



CMG GardenNotes #011

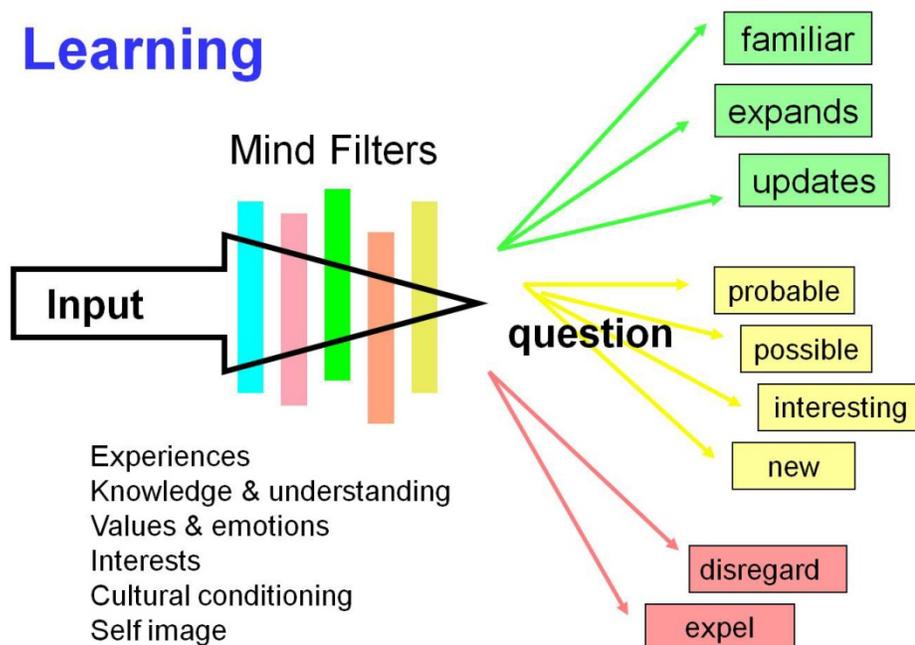
Learning

- Outline:
- Mind filters regulate learning, page 1
 - Accepted, page 2
 - Questioned, page 2
 - Rejected, page 4
 - As the “learner,” page 4
 - As the “teacher,” page 5
 - Characteristics of the adult learner, page 5

Learning is a complex process. It happens **within** us, not **to** us. It involves our minds, emotions, values, interests, and behavior.

Mind Filters Regulate Learning

Like communications, all forms of input into our minds are processed through the mind filters of past experiences, understandings and personal values. Input may be: 1) accepted as familiar to what we already know, value and trust; 2) questioned; or 3) rejected.



Accepted

The input will be accepted when it is in harmony with our mind filter of knowledge, understanding and values.

Knowledge is added word phrase by word phrase and sentence by sentence, rather than by paragraphs and chapters. It must connect to prior knowledge and understanding, thus learning is easier when one has a prior knowledge of the subject matter.

Familiar – The input may be readily accepted because we already know and accept the input as fact (or fiction). The input may reinforce our knowledge, understanding and values.

Expand – We add the input to our mind filters as new knowledge and understanding only when it is in harmony with our current knowledge, understanding and values. In this situation, active learning takes place as we expand our knowledge and understanding of the topic.

Update – Here we may accept the input because it logically fits with our mind filters as we replace and update previous knowledge, understanding and values. In this situation, active learning takes place.

Since updating is changing our vision of the world and life, it is difficult for most people. People often refuse to learn because we are subconsciously unwilling to allow changes to our mind filters. Some students only want the input to validate their prior knowledge, thus blocking the learning process that updates their knowledge and understanding. When the mind filters of values and emotions are involved, updating is difficult for most people.

Maximizing your learning potential – Most students sit in class and passively process that they already know this point and that point. When a point is different from their current understanding, most students automatically disregard the input. With the normal approach, little learning actually takes place. People become bored when the bulk of the content is familiar and quickly feel overwhelmed when the content is unfamiliar to their current knowledge base.

To maximize learning, take an active approach in the classroom. Actively look for that word phrase and sentence that expands or updates your knowledge and understanding. Make notes on what is new and different.

