

Chapter 3 - How we learn (auditory, visual, tactual)

The following test will help you understand how you learn best. This information will teach you how information should be presented so that your tutee will be able to process it the way he/she learns best. Most people depend on one or two of the following:

- A visual learner needs to **see** information.
- An auditory learner needs to **hear** information.
- A tactual learner needs to **involve touch** in the learning process.

Take the following test to see which kind of learner you are. (*Barsch Learning Styles Inventory*, no permission needed)

Self-test: Learning styles

Place a check in the appropriate box after each statement.

	Often	Sometimes	Seldom
1. Can remember more about a subject through listening than reading.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Follow written directions better than oral directions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Like to write things down or take notes for visual review.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Bear down extremely hard with pen or pencil when writing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Require explanations of diagrams, graphs, or visual directions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Enjoy working with tools.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Are skillful with and enjoy developing and making graphs and charts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Can tell if sounds match when presented with pairs of sounds.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Remember best by writing things down several times.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Can understand and follow directions on maps.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Often	Sometimes	Seldom
11. Do better at academic subjects by listening to lectures and tapes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Play with coins or keys in pockets.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Learn to spell better by repeating the letters out loud than by writing the word on paper.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Can better understand a news article by reading about it in the paper than by listening to the radio.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Chew gum, smoke, or snack during studies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Feel the best way to remember is to picture it in your head.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Learn spelling by "finger spelling" the words.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Would rather listen to a good lecture or speech than read about the same material in a textbook.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Are good at working and solving jigsaw puzzles and mazes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Grip objects in hands during learning period.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Prefer listening to the news on the radio rather than reading about it in a newspaper.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Obtain information on an interesting subject by reading relevant materials.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Feel very comfortable touching others, hugging, handshaking, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Follow oral directions better than written ones.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Scoring procedures

Often: 5 points
Sometimes: 3 points
Seldom: 1 point

Place the point value on the line next to its corresponding item number. Next, add the points to obtain the preference scores under each heading.

VPS - Visual Preference (reading-seeing)
APS - Auditory Preference (lectures-hearing)
TPS - Tactual Preference (written-touching/doing)

Visual		Auditory		Tactual	
No.	Pts.	No.	Pts.	No.	Pts.
2	_____	1	_____	4	_____
3	_____	5	_____	6	_____
7	_____	8	_____	9	_____
10	_____	11	_____	12	_____
14	_____	13	_____	15	_____
16	_____	18	_____	17	_____
20	_____	21	_____	19	_____
22	_____	24	_____	23	_____
VPS =		APS =		TPS =	

Your highest score on the three scales (visual, auditory, and tactual) reflects how you learn best. You can use this information to help yourself and to help your tutee modify a learning situation to best match his/her own style. Here are some suggestions:

If you're a **visual learner**, you need to see information.

- Take good notes (see Cornell method, Ch. 6).
- Highlight what you read.
- Review your notes regularly.
- Make charts and graphs or pay close attention to the ones handed out.
- Write things down that you're trying to learn.
- Other ideas: _____

If you're an **auditory learner**, you learn best by hearing information.

- Use a tape recorder when appropriate.
- Read material out loud to yourself.
- Determine the length of time you can concentrate (see article on concentration, Appendix);

respect that by taking frequent breaks. Get up and move around.

- Teach others, or, if no one's around, teach animals or toys.
- Other ideas: _____

If you're a **tactual learner**, you learn best by touching.

- Knead something when you study.
- Involve a tactile sensation when you read or write. This might mean using a pen that feels comfortable to hold or keeping a favorite stone nearby.
- Type on the computer keyboard.
- Translate what you're learning into something that can be touched.
- Determine the length of time you can concentrate (see article on concentration, Appendix); respect that by taking frequent breaks.
- Other ideas: _____

If your test scores reflect an equal balance of all learning styles, you're lucky! Use them all.



