

## Teaching Nutrition to the Neediest

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*One of the means of extending the impact of Extension programs, as envisioned by the Joint USDA/NASULGC Extension Study Committee,<sup>1</sup> is through the use of paid employees who are not considered professionals (referred to as aides, subprofessionals, technicians, program assistants, etc.). As Silverman points out in the Spring, 1969 issue of this journal, adding this group to the organization presents some real challenges and opportunities. One opportunity is in the prospect for improving teaching efforts. Specifically, such personnel are thought to hold considerable promise in working with the disadvantaged. This article uses specific references to the Extension nutrition program for the disadvantaged to point out how learning can be facilitated. However, its implications go beyond the teaching of nutrition.—The editor.*

HOW CAN CHANGES in behavior be brought about? Can such behavior change be accomplished by simply telling the learner what he "should" know or what he should do? The evidence is overwhelming: No. Telling people what they should know or should do is not a very efficient and dependable way to bring about changes in behavior. And this is especially true for the less literate, the disadvantaged, the less well fed.

Today Extension personnel and others are concerned with programs for teaching nutrition to those with low incomes, little schooling, and poor health. Many of the professionals involved are asking themselves how they can be sure that their efforts are effective. How will they be able to tell whether their program will result in raising the nutritional levels of this segment of society? Such an undertaking provides an excellent opportunity to examine critically and analytically how behavior change (i.e., learning) can be brought about by design. Professional persons will have the opportunity in this

<sup>1</sup> *A People and a Spirit*, A Report of the Joint USDA/NASULGC Extension Study Committee (Fort Collins, Colorado: Printing and Publications Service, Colorado State University, November, 1968).

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program to observe *their own* "teaching behavior." The current focus on teaching nutrition to the needy can illustrate how changes in behavior can be brought about by designed, intended learning.

### Determining Objectives

First of all, if results are to be measured, we must somehow know the intent of our efforts. Another way of saying it: What are our objectives? What behavior, in relation to nutrition, do we expect to be different from present behavior as the result of this Extension teaching effort?

The primary objective of these programs is surely to improve the diet of individuals in impoverished families. To determine if improvement in diet has occurred, something must be known about the diet when the program began. The diet (of the same individuals) at some later time must also be known. If knowledge affects behavior, and there is some evidence that it does, then one sub-objective will likely be to increase individuals' knowledge of nutrition. Again, some measure of the level of knowledge at the beginning of the program will be needed. If skills in food preparation, food buying, and food handling affect diet, another sub-objective may be to increase these skills. How can the initial level of the skills be measured? Is it necessary to make assessments on all the sub-objectives, or is it sufficient to appraise just the overall objective? What behaviors will we accept as evidence of improvement?

### *Determining What To Teach*

Part of the job is to determine what content to teach. What *are* the basic "ideas about" or principles of nutrition which must be understood in order that our chances of being well fed and healthy are improved? What is a principle? How do principles differ from prescriptions and judgments? Take the following three statements, in simple language for low literacy levels, for example:

1. The vitamin A in carrots helps children grow.
2. Eat green and yellow vegetables every day.
3. You should feed your children green and yellow vegetables.

The first, of course, is a factual statement of the relationship between vitamin A and growth—a *principle*, or in today's curriculum language, a generalization. The second is a prescription or a command; the third is a judgment. Do we as educators have any right to prescribe others' behavior or to make their judgments for them? Or is our job to help the learner understand established relationships so

he can make sounder judgments and determine his own behavior in a more adequate manner? How much sin do we have on our souls for issuing commands that everyone drink four glasses of milk a day—without regard for cost, allergies, sanitation of milk supply, nutritional substitutes, or anything else?

Teachers who think in terms of established relationships will not begin with a topical outline. Topical outlines interfere with *relational* thinking which they are trying to develop in learners.

The teacher might do well *not* to begin with Basic Four—for two reasons: First, most people have heard this so often that they may be “sick of it.” A new approach would get more attention. Second, and more importantly, the *need to know* must be felt by the learner—he must have some reason for wanting “to know” before he is likely to exert energy in acquiring the knowledge.

Neither will an approach by the teacher be effective which begins: The six nutrients are . . . ; protein is necessary for body building and repair, regulation of body processes, and energy; vitamin A is necessary for the eyes, vitamin B<sub>1</sub> prevents beri beri, vitamin C prevents scurvy, calcium is needed for bones and teeth; etc., etc., *ad nauseam*. If this kind of teaching were successful, we wouldn't have the problem now of so many uninformed people.

