are especially good for rewriting notes, because they force them to make connections between concepts and themes.

They can also simply jot down key points in bullet form, or tidy up any original notes.

3. Schedule Reviews

Remember – it takes time to move information to your long-term memory. So, it's important to review information frequently.

It's best to carry out a review after a day, after a week, and after a month; and then to review their notes every few months thereafter.

Make sure that they schedule time for their reviews, otherwise they will just get pushed aside when urgent issues come up. Also, put these on their To-Do List, or into their Action Program if they have one..

They will also find it useful to write notes during these regular reviews. If they jot down what they can remember about the subject, and then compare these notes with their original ones. This will show them what they have forgotten, and will help them refresh their memory.

Tip 1: Reviewing learned information is the final step in the **SQ3R** process. SQ3R (which stands for Survey, Question, Read, Recall and Review) is a particularly potent method for assimilating information, and for getting the greatest benefit from a learning experience.

Tip 2: Sleep also helps memory – research shows that we remember more when we get a good night's sleep.

SQ3R - Increasing their retention of written information

SQ3R is a useful technique for fully absorbing written information. It helps students to create a good mental framework of a subject, into which they can fit facts correctly. It helps them to set study goals. It also prompts them to use the review techniques that will help them to fix information into their long-term memory.

By using SQ3R to actively read a document, they can get the maximum benefit from their reading time.

The acronym SQ3R stands for the five sequential techniques they could use to read information, be it notes they have made or a book, journal or article they are reading:

- **Survey:**
Survey the document: scan the contents, introduction, chapter introductions and chapter summaries to pick up a shallow overview of the text. Form an opinion of whether it will be of any help. If it does not give you the information you want, discard it.
- **Question:**
Make a note of any questions on the subject that come to mind, or particularly interest you following your survey. Perhaps scan the document again to see if any stand out. These questions can be considered almost as study goals – understanding the answers can help you to structure the information in your own mind.
- **Read:**
Now read the document. Read through useful sections in detail, taking care to understand all the points that are relevant. In the case of some texts this reading may be very slow. This will particularly be the case if there is a lot of dense and complicated information. While you are reading, it can help to take notes in **Concept Map** format.
- **Recall:**
Once you have read appropriate sections of the document, run through it in your mind several times. Isolate the core facts or the essential processes behind the subject, and then see how other information fits around them.
- **Review:**
Once you have run through the exercise of recalling the information, you can move on to the

stage of reviewing it. This review can be by rereading the document, by expanding your notes, or by discussing the material with colleagues. A particularly effective method of reviewing information is to have to teach it to someone else!

Mind Maps

Mind Maps were popularised by author and consultant, Tony Buzan. They use a two-dimensional structure, instead of the list format conventionally used to take notes.

Mind Maps are more compact than conventional notes, often taking up one side of paper. This helps you to make associations easily, and generate new ideas. If you find out more information after you have drawn a Mind Map, then you can easily integrate it with little disruption.

More than this, Mind Mapping helps you break large projects or topics down into manageable chunks, so that you can plan effectively without getting overwhelmed and without forgetting something important.

Using Mind Maps Effectively

- Once you understand how to take notes in Mind Map format, you can develop your own conventions for taking them further. The following suggestions can help you draw impactful Mind Maps:
- Use Single Words or Simple Phrases, this ensures that facts are conveyed in the correct context, and in a format that is pleasant to read.
- In Mind Maps, single strong words and short, meaningful phrases can convey the same meaning more potently. Excess words just clutter the Mind Map.
- Print Words. Joined up or indistinct writing is more difficult to read.
- Use Colour to Separate Different Ideas. This will help you to separate ideas where necessary. It also helps you to visualise the Mind Map for recall. Colour can help to show the organisation of the subject.
- Use Symbols and Images. Pictures can help you to remember information more effectively than words, so, where a symbol or picture means something to you, use it. (You can use photo libraries like iStockPhoto or Google images to source free images.)
- Using Cross-Linkages. Information in one part of a Mind Map may relate to another part. Here you can draw lines to show the cross-linkages. This helps you to see how one part of the subject affects another.

Mind Maps are useful for:

- Brainstorming - individually, and as a group.
- Summarising information, and note taking.
- Consolidating information from different research sources.
- Thinking through complex problems.
- Presenting information in a format that shows the overall structure of your subject.
- Studying and memorising information.