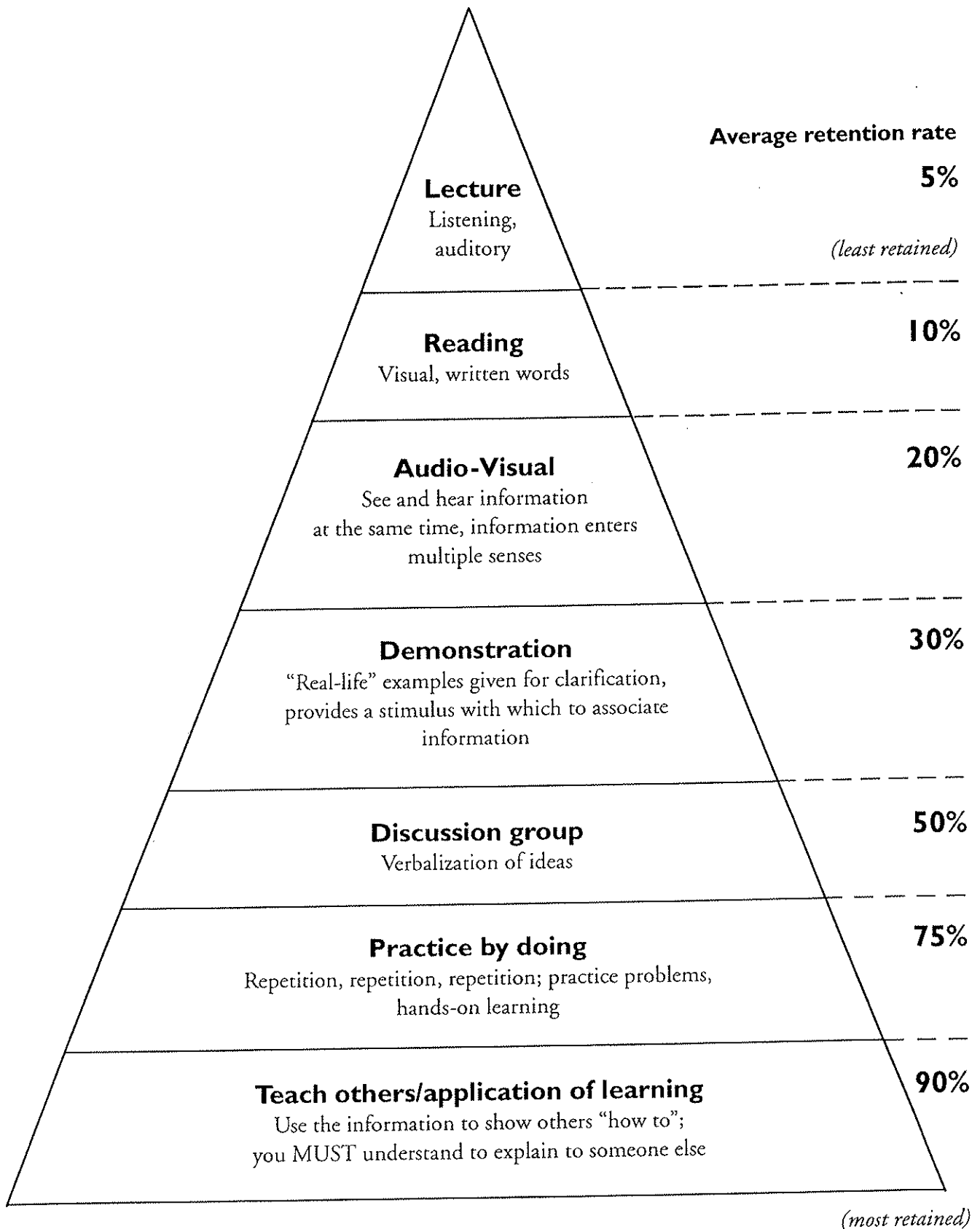
For students – major points about learning

1. Your brain was born to learn, loves to learn, and knows how to learn.
2. You learn what you practice.
 - Practice is making mistakes, correcting mistakes, learning from them, and trying over, again and again.
 - Making mistakes is a natural and necessary part of learning.
3. You learn what you practice because when you are practicing your brain is growing new fibers (dendrites) and connecting them (at synapses). This is what learning is.
 - You need time to learn because you need time to grow and connect dendrites.
 - “If you don’t use it, you lose it.” Dendrites and synapses can begin to disappear if you don’t use them (if you don’t practice or use what you have learned).
4. Your emotions affect your brain’s ability to learn, think, and remember.
 - Self-doubt, fear, etc., prevent your brain from learning, thinking, and remembering.
 - Confidence, interest, etc., help your brain learn, think, and remember.

Source: Smilkstein, R. (2002). *We’re Born to Learn: Using the Brain’s Natural Learning Process to Create Today’s Curriculum*, Thousand Oaks, CA: Corwin Press.



The learning pyramid



Adapted from: "The Freshman Seminar: Tips for Success,"
National Training Laboratories, Bethel, Maine



Study skill

How effective would each of the following activities be for your learning style?
What modifications might you undertake?

- keeping journals or logs
- participating in small group discussions
- doing math problems in a small group
- making a group sculpture
- listening to teacher directions
- writing papers
- going on a nature walk
- studying for a unit test
- other type(s) of academic work

How would this help your tutee?



Chapter 5 - Questions

Good questions

A good question will help the tutee answer.

Example: “I remember you said last time that you would be studying the Revolutionary War in history. You said you’d just learned about Paul Revere’s ride. Can you tell me what that was about?”

It might model a thinking process.

Example: “Whenever I try to find an answer to a history question, I remember everything I know that relates to that topic; eventually I stumble upon the answer. For example, I remember that Paul Revere...”

A bad question will feel like interrogation to the tutee.

Example: “Why didn’t you do your homework? Don’t you know who the first president of the U.S. was?” This puts the tutee on the defensive.

Too many questions are like asking for too many gifts, especially if the tutee is an introvert.

Example: “Where’d you go after school? Why? Do you go there a lot? Who do you go with?”

If questions don’t work....

For example, you may ask your tutee a question and only get a one-word answer, or “I don’t know.”

The tutor can explain by providing background in the form of a summary. Limit this type of explanation. It is best if you can get the tutee to do the explaining.

Or, both tutor and tutee can share in the explanation.