Of course, the above information is important *when it is seen as helping to solve a problem*. What principles, generalizations, or established relationships can we teach which will help our clients recognize their problems and desire more knowledge? Does the client know that what she eats affects how she feels? Maybe not. Does she know the relationship between prenatal diet and the mental development of the unborn child? Does she understand that cost is *not* related to nutritive value? Does she know that vegetables cooked an hour have less vitamins than those cooked ten minutes—that is, the relation between cooking time and vitamin content?

Helps are available in identifying the most basic relationships of nutrition to teach, e.g., Ruth Leverton's article, “Basic Nutrition Concepts.”<sup>2</sup> She identified four: (1) Nutrition is the food you eat and how the body uses it; (2) food is made up of different nutrients needed for growth and health; (3) all persons, throughout life, have need for the same nutrients, but in varying amounts; (4) the way food is handled influences the amount of nutrients in food, its safety, appearance, and taste. There are others.

To teach these basic principles, one must determine what specifics

<sup>2</sup> Ruth Leverton, “Basic Nutrition Concepts,” *Journal of Home Economics*, LIX (May, 1967), 346-48. Also see her book, *Food Becomes You* (Ames, Iowa: Iowa State University Press, third edition, 1965).

are needed to lead the learner to discover the general relationships. What experiences are needed to help the learner build these new relationships into his thinking? These and other relationships constitute the subject matter to be taught. In order to learn a new relationship, one must have new experiences on which to build his thinking. Experience involves *doing* and understanding what one does and why. Listening to someone who says that one should drink milk is *not* the kind of experience that is likely to result in changed behavior.

### Providing Learning Situations

That leads us to the consideration of finding approaches to teaching that will result in the desired changes in behavior on the part of the learner. Most of the available materials and many commonly used techniques will not work. If any professional believes the myth that "telling is teaching," and plans to teach program assistants or clients by lecture, she can expect disappointment. And a lecture is a lecture—even if it is accompanied by slides, flannel boards, posters, and a trunk full of other visual aids. As Lewin's research<sup>3</sup> demonstrated so well during World War II, food habits are not changed appreciably by lectures. The critical question is: What kinds of learning situations can be arranged that will provide the learner with experiences that will result in his learning what is intended?

One psychological principle which might guide us in choosing methods, or arranging learning situations, is that people tend to repeat experiences which are pleasant or enjoyable. Fortunately, food is a pleasant subject, and experiences with food can be quite enjoyable. The teacher will probably find her most useful and effective visual aid is food—real food which learners consume during the learning experience. Colorful charts showing the nutritive value of a food (such as the National Dairy Council Comparison Cards) can have meaning when used in conjunction with that food as it is eaten. Potluck meals might be a very effective teaching laboratory.<sup>4</sup>

Another principle which is applicable is that the involvement of the learner in helping plan and carry out objectives and activities in-

<sup>3</sup> Kurt Lewin, "Forces Behind Food Habits and Methods of Change," *The Problem of Changing Food Habits*, Bulletin #108 (Washington, D.C.: National Research Council, October, 1943), p. 60.

<sup>4</sup> For more about potluck meals and other teaching techniques, see Hazel Taylor Spitze and Ann Stice, "Consumer Education for Disadvantaged Adults," *Illinois Teacher*, XI (Fall, 1967/68). Single copies available from 342 College of Education, University of Illinois, Urbana, Illinois 61801, for \$1.00.

creases his learning. If program assistants, and later clients, are asked what they think the problems are, what kind of information is needed, where it may be found, and their responses are accepted, their learning is likely to be much greater than it would be if the teacher "presents" a carefully planned "lesson" without such involvement.

If a learner sees usefulness in what she is asked to learn, her motivation to learn will be affected favorably. Applied to the nutrition program, this principle might read: If a mother sees nutrition knowledge as a way to help her children be healthier, happier, and even more intellectually productive, she will be eager to acquire it. If she sees a need to teach her children this knowledge, she will feel compelled to learn it well enough to transmit it to them. Attempting to teach is a very effective method of learning.

One means of making learning enjoyable and transferable to the child is through simulation and gaming. A limited number of nutrition games are available and others are being produced. A project at the University of Illinois should yield some additional help of this kind by summer 1969. As noted earlier, the level of nutrition knowledge at the beginning of the program may need to be measured, and since tests are threatening to undereducated adults, a game may be a solution to this problem.