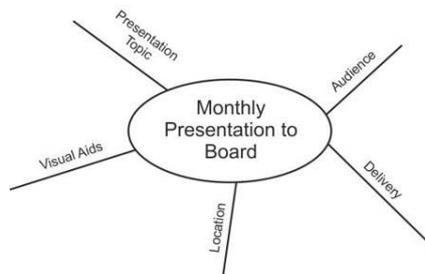
Drawing Basic Mind Maps

To draw a Mind Map, follow these steps:

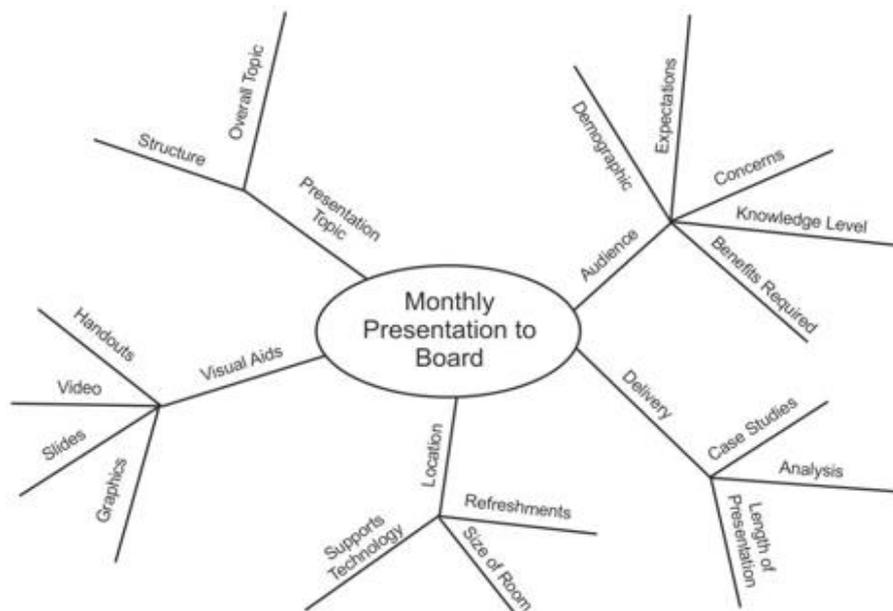
- Write the title of the subject you're exploring in the centre of the page, and draw a circle around it.
- (My simple example shows someone brainstorming actions needed to deliver a successful presentation.)



As you come across major subdivisions or subheadings of the topic (or important facts that relate to the subject) draw lines out from this circle. Label these lines with these subdivisions or subheadings.



As you "burrow" into the subject and uncover another level of information (further subheadings, or individual facts) belonging to the subheadings above, draw these as lines linked to the subheading lines.



