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ABSTRACT

Funded under the Nutrition Education and Training Program, Michigan's Project SNACK (Sharing Nutritional Awareness through Curriculum for Kids, K-6) is an adaptable model of nutrition education that focuses on staff development (trainer of trainers) involving the infusion of nutrition education into the regular. -classroom curriculum. During the 1978-79 school year, the school food . service director, teachers, food service employees and noon aides from three schools in Macomb County received training in nutrition concepts and activities. The teachers subsequently trained other teachers in each of their buildings in a halfday inservice workshop. Based upon this experience, the teachers developed a Nutrition Education Curriculum that included activities for integrating nutrition education into other subject areas. Through consolidation of training techniques based on this experience, and using the trainer of trainers model, Project SNACK spread to other schools during the next two years, having an impact on a total of 2,670 students, 89 classroom teachers, and two food service directors during 1980-81: Pre- and posttests of students and measures of nutrition concepts by teachers all demonstrated significantly positive results in knowledge gained. Project SNACK has demonstrated that the trainer of trainers model is practical and peneficial for infusing nutrition education in elementary schools and should be maintained and disseminated to other interested schools and school districts. (KC)

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NUTRITION EDUCATION IN THE CLASSROOM: PROJECT SNACK (Sharing Nutritional Awareness through Curriculum for Kids, K-6)

Paper presented at the Society for Nutrition Education (SNE) August 11, 1981
San Diego, California

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The United States Congress recognized that learning in the lunchroom can be enlightening when they amended the National School Lunch and Child Nutrition

Acts in October, 1977, and funded NET, the Nutrition Education and Training Program for fiscal years 1978, 1979 and 1980.

The State of Michigan's Project SNACK has been funded under this Nutrition Education and Training Program. SNACK is an acronym for Sharing Nutritional Awareness through Curriculum for Kids, K-6.

Project SNACK, established with State NET funding in 1978, is an adaptable model of nutrition education which focuses upon staff development (trainer of trainers) involving the infusion of nutrition education\_into the regular class-room curriculum. During 1978-79, the school food service director, teachers, food service employees and noon aides from three schools in Macomb County received training in nutrition concepts and activities conducted by a team consisting of nutrition consultant from Project SNACK, a curriculum consultant, and a school food service consultant from the Macomb Intermediate School District. The teachers (a team of two from each building) subsequently trained other teachers in each of their three buildings. Based upon this trainer of trainer format, the teachers developed a Nutrition Education Curriculum using the State of Michigan's kindergarten through sixth grade Minimal Performance Objectives in Health Education (Nútrition).

Seven Minimal Performance Objectives for Health Education in Michigan in the area of nutrition were used as the basis for developing the Nutrition Curriculum and were measured by minimum criteria on an objective referenced test. The objectives stated that, by the end of the third grade, students:

- 1. Would be able to identify a variety of foods taken from the basic food groups.
- 2. Would be able to classify foods according to the basic food groups.

3. Would be able to demonstrate knowledge of the general relationship between food consumption and health.

and, that by the end of the sixth grade, students:

- 1. Would be able to demonstrate they value food choices which are consistent with good eating patterns.
- 2. Would be able to demonstrate knowledge of the variety of foods and eating patterns.
- 3. Would be able to list personal experiences and concerns which influence their food choices.

and, finally,

4. Would be able to apply the concept "well-balanced" to their selection of foods.

During 1979-80, the SNACK Nutrition Education Curriculum, developed the previous year, was expanded and tested in five area schools by teachers, school food service personnel and parents.

Because Project SNACK had demonstrated significant impact upon children during the first two years of operation, it was desirable to have the SNACK Program modified to enable the training to be repeated by qualified curriculum and nutrition consultants with a minimum of funds.

Therefore; during 1980-81, Project SNACK was funded to develop and pilot a one and one-half day adaptable model of nutrition education which focused upon staff development using a trainer of trainer format to inservice classroom teachers in techniques for infusing nutrition education into the regular K-6 classroom curriculum, the lunchroom and the home.

The simplified model used the SNACK curriculum materials, developed in 1978-79 and 1979-80, and consolidated the training into a concise set of workshops which required only a minimum of funds and staff time. The simplified SNACK model was designed to enable the package to be repeated by qualified curriculum consultants and/or nutrition consultants.