With the active approach, learning skyrockets! Students become energized by input that expands and updates their knowledge and understanding. In classes where much of the content is already familiar, those update tidbits make the class still rewarding.

Questioned

We naturally question any input that is not in harmony with our mind filters of knowledge, understanding and values.

New – It is natural to question any input that is new to our mind filters.

Interesting – Our interest may increase as we begin to question the input as fact (or fiction) based on our mind filters.

Possible – With repeated input, the questionability of the input will become more focused as possibly factual.

Probable – With additional input, our mind filters will render the input as probably factual (or fictional). It may eventually be accepted as factual (or fictional).

Working in the questionable realm may be part of the learning process as we move from interesting to possible to probable to accepted. This is the science of marketing. In the marketing process we may eventually come to accept the input simply because it is familiar rather than because we actively legitimized the information as factual or fictional.

Maximizing the learning – When the mind filters question a concept, make a note and reprocess the input looking at why it was questioned. Understanding why your mind filters questioned it will enhance your learning potential. Common reasons for the mind filters to question a concept include the following:

- **New and different** – The mind naturally questions input that is new or different from current knowledge, understanding and values.
- **Different perspective** – A lot of questioning arises due to differing perspectives. Differing perspectives may be on target, but from differing frames of view.

For most people, it is hard to understand another's perspective unless the background is explained. For example, an instructor who works primarily with commercial growers may have different perspectives on growing techniques than instructors more focused on home gardening. An instructor with a soils background may have different perspectives on fertilizing flowers than an instructor with a background in flowers. Gardeners specializing in annual flowers may see general flower growing concepts differently than gardeners specializing in flowering perennials. Each could be factual from their respective points of reference.

Oftentimes the confusion arises from changing needs in the life cycle of a plant. For example, newly planted trees are intolerant of water stress. Established trees in good health are tolerant of short-term drought. Older trees in decline are intolerant of drought. General statements about watering trees during a drought need to be prefaced with information about the life-cycle stage of the trees.

- **Gardening experience** -- Your own gardening experience will be different from that of other gardeners. Do not assume that other gardens have the same soils, pests, microclimates, irrigation needs, favorite plants, or landscaping styles. One of the difficult things in working as a CMG volunteer is understanding that the clients' gardening needs, problems, and questions are different from your own.
- **Bridging between general concepts and site-specific needs** – Making the jump from general garden concepts to how they may or may not apply to site-specific situations can be difficult.

For example, a general concept in soil management and water wise gardening is to improve the soil to 4-5% organic matter (general concept). This enhances plant growth and makes maintenance easy. However, soil improvement may not be possible in many sites due to cost, the physical labor involved, rocky soil, etc. (site-specific need). When soil improvement is not possible, we must adapt our

general gardening techniques to compensate for the unimproved soil. Some native plants may prefer a soil that is not improved (site-specific need).

Aphids on shade trees do not generally warrant management efforts for the health of the tree (general concept). However, trees that are water stressed (due to drought, new plantings, or restricted root spread) are rather intolerant of aphids (site-specific need).

Remember that no gardening concepts are universally adaptable to all sites. We have to match the approach with the objectives of the garden and site limitations.

- **Values and emotions** – If the topic tugs on values and emotions, learning may be difficult. People have many values and emotions about gardening that come from the plants we love and dislike and our values towards garden inputs such as pesticides, irrigation, and landscape styles. When emotions are highly charged about a topic, it is normal to block any input that has a different point of view. It takes active work to unblock the input that would update or expand our knowledge and understanding.

Rejected

People naturally reject input that our mind filters evaluate as contradictory to our accepted knowledge, understanding, and values.

Disregard – In most situations, we simply disregard the input. In fact, we may disregard the input so automatically that we do not even process it.

Expel – When the input is in strong opposition to our mind filters of values and emotions, we typically expel the input. We may respond in a variety of manners including getting an upset stomach or headache, feeling nervous or anxious, becoming quiet or vocal, feeling angry, or even becoming violent.

Maximizing the learning – When the mind filters reject a concept, make a note and reprocess the concept looking for why it was rejected. Understanding why your mind filters rejected it will enhance your learning potential.

Common reasons for the mind filters to reject a concept include that it was new and different, that it was a different perspective or experience from your own, and the strong filters of values and emotion.