TIME MANAGEMENT

EFFECTIVENESS
ACTION PLANS
PRIORITIES
GOALS
DIARIES
MEETINGS

CLARITY
MOTIVATION
APPRECIATION
SIMPLIFICATION

MONITORING
PROGRESS
FOLLOW-UP
BALANCE
NEGOTIATION

COMMUNICATION
FEEDBACK
SUPPORT
PRAISE
REVIEW
CORRECTION
IMPROVE

ERGONOMIC
USER-FRIENDLY
EFFICIENT
VALUE-ADDED
POSITIVE

KEY ISSUES
METHODS
CHECK POINTS
DEADLINES

SMART
SPECIFIC
MEASURABLE
ATTAINABLE
RELEVANT
TIME-BOUND

5W1H
WHO
WHAT
WHERE
WHEN
WHY
HOW

MINDTOOLS
SPEEDREADING
MINDMAPS

FASTER
SMARTER
BETTER
URGENT VS. IMPORTANT
WASTAGE

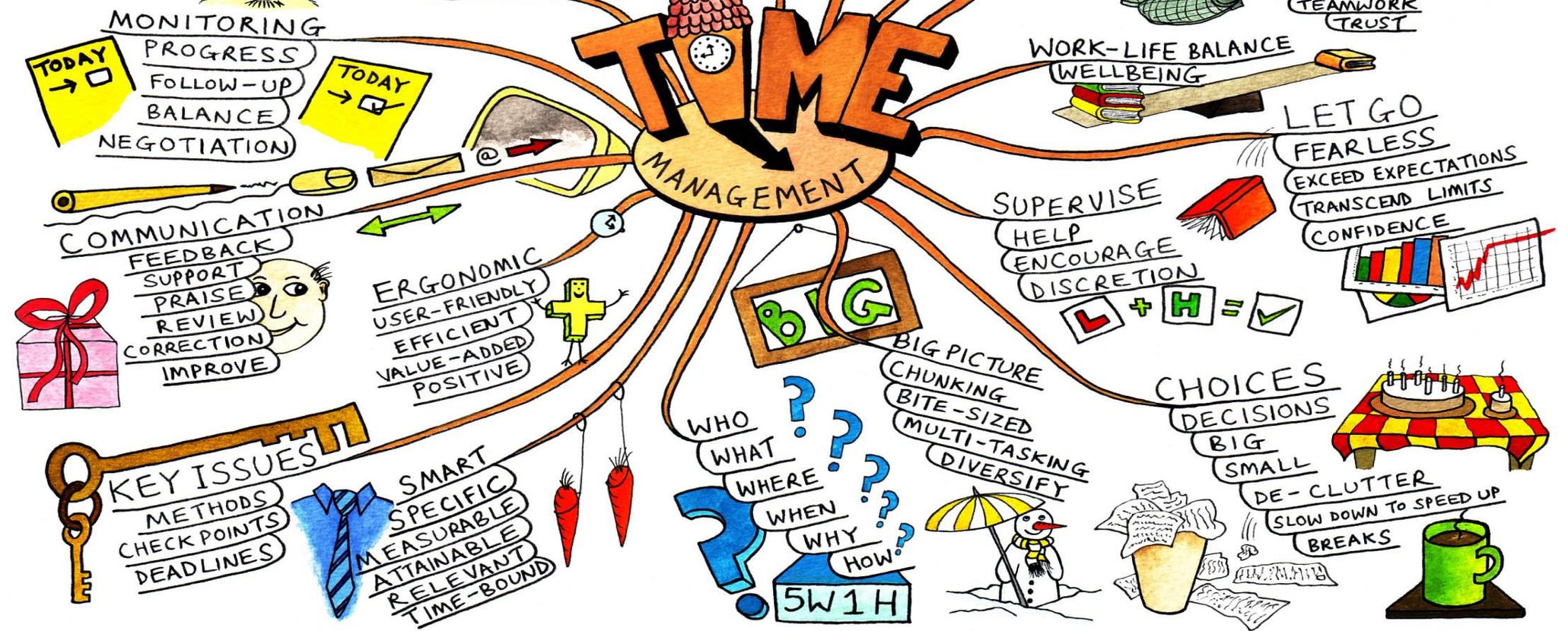
DELEGATION
TO-DO OR NOT TO-DO
CAREER
LIFE
COMFORT ZONES
GUIDANCE
TEAMWORK
TRUST

WORK-LIFE BALANCE
WELLBEING

LET GO
FEARLESS
EXCEED EXPECTATIONS
TRANSCEND LIMITS
CONFIDENCE

SUPERVISE
HELP
ENCOURAGE
DISCRETION

CHOICES
DECISIONS
BIG
SMALL
DE-CLUTTER
SLOW DOWN TO SPEED UP
BREAKS



Evaluating your teaching

STUDENT-TEACHER'S SELF-EVALUATION RECORD AND ACTION PLAN

Student's name:

Date:

To be completed by the student-teacher at the end of the teaching session:

- Provide both positive and negative feedback and give examples from your session to illustrate your points
- Suggest how you intend to improve future sessions and identify your future personal development aims

Planning: Did your plan meet the needs of every learner during the session? Evaluate how your plan met individual needs.

Justify your selection of resources for the session. Where possible, analyse how effective the resources were in supporting the session delivery.

Teaching: Justify and evaluate your selection of teaching and learning approaches for the session.

Evaluate the effectiveness of your teaching and suggest how you would modify the session to make it more effective.

Evaluate your own communication skills and identify how you could improve. How could you overcome any barriers to effective communication next time?

Explain how you used feedback and questioning In your session to support the assessment of learning. Where possible, analyse how the feedback and questioning contributed to learning.

Using feedback from others (including learners, peers and your tutor) evaluate how you could improve your own practice. Reflect on how effective others thought you were and suggest modifications to your teaching as a result.

PLANS FOR PERSONAL DEVELOPMENT. From your evaluation above, what main points will you take forward to help with being a more effective teacher next time?

Student-teacher's signature:

Date:

Learning styles

Most adult learners develop a preference for learning that is based on childhood learning patterns (Edmunds, Lowe, Murray, & Seymour, 1999). Several approaches to learning styles have been developed, one being based on the senses that are involved in processing information. A knowledge of students different learning style is a fundamental step prior to beginning any educational activity. Determining the learning styles of your students will help identify the preferred teaching under which learning is more likely to take place and be effective (Richardson, 2005). The most frequent learning styles are visual, auditory, and kinaesthetic learners.

Visual learners

prefer seeing what they are learning. Pictures and images help them understand ideas and information better than explanations (Jeziarski, 2003). A phrase you may hear these learners use is "The way I see it is." The teacher needs to create a mental image for the visual learner as this will assist in the ease of holding onto the information. If a visual learner is to master a skill, written instructions must be provided. Visual learners will read and follow the directions as they work and will appreciate it even more when diagrams are included.

