Learning Best Through Experience

Abstract
Learning theory and research have consistently concluded that learning opportunities providing a chance to "do" or experience the educational input, result in higher learning gains and retention. Studies of North Carolina Extension clientele and new Extension field faculty confirm that "doing" is clearly the most preferred mode of learning by both groups. Combinations of learning modes were shown to be even greater learning enhancers than individual modes. The most preferred combinations included "seeing," "doing," and "discussing." Findings demonstrate that a well planned program delivery system that includes opportunities to see, experience, and discuss should greatly enhance the learning process.

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Enhancement of Extension's delivery systems and program effectiveness is a priority both within and outside the organization. While adults learn by many different means, two North Carolina Cooperative Extension studies presented in this article show that clientele, as well as new Extension agents, prefer to gain new knowledge and skills through experiential opportunities that reflect the principles or information being taught.

Learning preferences of targeted Extension audiences and new agents clearly reflect those theories and principles that have long been espoused by leaders in the field of education. Perhaps the most well known proponent of learning by doing is indeed the person generally recognized as the "father" of Extension--Seaman A. Knapp. He stated that: "What a man hears, he may doubt; what he sees, he may possibly doubt, but what he does, he cannot doubt" (Rasmussen, 1989). The noted learning theorist, John Dewey was a strong proponent of experiential opportunities being provided as a critical component of the education process. He stated that "..all principles, by themselves are abstract. They become concrete only in the consequences which result from their application" (Dewey, 1938). In his thesis on curriculum development, Ralph Tyler saw planned "sequential practice" of what is being learned as a key element of a learning system (Tyler, 1971). More recently, Stephen Brookfield (1983) sought to differentiate experiential learning into two components: one that results from no purposeful desire such as an injury or an accident, and one which reflects a desire to gain knowledge and skills.

As Extension educators, our desire is to create experiential educational opportunities for our clientele by planned design rather than experience occurring by accident. Based on theory and educational research over the years, our educational program delivery systems should include delivery methods that provide opportunities for clientele to gain a sensory, exploratory experience with the information being presented. Two recent North Carolina Cooperative Extension studies reinforce and accentuate the need to include clientele experiential opportunities as we conduct our educational programs.

Clientele Study

A guided interview questionnaire was used for determining the learning preferences of specifically targeted Extension audiences in 11 North Carolina counties. Agents from each of the 11 counties selected an applicable program for their county and developed educational program objectives and a list of clientele targeted to receive the specific information. These educational programs ranged broadly from those focusing on water quality, to community leadership development, to feeder cattle conditioning programs. Seven people who participated in the programs in each of the 11 counties were randomly selected from each county list, and were subsequently interviewed by the Extension agents in those respective counties.

Findings

The demographic analysis indicated that most respondents were adults from 30 to 65 years old. There was about a one-third split between those with high school education, some college or trade school training, and college graduates. About one-third were full-time farmers, 13% were full-time homemakers, and the remainder indicated their primary occupation as other than farming or homemaking. Over 90% indicated "some" to "very much" dependence on Extension for providing needed information.

Learning Preferences

To determine the single most preferred way of learning by targeted clientele, they were given the choices of hearing, seeing, touching/feeling, doing, tasting, smelling, and discussing. Among these options, they indicated an overwhelming preference for "doing" as shown in Table 1.

Table 1. Preferred learning methods of North Carolina Cooperative Extension clientele

Learning Method	n	%
Doing	54	70.1
Seeing	14	18.2
Discussing	5	6.5
Hearing	3	3.9
Touching-feeling	1	1.3
Tasting	0	0.0
Smelling	0	0.0
Total	77	100.0

In another question, clientele were asked if there are any combinations of learning methods that helps them learn better. In their responses, the preferences were strongly focused on combinations of methods that allow them to gain an interactive, sensory experience when learning. These findings, shown in Table 2, indicate that 74% preferred some combination that

allows them to "do" what they are being taught. Preferences for combinations that include being able to "see" what is being taught were indicated by 64.9% of clientele. Also, 35.1% preferred a combination of delivery methods that allow them to "discuss" the information they are receiving. The other modes received little or no mention as preferred means of learning.