### *Sequencing Learning Experiences*

Extremely careful planning is necessary before the first contact with the client. The professional person would do well to work directly with a few clients before she begins preparing program assistants to do so. One possible beginning might be to knock on doors, say that she is taking a food survey, and ask the potential client if she would mind answering a few questions. Then she could produce a questionnaire with items about food attitudes and preferences, cooking and serving practices, food buying, and nutrition knowledge. Most people will be eager to know, on the fact items, how many they got right or which ones they missed. Hence, a golden opportunity to teach one principle and promise to come back and teach more! The client might even be persuaded to invite two neighbors in for the next visit.

The second visit could deal with another principle and ask for a favorite recipe to be included in a Community Cookbook. Before the third visit, the leader could inform herself concerning the nutritive value of this contributed recipe, and the colorful Dairy Council charts could be introduced appropriately as other foods are com-

pared with it. The third or fourth visit could include some food to share, perhaps an oatmeal cookie, to encourage more nutritious snacks for children. A simplified recipe for it and a chart comparing its nutritive value with a candy bar is helpful. Cost could also be compared.

By this time such rapport should be established that the client will be looking forward to the visits. She will be impressed with the importance of what she is learning, and she should be eager to share her new knowledge. If the importance of prenatal diet has been stressed and she wishes to inform her pregnant friends and relatives, a simple leaflet could be introduced for her to distribute as she talks with them. The leader could take the names of those with whom she shared it. This could offer praise to her for her efforts and provide opportunity for follow-up with new clients.

Another possible way to make the initial contact would be personal calls to invite the client and a few of her friends to a luncheon given by the Extension Service. Transportation would have to be provided to the luncheon, of course, and the invitation would have to include the pre-school children. The group should be kept small and the atmosphere social. There could be a quiz game about food, and bulletin boards with interesting and important information to call to the guests' attention. This luncheon, or a "tasting party," might well be the first meeting of the program assistants. Or it could be a weekly affair with one big idea being learned each week which they will share as they visit clients.

Still another type of first contact might offer the client a free ticket (and a ride) to a "cooking school," in a nonthreatening location, and an explanation that the demonstrated food will be served. Again, the group should be small and young children provided for. If an assistant or volunteer is available to play games (why not nutrition games?) with them while mothers watch the demonstration, all would be happier.

Another idea might borrow from the "Stanley parties." If, after a few visits, a client is willing to serve as a hostess for five of her friends, the Extension agent or program assistant will provide "refreshments and entertainment." The former should be generous and nutritious. The latter could include games about food buying, meal planning, and nutrition. Special treats could be included for the children. If children can be taught to request nutritious food, the adult education will be much easier.

Clients could also be approached as winners of a specially prepared recipe book or with requests to "try out these three recipes and see which one your children like best" before the agent calls

again to get her report. A box of raisins and three cookie recipes might be a starter. In all cases a simple leaflet, with *one* important principle stressed, could be distributed in whatever quantity clients wished to share with their friends and relatives.

What this all implies is that, for learning to be meaningful, the learner's experiences must start "where she is"—not "where the teacher is." With this sound beginning, subsequent learning situations can become increasingly comprehensive, building on each previous learning experience according to the learner's response.

### *Teaching Materials*

Most of the materials presently available for teaching nutrition are not satisfactory for the neediest. They are either too difficult, preachy, dull, or biased toward the middle class. It has been said that undereducated people do not like to read; but it is much more likely that they *do* like to read *if* they have reading materials that are on their reading level *and* on adult levels of interest and importance. Very few have been produced, but the University of Illinois project should add something here.<sup>5</sup>

Teaching (or reading) materials, like other potential bases for learning, should be learner oriented, involve the learner in the activity, and make learning pleasant. Sometimes learners can produce their own materials. One possibility would be a cookbook containing their favorite recipes *and* information about the nutritive values of each and what foods might be combined with them to make balanced meals. Blank spaces could be left for further notes to be inserted or illustrations added if someone in the family can draw or paste magazine pictures.