As the “Learner”

Education is about change as we expand and update our mind filters of knowledge, understanding, and values.

When involved in a learning experience, pay attention to your mind filters that may enhance or detract from your learning potential. Being aware, up front, of the impact of mind filters allows us to focus energy where needed to enhance the learning process. For example:

- o If you have high interest in a topic, learning may be easy.

- o If you have low interest in a topic, it will require more energy on your part to enhance the learning process.
- o If you feel well versed on a topic, your knowledge base may interfere with your learning potential. Your mind filters may be closed to input that expands and updates your knowledge and understanding. You may automatically disregard “new” and “relearned” input without even processing the data.
- o If you have values or emotions attached to a topic, your mind filters will be very powerful. This could enhance your learning if the input is in harmony with your mind filters. However, it may block learning as mind filters cause you to automatically disregard or expel any contrary input without evaluation.

In the Classroom Setting

To maximize the learning potential in a classroom setting, education experts teach students to take time to review the class content within 24 hours of the class period. This enhances the movement of expanded and updated input into long-term memory.

In the review process, give special attention to concepts that expand and update knowledge and understanding. Particularly in long class periods (like CMG training), so much material is covered so fast that students readily fail to make these new connections without actively reprocessing the input as new and different. Study questions with CMG units are designed to help with review of learning objectives.

As the “Teacher”

When CMG volunteers are in the teaching role, remember that your mind filters are trying to communicate with the client’s mind filters. Communication and learning are two-way processes. Most of the time our clients are thrilled with whatever help we can provide.

However, in limited situations we cannot educate when the client is not open to learning. Sometimes they just call to verify their current knowledge and understanding and will “auto reject” any new or different information. Sometimes they have an auto-rejection mode turned on due to values, emotions and interests related to pests, pesticides, organic gardening, and xeriscaping. Sometime they are unwilling to accept any responsibility for the problem they called about, blocking learning. As a CMG volunteer, do not take it personally when clients are not open to learning.

Characteristics of the Adult Learner

The framework for CMG volunteer work is education of the gardening public. Sometimes the CMG service is in organized outreach activities. Other times the CMG volunteer may be structuring the learning situation. People have their own motivations for coming to us for information. It is important to respect their reasons.

Motivations for Learning

Application oriented – They need to take action, solve a problem, or accomplish something.

Knowledge oriented – They want to satisfy their curiosity and learn for the sake of acquiring new knowledge and understanding. They want to use their intellectual abilities and sometimes like to be challenged. Unlike children, they come from a base of experience.

Socially oriented – They will attend a class or make a contact for social interaction and enjoyment.

Principles of the Adult Learning Environment

Experience – Adult learners have large and growing storehouses of experiences that represent rich resources for their own learning and that of others. Many want to share that knowledge and experience.

Continuing process – Adults see learning as a continuing process of gaining knowledge and skills that can be applied right away.

Relationship – The information must be related to the adult learners' needs or interests.

Logical – The information must make sense to the adult learner.

Independent – Adult learners are independent, taking initiative without having to be told what and how to do it. They engage in learning activities because they want to—often with a clear idea of what they want to learn and how they want to learn. They seek step-by-step solutions.

Self-diagnosis – Adults learners like to see a model of competence—what good looks like—against which learners can compare themselves and figure out what they need to learn.

Shared evaluation – Instead of teachers deciding whether participants have learned, adult learners prefer to assess their own learning.

Author: David Whiting, Extension Consumer Horticulture Specialist and State CMG Coordinator (retired), Dept. of Horticulture & LA, Colorado State University. Artwork by David Whiting; used by permission.

- Colorado Master Gardener *GardenNotes* are available on-line at www.cmg.colostate.edu.
- Colorado Master Gardener training is made possible, in part, by a grant from the *Colorado Garden Show, Inc.*
- Colorado State University, U.S. Department of Agriculture and Colorado counties cooperating.
- Extension programs are available to all without discrimination.
- No endorsement of products mentioned is intended, nor is criticism implied, of products not mentioned.
- Copyright 2003-2018. Colorado State University Extension. All Rights Reserved. *CMG GardenNotes* may be reproduced, without change or additions, for non-profit educational use.

Revised October 2017