Table 2. Preferred learning method combinations of North Carolina Cooperative Extension clientele

Preferred Combinations	n	%
Seeing/Doing	15	19.5
Hearing/Seeing/Doing	9	11.7
Discussing/Doing	7	9.1
Discussing/Seeing/Doing	7	9.1
Discussing/Seeing/Hearing/Doing	4	5.1
Hearing/Seeing/Discussing	3	3.9
Hearing/Seeing/Feeling/Doing/Tasting/Smelling	3	3.9
Performing	3	3.9
Hearing/Seeing	2	2.5
Touching-feeling/Seeing/Doing	2	2.5
Touching-feeling/Doing/Hearing	2	2.5
Discussing/Seeing	2	2.5
Hearing/Doing/Discussing	2	2.5
Hearing/Doing	1	1.2
Seeing/Touching/Hearing	1	1.2
Doing/Discussing/Touching-feeling	1	1.2
Seeing/Tasting/Touching/Hearing	1	1.2
Touching-feeling/Doing/Hearing/Seeing	1	1.2
Seeing/Tasting/Touching/Hearing	1	1.2
Seeing	1	1.2
Discussing	1	1.2
No combination preferences expressed	9	11.7
Total	77	100.0

When clientele were asked why they preferred a combination of learning modes, their responses indicated that the learning process was positively enhanced. The reasons they gave clearly reflect

the need for selection of program delivery methods that provide numerous modes of learning when implementing Extension programs. In expressing their support for multiple learning modes, the clientele made the following comments:

- "Combinations makes learning easier and faster."
- "Helps for better and longer retention."
- "Enhances understanding."
- "Helps make a greater and more logical impression."
- "Can improve understanding and learn from others by comparing situations."
- "Helps to discuss, then do."
- "By using all senses, can gain more knowledge."
- If I can see it done, then do it, I learn it."

New Agent Study

During new worker orientation training in December, 1992, all participating agents responded to the same questions used in the clientele study. In their response to the single most preferred mode of learning, agents indicated an even stronger preference for doing or performing (80.7%) than clientele (70.1%), as shown in Table 3.

Table 3. Preferred learning methods of new Cooperative Extension agents in North Carolina

Learning Method	n	%
Doing	25	80.7
Seeing	5	16.1
Discussing	1	3.2
Hearing	0	0.0
Touching-feeling	0	0.0
Tasting	0	0.0
Smelling	0	0.0
Total	31	100.0

Learning Preferences

When asked if there were combinations of learning modes that were most preferred, the new agents' responses were similar to those given by clientele. However, there was an even greater preference for "discussing" to be included in the combination. The agent preferences for learning combinations are shown in Table 4.

Table 4. Most preferred combinations of methods of learning by new Cooperative Extension agents in North

Carolina Preferred Combination	n	%
Seeing/Doing/Discussing	10	37.0
Hearing/Seeing/Doing/Discussing	6	22.2
Seeing/Doing	5	18.6
Hearing/Seeing/Feeling/Smelling/Tasting/ Discussing/Doing	2	7.4
Hearing/Seeing/Doing	2	7.4
Doing/Discussing	1	3.7
Doing/Seeing/Discussing/Touching-feeling	1	3.7
Total	27	100.0

Even though "discussing" was strongly preferred as a component of a learning system by a majority of new agents (74.1%), all of the agents preferred a combination of learning methods that include "doing." Most also preferred "seeing" as a part of the combination (96.3%), as shown in Table 5.

Table 5. Number of times a learning method was identified in a preferred combination with other methods by new North Carolina Cooperative Extension agents*

Method	n	%
Doing	27	100.0
Seeing	26	96.3
Discussing	20	74.1
Hearing	10	37.0
Feeling	3	11.1
Tasting	2	7.4
Smelling	2	7.4

*100% prefer "doing" in a set of learning methods available, but only 37% prefer "hearing" in a set of methods.

Even though the preferred combination percentages of new agents are higher than clientele, there is a parallel among these two different groups of people. These results indicate that these two groups agree on how information should be delivered. The learning experience should include opportunities to "do," "see," and "discuss" the information presented.

Summary

The results of these two studies indicate that Extension educational programs should include foremost, experiential or "doing" opportunities. The learning process is further enhanced by providing opportunities for the learners to also see and discuss the information. Thus, development and implementation of a comprehensive program delivery system that includes these components will be in the best interest of all who are involved in both delivering and receiving Extension information.

References

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