As the tutee becomes more comfortable, s/he will take over more of the explaining. This is what you’re working toward. It shows trust in the relationship.

Questions vs. explanations

- Questions encourage students to be active participants in their own learning.
- Questions help the tutor determine what the student knows.
- Questions allow the learner to discover what s/he knows or doesn’t know and add to the discovery process.
- Often a tutee knows more than s/he thinks s/he does, and it is through talking that this emerges.

Source: *The Master Tutor* by Ross McDonald.



Types and forms of questions

Types

1. Affective

Examples: How are you?
How's your week going?
How was the test? (How do you feel about the test?)

2. History

Examples: Have you had this topic in calculus before?
Did you take physics in high school?
What did you cover in class yesterday?
How was the test? (What was your score?)

3. Study Habits

Examples: How much time do you spend studying?
Are you benefiting from the lecture notes?
Have you memorized the quadratic formula?
How much of the homework did you do?

4. Metacognitive-Evaluative

Examples: What are you having trouble with?
Have you studied these definitions enough?
What did you not understand in today's lecture?
Do you have any specific questions?

5. Content

Examples: Tell me what is happening in this graph.
Why isn't there a reaction in this case?
So would the acetate ion react in this case?
Does water act as an acid or a base here?

Forms

Activity: Classify each question above as to its form. Use the categories of open-ended (O), closed-ended (C), and yes-no (YN). Can you change closed-ended and yes-no questions into open-ended questions?

More on questions: The 6PQ method

Preface - helps build rapport.

“What’s your schedule?”

“When’s your math class?”

Paraphrase what the tutee says (summarize the tutee’s answer).

Before the session ends, ask the tutee to paraphrase the entire session. Ask for highlights.

Example: “What can you tell me about _____ now?” Or, “Tell me everything you know about _____.”

Pace – sets the pace for the session.

“What can you tell me about this chapter?”

Paraphrase what the tutee says.

Keep in mind that you don’t have to go through all the levels all the time. Use your judgment and trust your instincts.

Probe – builds on what you learned in the pace question.

“Why?”

“Can you give me an example?”

Paraphrase what the tutee says.

The entire session could take from five minutes to an hour, depending on the content, the tutee and you.

Make up a situation where you could practice 6PQ and try it with a partner.

Prod – encourages the tutee to speculate.

“If you had to guess, what would you say?”

Paraphrase what the tutee says.

Prompt – a hint in question form.

“Do you think it has something to do with _____?”

In this level, the student will discover the answer.

Paraphrase what the tutee says.

Process – relates to the bigger picture.

“How would you contrast that?”

“How does this fit into the whole course?”

Paraphrase what the tutee says.



Chapter 6 - Giving effective feedback

Warm-up

Use the "Four Goals of Misbehavior" chart on the next page to gain insight into the following situations:

- Your tutee continually interrupts you, changes the subject, refuses to get down to work, and tells jokes, trying hard to make you laugh.

What is the student's "faulty belief," and how would you work with him or her?

- Your tutee arrives wearing a sad face. When you ask how s/he is, you get a long list of everything that's going wrong, followed by how s/he hates the teachers and they in turn hate him/her.

What is the faulty belief? What would your approach be?

- Your tutee won't let you take the lead. S/he won't listen to your suggestions, and is reluctant to try anything you think might work. S/he wants to see your planning log, and wants to change your goals for the session.

What is the faulty belief? What would you do?

- You see your tutee making cruel comments to another student. S/he's very quiet with you, but when another student comes near, s/he is very unfriendly.

What is the faulty belief? Suggestions?

Four types of positive reinforcement

- 1. Positive verbal reinforcement.** The tutor immediately follows a desired student response with such comments as “good,” “fine,” “excellent,” or other statements indicating satisfaction with the response. Positive verbal reinforcement is most effective when it is varied and intermittent.
- 2. Positive nonverbal reinforcement.** The tutor expresses a constant positive nonverbal message when maintaining a posture that indicates respect and interest. The tutor usually sits next to and turned slightly toward the student. The tutor leans slightly forward, maintains some eye contact, and pays close attention to the student's words. In responding to a desired student response, a good tutor nods affirmatively, smiles, and occasionally adds verbal reinforcement.
- 3. Qualified reinforcement.** The tutor differentially reinforces separate parts of a response. The correct parts are mentioned first and emphasized, as in the following examples:

Tutor: *John, how is yellow fever transmitted?*

John: *I think it is transmitted by flies.*

Tutor: *You're right; it's an insect that carries the disease, but it isn't a fly.*

Tutor: *Describe the reduction half-reaction in the galvanic cell.*

Mary: *Reduction is when electrons are lost at the cathode.*

Tutor: *Reduction does occur at the cathode; but are electrons lost or gained?*

- 4. Delayed reinforcement.** The tutor emphasizes positive aspects of a student's earlier responses by referring back to the student's ideas. This skill is important to enable students to build concepts on their own correct ideas.

For example, the chemistry tutor recalls that earlier in the tutoring session, Mary had explained correctly the difference between ionic and covalent bonds. Now Mary is confused about writing ionic equations. The tutor begins by saying, “You told me earlier that ions remained apart in solution.”