Auditory learners

prefer to hear the message or instruction being given. These adults prefer to have someone talk them through a process, rather than reading about it first. A phrase they may use is "I hear what you are saying." Some of these learners may even talk themselves through a task, and should be given the freedom to do so when possible. Adults with this learning style remember verbal instructions well and prefer someone else read the directions to them while they do the physical work or task.

Kinaesthetic learners

want to sense the position and movement of the skill or task. These learners generally do not like lecture or discussion classes, but prefer those that allow them to "do something." The phrase this group of people will often use is "I feel like you are" These adults do well learning a physical skill when there are materials available for hands-on practice.

Q: Why is it important for adult educators to know Adult Learning?

A: Adults and children have different learning styles and different needs. Very often, adults are in educational settings for work related purposes. It is important for adult educators to know what participants needs are so that they can make the sessions as applicable as possible.

Q: What are the differences between adults and children as learners?

A: There are a number of differences in the ways that adults and children learn. The chart below provides a detailed breakdown of these differences.

Differences Between Children and Adults as Learners	
Children	Adults
Rely on others to decide what is important to be learned.	Decide for themselves what is important to be learned.
Accept the information presented at face value.	Need to verify the information based on their beliefs and experiences.
Expect what they are learning to be useful in their long term future.	Expect what they are learning to be immediately useful.
Have little or no experience upon which to draw, they are relatively "clean slates."	Have much past experience on which to draw may have fixed viewpoints.
Have little ability to serve as a knowledgeable resource to teacher or fellow classmates.	Have significant ability to serve as resource to the trainer and fellow learners.

Adapted from "Train the Trainer," 2nd Edition, Itner & Douds, 1997

As a trainer, how do I translate Adult Learning into practice?

There are a number of ways you can use Adult Learning Theory to maximize the impact of training. The chart below details some of the actions you can take.

Translating Theory Into Practice		
Theory	Into	Practice
Adults remember 10% of what they hear, 65% of what they hear and see and 80% of what they hear, see and do.	➡	To increase retention, provide both auditory and visual stimulation and allow for practice.
The greater the degree of relevance to the individual, the greater is the degree of learning.	➡	Provide examples that are directly related to expectations or exam questions.
Adults need to be able to integrate new ideas into what they already know if they are going to be able to retain the information.	➡	Capitalize on the experiences of the audience to build new concepts; structure lessons to move from the known to the unknown.
Adults prefer self-directed and self-paced instruction to group learning led by an instructor.	➡	If the training is done in a group led by the instructor, build in independent activities.
Adults bring a great deal of experience to training.	➡	Capitalize on the experiences by facilitating discussions.

Adapted from "Train the Trainer," 2nd Edition, Itner & Douds, 1997

It is important to become acquainted with the different learning styles of adult learners for two purposes:

1. To discover your own personal learning style and how it influences you as a trainer,
2. To be able to design lessons that incorporate activities that meet the needs of all types of learners.

Complete the following questions about your next session:

Choose a course topic you are likely to teach in the near future.

List the objectives of the course.

How would you incorporate the needs of **Kinaesthetic learners into the course?**

How would you incorporate the needs of **Auditory learners into the course?**

How would you incorporate the needs of **Visual learners into the course?**

Allow Your Students to Experience What They're Learning

Experience can take many forms. Any activity that gets your students involved makes the learning experiential. This includes small group discussions, experiments, role playing, skits, building something at their table or desk, writing or drawing something specific – activity of any kind. Activities also keep people energized, especially activities that involve getting up and moving about.

The other aspect of this principle is honoring the life experiences your students bring to the classroom. Be sure to tap into that wealth of wisdom whenever it's appropriate. You'll have to be a good timekeeper because people can talk for hours when asked for personal experiences, but the extra facilitation needed will be well worth the gems your students have to share.

Ice breakers are the best way to help your students get to know each other, to break the ice on the awkward first day. It's even more important to choose an ice breaker that won't backfire on you,

with adult students. Most adults don't want to play silly games. Choose one of the top ten or develop your own. Remember that ice breakers are also a great way to energize your classroom when the doldrums set in, or to introduce a new topic. Be creative!

1. Marooned.
2. Bingo.
3. Table topics
4. The power of story
5. Expectations
6. 2 minute mixer
7. Photo Scavenger Hunt
8. Where in the World?
9. If You Had a Magic Wand
10. If You Had Taken a Different Path

These are some examples of not just ice breaker for beginning of sessions but can also be developed for topics that you may be teaching.