Three different models of inservice nutrition education implemented by Detroit's Nutrition Education Training (NET) Project are described and compared. The NET Project was funded first as a pilot project in 1978-79, and was refunded in 79-80 and 80-81. The original pilot project goal was to demonstrate the value of teaching urban day care staff members to provide hands-on, classroom food activities for the preschoolers in their care. The Year I Model provided intensive, on-site training in six workshops focused on topics such as food attitudes, nutrition facts, and mealtime procedures in the center. The goal in the Year II model was to develop a less expensive model so that several centers could receive on-site training. Experience showed that (1) the Year I Model could not be reduced to one session and that (2) the original emphasis on classroom activities was of secondary importance: first priority had to be given to upgrading mealtime and nutrition at the 10 participating centers. In the third year, on-site training was impossible because of reduction in funds. Therefore, a 2 1/2-hour nutrition session was presented as part of a 20-hour training experience in the Michigan Day Care Provider Training Project.

Comparison of the three models leads to the conclusion that the most relevant inservice intervention uses the mealtime situation as learning occasions for the children. (RH)
Nutrition Inservice Education for Urban Day Care Providers: A Comparison of Three Models

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Paper presented at the National Association for the Education of Young Children Annual Conference
November 8, 1981
Detroit, Michigan
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I would like to tell you today about the three different models of inservice nutrition education followed by our Nutrition Education Training (NET) Project here in Detroit and to explore their relative advantages and disadvantages.

As you may know, in November of 1977, the Congress passed Public Law 95-166, the National School Lunch Act and Child Nutrition Amendments. This act led to the dissemination of 50 million dollars from 1978-80 for nutrition education training to reach 26 million children in their day care centers and schools across the United States.

Our preschool NET project here in Detroit was funded, first as a pilot project in 1978-79, and then refunded, for 79-80 and 80-81. Our original pilot project goal was to demonstrate the value of teaching urban day care staff members to provide hands-on, classroom food activities for the preschoolers in their care. Our premise was based on Piaget's theory of learning, that the basic modes of learning in the preschool years rely upon physical experiences and exploration of materials in the environment. Therefore, we deduced, nutrition education activities for preschoolers should involve physical, sensory experiences with actual food. By the end of our project we were focused entirely on the improvement of mealtime procedures in centers...
as the primary arena where children learn about food choices and establish food habits that may influence them throughout their development. Lunchtime was viewed as a natural, ready-made setting for nutrition education.

**Population**

All of the providers trained through our program worked as staff members in day care centers or family day care homes in the Detroit Metropolitan area. During the first two years, all of the centers were located in the core city itself. The majority of neighborhoods served by these centers were low income. During the last year, participants came from 25-30 different centers and homes, resulting in some expansion of the socioeconomic groups served by the represented centers. None of our efforts served Head Start Centers' personnel, since these centers already receive nutrition inservice education and resources as part of their funding.

**Three Models for Nutrition Education and Training**

During our first-year pilot project we sought to demonstrate the connections of staff training to classroom food activities, mealtime activities, and the food knowledge and behavior of the children. Specifically, we focused upon a class of healthy foods often reported as unliked by preschoolers: vegetables (see Figure 1).

**Year I Model: Intensive, on-site training model.**

1. Six workshops were presented with two classroom food experiences after each workshop.
2. Cook, director, teachers, aids and foster grandparents participated as a singular group. All were from the same center.
3. All food and materials were provided by NET.
4. Staff members were paid a small amount for attendance.
5. All training occurred on-site.
6. The workshops included the following topics:
   - food attitudes
   - nutrition facts
   - children's food habits
   - how children explore food
   - food learning activities
   - mealtime procedures in the center
   - planning and role-playing specific vegetable experiences
   - for children.

   This in-depth approach to training worked well. Staff members became
   better acquainted and agreed upon goals as well as approaches for both
   classroom and mealtime activities. The staff themselves took responsibility
   for implementation of plans and then reported back to the group at the follow-
   ing workshop.

   Our charge in Year II was to extend what we had learned to other centers
   by developing a less expensive model so that several centers could receive
   on-site training. Letters describing the training project were sent to all
   256 full-day, licensed child care centers in Detroit. About 20% of the centers
   expressed an interest in participating. Ten centers were chosen that served
   a total of more than 300 children.

   Year II Model: Brief, on-site training model.

   1. This model involved a pre-training visit to meet the staff,
      one workshop, and a post-training visit to reinforce learning.
   2. Again, the staff participated as a singular group.
   3. Resources for nutrition activities were provided such as a
      food mystery box for the cook to use with the children.
   4. The center director volunteered for her staff to participate
      in the workshop training and there was no payment for attendance.
   5. The workshop topics were similar to those emphasized during the
      first year.

   In this year, we learned two important things: 1. The model from year
   one could not be scaled down to one session. On-site training needs to occur
   over time so that trust can develop between trainer and trainees, and so that
the staff can participate in developing its own plan for the incorporation of nutrition into the program. 2. We also learned that our original emphasis on classroom activities was truly of secondary importance in most urban centers. First priority had to go to the mealtime. We became concerned about the food that children received and about the lost opportunity to use lunchtime and snacktime as learning labs about food for children. In most centers, no adults sat down with the children to eat; in half of them, no mention was made to any of the children about seconds of milk or food. Sometimes serving sizes were inadequate. The meal was often very rushed and quickly cleared away for naptime.

The following, therefore, became priorities for discussion during training:

1. Adequate food and beverage for seconds are served at every meal.
2. An adult asks the children if they want seconds.
3. Adults sit with the children.
4. Adults eat the same food as the children.
5. The mealtime atmosphere is neither chaotic nor rigidly controlled.
6. There is conversation at the table about food, its color, taste, name, where it comes from, how it is prepared, and so forth.

