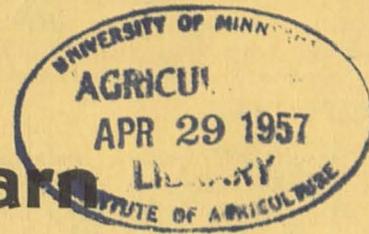




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Communications ⁽³⁾ BULLETIN...

Number 9



How We Learn

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UNIVERSITY OF MINNESOTA



AGRICULTURAL EXTENSION SERVICE

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As Extension workers we bring information to farm families. However, this communication isn't complete until some change occurs in farm families--in their attitudes, knowledge, practices, and in the ways they think, feel, and act.

Every Extension worker communicates or presents information in many ways--individual contacts, meetings, TV, radio, displays, printed material, news articles, etc. Presenting alone, however, does not necessarily mean either communication or learning. There may be a missing factor...our knowledge of learning principles.

WHAT IS LEARNING?

Learning is acquiring habits, knowledge, and attitudes, involving new ways of doing things. Actually it is self initiated and the learner himself must be aroused so that he will persist in this learning activity.

TYPES OF LEARNING

Sensations

This is the first and most simple of all learning processes. They involve the sense organs--eye, nose, tongue, ear, feel, etc.

Eye--About 85 percent of our learning is derived through our eyes. However, there are wide differences among individuals in how efficiently they use their eyes.



In Extension it is important to recognize these differences. For example, in instruction in culling poultry the agent may say "See this eye ring?" However, the farmer may not see it and he won't admit he doesn't. Consequently, no learning takes place.

Ear--About 10 percent of all learning comes through the ear. As with the eye there is wide variation in the effectiveness with which different persons actually use their ears. For example, not everyone can tell the difference between the sound made by a smoothly working tractor engine and one that is throwing a bearing.

Smell--Here, too, human abilities vary. Smell is sometimes used as an informal quality check in dairying or as a factor in cooking, but we can't assume everyone can smell what we do.

Taste--Obviously there is a great variation in the ability of people to taste.

Feel--A large number of skills on the farm depends on the sense of feel.

Kinesthetic sense--This might be defined as muscle sense, the sense which is stimulated by bodily tensions. This sense is important in such activities as operating machinery, chopping wood, sewing and knitting, etc.

Perceptions

A sensation or stimulus has value only when it has meaning. Thus, sensations plus meaning or equal perceptions or percepts. Not all people give the same meaning to a sensation. The following factors may determine the meanings they apply.

Experience--Experience has the powerful influence on the meaning we put on any sensation. We learn by "building on", putting experience on top of experience. Each new stimulus is interpreted in terms of all our older experiences. For instance, information about a new variety of wheat would have different meanings to a farmer who successfully grew the last variety of wheat recommended, as to one who tried the last recommended variety unsuccessfully.

Interest--Interest is essential to learning, but unfortunately a person's interest varies from time to time. This brings up two important questions we'll discuss later. 1. How can you create interest? 2. How can you maintain it?

Attitude--A distinguishing characteristic of an attitude is that it is emotional in nature. The ego is deeply involved; a person will defend it strenuously. Consequently, an attitude should never be attacked frontally or by reasoning. Such attacks may produce an emotionally based resentment and block a behavior change.

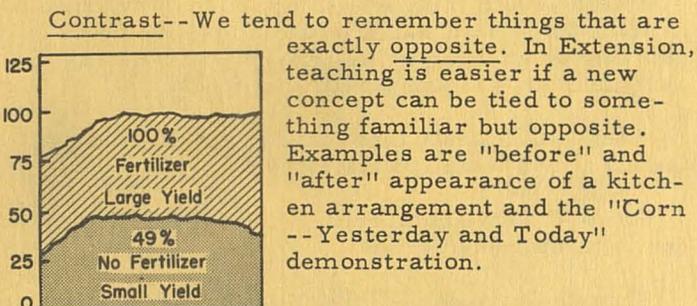
Attention--If there is no attention, there is no learning. Attention is best when the learner feels that the material being presented is important, interesting, or appealing to him.

Stimulation--Stimulation is the degree of intensity with which a sensation arouses one or more of the learning factors.

Interpretation--Interpretation gives depth and significance to meaning, and, therefore, to perceptions. Interpretation will vary according to the individual's interest, attitude, related experience, and stimulation.

Association

We learn by associating new percepts with our own experiences. This is done in many ways:



Recency--We associate with things that happened recently or which we learned recently. Talking about rust-free wheat at the time of the rust epidemic; about a practice followed by a state 4-H winner named yesterday; or about irrigation during a drought ties new knowledge to something that happened recently.



Vividness--We remember things that are vivid, dramatic, or striking. Examples are accident scenes, poison labels, fertilized vs. unfertilized plots, or a judge ordering reckless drivers to tour the morgue.

Frame of Mind--"Frame of mind" is the learner's momentary attitude. He can be swept with feelings of anger, resentment, happiness, or sadness. Therefore, frame of mind helps determine if a person makes any association and what associations he makes. Strong emotions can block any reaction.

Frequency--The frequency with which an association is used increases its retention. Remember Hitler taught very effectively. His prescription was "Tell it simple, but tell it often! Keep on telling them, telling them, telling them!"

Hitler misused this principle, but it can be used effectively. An example might be using several media to tell about a new practice.



Similarity--We remember, through association, similar things. Thus we should try to tie our message to known things that are similar or related, such as comparing nutritional requirements for a baby and chicks.

Motor Learning

Motor learning means acquiring a skill or a habit and depends entirely upon sensations and perceptions. To develop correct motor learning remember these points:

1. Present correct instruction so you don't have to correct errors.
2. Practice using proven techniques.
3. Avoid adverse criticism.
4. Stress accuracy and speed for efficiency.
5. Stress consistent practice.

Trial and Error Learning

Most living creatures will respond to a new situation by making more intense movements or more different movements than are actually necessary to meet the situation. If the learning situation is well organized and meaningful, then we can avoid wasting of time through trial and error.

LAWS THAT AFFECT LEARNING

1. Law of Exercise--Other things being equal, practice tends to strengthen the new action. "Practice makes perfect."
2. Law of Effect--A new response is strengthened or weakened by the satisfaction or the annoyance which may accompany or follow it.
3. Law of Frequency--Other things being equal, the more frequently a connection is exercised, the more likely a given response will be made to a given situation. Learning cannot take place all at once.
4. Law of Recency--The more recent a reaction, the stronger will be the learning by connection.
5. Law of Readiness--The more ready the subject is, the more effective the learning.