The major objective of the Project is to develop and pilot a one and one-half day adaptable model of nutrition education which focuses upon staff development using a trainer of trainer format to inservice classroom teachers in techniques—for infusing nutrition ducation into the regular K-6 classroom curriculum, the lunchroom, and the home.

During 1980-81, Project SNACK trained teachers and the school food service directors from three Macomb County districts. A total of fourteen teachers (representing seven elementary buildings) and two school food service directors participated, directly impacting 420 students. After this one and one-half day training, the teacher trainers inserviced 75 other teachers in their elementary buildings, impacting another 2,250 children. A total of 2,670 students in grades K-6, and 89 classroom teachers in addition to two school food service directors were impacted during the 1980-81 Project SNACK.

Project SNACK, for the past three years, has trained core groups of teachers using the SNACK Curriculum Manual. This manual, developed and piloted by Magomb County K-6 teachers and students, includes:

- --basic nutrition concepts
- --classroom nutrition activities and
- --nutrition resources

Throughout the manual, infusion of nutrition education into the K-6 classroom curriculum, specifically the areas of Language Arts, Science, Social Studies, Mathematics and Art is emphasized as is the coordination of the lunchroom, classroom, and home to provide learning experiences which help children make knowledgeable food choices.

In addition to the Project SNACK Curriculum Manual, classroom nutrition activities have been developed by the Project staff to further reinforce nutrition education in the classroom, lunchroom, and home. These activities have

been developed using a file folder format. A matrix, outlining the relationship of each specific activity to general areas of curriculum, has also been developed to assist teachers in their selection of activities.

The documented evidence and evaluation of Project SNACK's success since its inception in 1978 indicates quite clearly that the Project's Frainer of Trainer Model of infusing nutrition education into the classroom, lunchroom, and home is a successful concept and one which would be useful to school districts. The Project SNACK simplified training model, using a minimum amount of funds and staff time, can be used to impact a large number of elementary teachers and students in any school district.

From each participating school district, the school food service director and two representatives per participating elementary chool building, volunteer to team as teacher trainers for their building. Nutrition concepts and activities utilizing the Project SNACK Curriculum Manual as well as other material and community resources are taught in a one-day workshop conducted by a nutritionist from Project SNACK, a curriculum consultant and a school food service consultant from the Macomb Intermediate School District. The teacher trainers and school food service director then infuse nutrition education concepts into their class-rooms as well as the school lunch program, thus also influencing the home.

After six weeks, the teacher trainers and school food service director participate in a one-half day follow-up workshop in which they are assisted by Project staff in the development of a nutrition education inservice for the remaining teaching staff and school food service personnel in their elementary buildings.

All training workshops are conducted for groups of ten to twenty participants so that the format can include hands-on experience with classroom activities for nutrition concepts as well as group leadership skills.

The teacher trainers and school food service director then conduct workshops (with a <u>minimum</u> of four hours of total inservice) for the remaining teaching and school food service personnel in their local elementary buildings, thus becoming the nutrition education resources for their school building. They use the SNACK Curriculum Manual and community resources as well as other printed nutrition material as needed.

The team of project nutritionist, Macomb Intermediate School District curriculum consultant and school food service consultant is available for consultation and every attempt is made for one member of the team to be present during the teacher trainer inservicing of fellow staff. In addition, Project staff have met with teacher trainers at times mutually convenient for follow-up sharing and discussions. At the request of the building principal, Project staff will conduct workshops for lunchroom personnel in the areas of nutrition concepts, and discipline and communication techniques in the lunchroom setting as well as improving the atmosphere of the school lunchroom. At the beginning of each new school year, participants from the previous year's Project are invited to an after-school round table sharing of nutrition education. During 1980, attendance at this event was 80 percent.

Basically, Project SNACK demonstrates for a school district an adaptable model of nutrition education which focuses upon staff development (trainer of trainers) involving the infusion of nutrition education into the regular class-room curriculum. Project SNACK staff help two elementary teachers in each participating school building and the district school food service director learn to work SNACK concepts and activities into everyday curriculum during a one and one-half day training session utilizing the SNACK Curriculum Manual.