We agree that the best mealtime setting for learning about food choices is a meal that is served family style. Although family style meal service is mandated for Head Start Programs, we saw it in only one non-Head Start Center (out of 16 visited during Year II). We decided that while family style service is ideal, it could not realistically be a goal for our one workshop. Instead, we suggested that centers consider that one food be served family style at each meal such as carrot sticks, apple slices, or some other fresh fruit or vegetable.

A large poster with a circle graph was used to discuss the importance of food for physical growth, energy, ability to learn, and social development.
in childhood. Workshops included demonstrations of suggested serving sizes for toddlers (1-3), preschoolers (3-6), and schoolage children (6-12), using playdough pushed into a measuring cup and placed on a serving plate.

All workshops included the preparation and tasting of snack foods that are appropriate for preschoolers to make themselves, such as no-bake peanut butter logs and fresh vegetables with yogurt dip.

In our third year, our funds were reduced so that on-site training was impossible. In order to reach the largest group of providers possible, we presented one, 2-hour nutrition session as a part of a 20-hour training experience in the Michigan Day Care Provider Training Project. This project, in the Center for Urban Studies, Wayne State University, was funded by Title XX funds to offer comprehensive provider training in twenty different child care topics.

**Year III Model: One Session, Training Within Training.**

1. This model included one session or workshop with providers who were already participants in a statewide training project for day care providers.
2. The workshop usually occurred off-site, in a location convenient for several centers.
3. The participants were usually a mixed group from several centers and homes.
4. Only limited resources were provided, such as hand-outs and free pamphlets.
5. The providers had all enrolled in this training program themselves.
6. The content was very much the same as that of Year II: nutrition information, serving sizes, USDA requirements, and the importance of mealtime procedures were stressed.

**Conclusions**

The following conclusions are based upon examination of Figure 1 which compares the three training models visually. First, a few words about
evaluation. When we compare the three approaches with regard to evaluation, it is clear that the most definitive information was obtained in Model I, less in Model II, and least in Model III where we only have data at the level of staff knowledge. By contrast, in an analysis of the numbers of persons who received training, clearly more persons were involved in Model III. It is true, however, that these persons were trained in a somewhat cursory way compared to the in-depth training provided in Model I. Since many "trade-offs" are involved in decisions about inservice training, it seems important to delineate the relative advantages and disadvantages of these approaches in more specific ways than either the level of evaluation data or the numbers trained can reveal.

In Model I, the workshops can be tailored to each center. Group process helps to build motivation and commitment to new patterns of behavior. This may be the only approach that can lead to large-scale program changes or to involvement of the entire staff. On the other hand, it is so expensive and time-consuming that few can be trained.

Model II, with its three visits, at first appeared to be a good compromise between in-depth and one-session training. It is much less expensive and allows for training in more centers. Yet strong disadvantages were discovered with this approach. Since the two trainers made one visit to each center before the workshop, the content of the workshop was sometimes viewed as an attack on the center's program. Without time to build relationships between the trainer and trainees, on-site training of a total center staff can produce a feeling of "insiders" and "outsiders". The other contributing factor to such a feeling in this model is the fact that the director had volunteered
her staff for training: sometimes the staff were less receptive because of this. Our experience suggests that on-site training of a total staff should involve several sessions and that trainees should volunteer for training individually.

Model III afforded many advantages. Large numbers of trainees could be trained at a reasonable cost and with demonstrable knowledge gains. In this case, most sessions involved persons from several centers and were off-site. Trainees seemed to feel that general information was being offered, not that any center's program was being criticized. Enrollment in this training sequence added a dimension of motivation and professionalism that is necessary for a trainee to capitalize on an educational opportunity. Unlike Model II, these providers had each chosen, individually, to enroll in the training sequence. While this approach proved worthwhile in the current situation, it is limited to providers already in training.

We have concluded that the most relevant form of nutrition inservice education for urban child care providers addresses the mealtime situation in their centers as learning occasions for the children. In order to accomplish this type of training, either several sessions devoted to the topic seem to be required, or an opportunity to insert nutrition training into an ongoing provider training program. Such a training program supports and reinforces many of the child care attitudes implicit in nutrition education. This effect is not surprising since mealtime patterns in day care centers and homes, like all food patterns, are embedded in the lifestyle of the center or day care home. They have evolved over time and for particular reasons. Considering the effect of these patterns on children and their future food habits is a...
complex but worthwhile undertaking, in all of our day care homes and centers, for all children who are in care. The benefits for children of improving these patterns are both so immediate, and so far-reaching, that we cannot afford to overlook them.
Preschool NET Project: WSU Department of Family and Consumer Resources

Year 1:
Intensive, on-site Training Model (One Center)
N=16
6 Staff Training Workshops ➔ Staff Knowledge and Attitudes ➔ Child Classroom Vegetable Activities ➔ Child Vegetable Knowledge ➔ Child Vegetable Intake ➔ Child Health and Growth

Year 2:
Brief, on-site Training Model (10 Centers)
N=64
Staff Training Workshop ➔ Staff Knowledge and Attitudes ➔ Mealtime Improvements ➔ Child Food Intake ➔ Child Health and Growth

Year 3:
One-Session, Training Within Training Model (Staff from 25-30 different centers and homes)
N=115
Staff Training Workshop ➔ Staff Knowledge and Attitudes ➔ Mealtime Improvements ➔ Child Food Intake ➔ Child Health and Growth

Evaluation data was collected for these variables.
Evaluation data was not collected for these variables.

Figure 1. Three Training Models.