### *Communication*

Of substantial concern in providing learning situations is the relationship established between the teacher and the learner and their ability to communicate. Facets of this concern include language, accent, and the learner's level of literacy. But even more significant may be the attitude of the teacher toward the learner as a person. If the attitude is not one of acceptance and respect, the teacher may get "tuned out" very quickly. "It is easier to believe what one reads

<sup>5</sup> One third grade reading level "text" for adults is available: see Hazel Taylor Spitze and Patricia H. Rotz, *We Are What We Eat* (Austin, Texas: Steck-Vaughn Co., 1966). It uses stories of three families to teach nutrition, meal planning, and food buying. A Teachers' Manual is also available.

and hears about 'these people' than to risk walking into a tentative unknown situation and discover humanness at first hand."<sup>6</sup>

Non-verbal communication (via facial expressions, gestures, postures, clothing, coiffures, choice of food, and the like)<sup>7</sup> may say more than words; and if they do not agree with the words, the latter may not be heard. As Brill<sup>8</sup> has suggested, communication may be impossible when one person denies another the right to be himself, or when values differ markedly, or when one has preconceived notions of how everyone should feel and think and behave.

Interference with communication may also come from the teacher's lack of understanding of the learner's food habits and preferences, her cultural background, her superstitions or beliefs in food faddism, and her limitations of housing (e.g., storage space for food), equipment, and income. It is not enough to know that the person whose diet one is trying to improve is very fond of fatback and turnip greens. The teacher may also need to know whether and why she eats clay.

To communicate well and be effective, the teacher must really *want* to teach *this* subject to *these* particular people!

### Other Considerations

The use of program assistants (aides, technicians, or whatever they are called) is designed to multiply the efforts of the professional (the Extension agent). However, such an added dimension to program efforts offers unique possibilities for bringing about learning beyond that of simply adding more people to work. This project provides an excellent opportunity for meaningful learning about nutrition to be gained by those who attempt to teach: for the program assistant who attempts to teach the mother; for the mother who attempts to teach her children or her neighbors. The Laubach literacy idea of "each one teach one" may be appropriate in nutrition education, too. We are suggesting also that, in this project, the professional (through her efforts to teach program assistants) may learn a great deal about how the teacher can function more effectively in facilitating learning (i.e., in arranging learning situations).

How many can one person teach at one time? The people to be reached by these programs are not inclined toward gathering to-

<sup>6</sup> Reba J. Davis, "Communication with Families Having Special Needs," *Illinois Teacher*, XII (Winter, 1968/69), 107-16.

<sup>7</sup> See Elizabeth J. Simpson, "We Speak—In Silence," *Illinois Teacher*, IX (1965/66), 192-98.

<sup>8</sup> Naomi Brill, "Communicating with Low Income Families," *Journal of Home Economics*, LVIII (October, 1966), 631-35.

gether in sizeable groups. In the beginning, program assistants may have to teach in homes, one person or one family at a time. Later, neighbors may be invited, and three or four may be taught at once. By involving these four in planning for a larger meeting and each being responsible for bringing a guest, the number might be doubled after a time.

If one were predicting the behavior of an Extension agent or other teacher who would *not* contribute to improved nutrition among the neediest, it might be described somewhat as follows: She calls her program assistants to a "training meeting" at which she makes it very clear that they are underlings, needed because there aren't enough agents. She arranges tables in a T formation, with herself in the most authoritative position, from which she lectures behind a good-sized podium. The lecture is well illustrated with basic four charts and other paraphernalia. It covers all the nutrients, their function in the body, and the foods rich in each. The presentation is logical and well ordered. She provides each program assistant with a notebook and a goodly supply of "handouts," mostly written above eighth grade reading level and dealing with a variety of important areas of nutrition. The assistants are *assigned* to read these before the next training meeting.

These "meetings" continue daily for two weeks. Then the program assistants are told to go and teach the needy. Since they are not teachers, they are *prepared only to imitate* what they have seen. Doubtless they will try to assemble groups so they, too, can lecture, even if not so well. Failing that, they will call at homes and deliver their lecture to one person at a time, and then dutifully distribute the "literature" which meant so little to themselves. No food habits will change. No one will feel excited about telling her neighbor she has quit putting pop in the baby's bottle because she understands that the baby needs milk and orange juice to grow and learn.

The success of these programs cannot be measured by sheer numbers. Beginnings will have to be small. But just as the best advertiser is a satisfied customer, the best publicity for such programs is a satisfied client. If one homemaker in every city block or square mile in the country could experience a feeling of increased vitality, fewer colds, and less "nervousness in her stomach," or see her husband and children miss fewer days of work and school after she participated in a nutrition education program, the word would soon cover the earth! But if hundreds are touched and no one sees that it makes any difference, then the programs will die. Our millions will be wasted—millions of dollars and millions of people. We cannot permit this to happen!