Since its evaluated success in 1978, Project SNACK has continued to make significant impact on students involved in the Project. Final reports with an independent evaluator confirm this and are on file with the Michigan Department of Education.

During 1978, Project SNACK made a significant impact on participating students and achieved 80 percent of its stated objectives.

During 1979, Project SNACK K-6 students:

- --knew significantly more nutrition facts
- --were significantly better able to identify pictures of foods belonging to the same food group.
- --were significantly better able to identify a nutritious snack and
- --were significantly and better able to identify foods to create a well-balanced meal

after infusion of Project SNACK into the classroom curriculum.

During the school year 1980-81, data continues to show significant impact. Specifically, the pre-post comparison between implementing and control students revealed that participating students in grades K-6 increased their knowledge of nutrition as compared to the control students.

of the implementing students increased their scores between pre-post, while only.

47% of the control students increased their scores. Using this information, it was noted that the students of teacher <u>trainers</u> increased their scores between pre-post-test administration in 65% of the student cases; teacher <u>trainees!</u>

students did so in 73% of the student cases. Consequently, the SNACK concept of developing dissemination of nutrition education through a trainer of trainers model appears to be quite successful. It should be noted that students in grades K-2 were tested using an instrument developed by the Project staff while students in grades 3-6 were tested using an instrument based upon the Michigan Education Assessment Program items for Nutrition Education.

In addition to instruments utilized in data collection pertaining to cognitive skills in nutrition, teachers maintained written logs of classroom activities.

These logs indicated that, of the more than 165 different SNACK classroom activities, teachers utilizing them mentioned they would employ them again and noted that student response ranged from positive to very positive about virtually all of the activities implemented.

A post training survey of participants was utilized to determine the quality of the training. The survey focused upon participant reactions to the training primarily in a formative way. That is, in terms of areas of presentation needing improvement. This data was collected at the conclusion of training sessions in February. The results of the survey response tabulations was quite positive. In terms of the open-ended comments, respondents appeared to appreciate the opportunity to ask questions, the opportunity to share ideas, and the make-it-take-it aspects of the training. Respondents for the most part did not indicate any aspect liked least. Further, most participants did not offer any recommendations for improvement. Thus, it appears, based upon informal evaluation, that the training was worthwhile and well organized.

Two assessments were utilized to ascertain the extent of activities within each school building participating. The design involved obtaining the reactions of those who served as teacher trainers from several perspectives: their own nutrition knowledge level; the types of activities they infused into their own classrooms; their role as trainers for other teachers; carryover into lunchroom activities; and an overall evaluation of Project SNACK. In addition, a pre-post design was used to ascertain teacher trainer knowledge.

Results of the reactionnaire/questionnaire indicated that teacher trainers were largely able to implement nutrition activities based upon SNACK materials and strategies. One hundred percent of the responding teacher trainers did

infuse nutrition education into their own classrooms, and indicated they were able to teach nutrition education to teachers in their respective schools. In addition, 78% of the respondent teacher trainers viewed SNACK as an above average process overall in disseminating nutrition education effectively. Eighty-nine percent believed SNACK has contributed toward increasing their own personal knowledge level of nutrition concepts and facts. Correspondingly, 89% of the respondent teacher trainers viewed the SNACK Curriculum Manual as a viable; resource for their own classroom.

Comments generally ranged positively. One respondent noted that bag lunches had improved significantly and that many students had become involved in preparing their own bag lunches as a means for insuring balanced nutrition. Another mentioned that students had enjoyed transmitting their new knowledge to parents at home. Yet another teacher trainer noted the positive feedback generated by the Project on the part of students, parents, and the school principal.

The results of the cognitive skills test administered to teacher trainers indicated an observed but not significant knowledge gain between pre-test and post-test (alpha .05). The mean on the pre-test was 15.80 and the mean on the post-test was 17.86.

Project SNACK has demonstrated that the Trainer of Trainer Model is practical and beneficial for infusing nutrition education in elementary schools. It is hoped that Federal and State resources will continue to be made available for the purpose of maintaining this and other exemplary Projects around the nation and disseminating the models to other interested local educational agencies and Intermediate School Districts.

It has been my privilege to acquaint SNE participants with Project SNACK and I thank you for your time and interest.

