

Purpose

The goal of the Food and Nutrition Service (FNS) of the U.S. Department of Agriculture's (USDA) was to document the process (steps, time, and resources) for fully implementing the Team Nutrition (TN) by communicating the four TN messages to students using the classroom and cafeteria as delivery channels, as well as other places in their environment such as the school, home, community and local media. This comprehensive approach to nutrition education resulted from findings of the TN Pilot Implementation Project in which behavior change of students was more likely when messages were provided by multiple persons in a variety of places (communication channels).

Given the promising results of the Pilot Project, FNS initiated the Team Nutrition Demonstration Project (TNDP). The major objectives of the project were to systematically document the implementation process and to more fully develop models of comprehensive and firmly established Team Nutrition Initiatives that are appealing and helpful to States across the country. Comprehensive Models include commitment to implementing a minimum set of core activities that provide the Team Nutrition messages through six communication channels. These channels include classroom, cafeteria, school-wide, home, community, and media. Sixty-one schools in four States (Idaho, Iowa, Kansas and Michigan) participated in this three-year Demonstration Project by documenting the steps, time, and resources needed to accomplish this comprehensive approach to TN programming.

In addition to this final report, key findings were also included in a TN Technical Assistance/Implementation Guide ("Getting it Started, Keeping it Going: A Guide for Team Nutrition Leaders"). The Implementation Guide

is intended to save time and effort for TN School Leaders in their challenge to build, improve and sustain TN activities that make a difference in the eating behavior and school environment of children.

Project Administration

A Request for Application (RFA) for Team Nutrition Demonstration Project Grants (TNDP) was distributed in 1999 to all State agencies that administered the National School Lunch (NSLP) and the School Breakfast Program (SBP). The TNDP, a USDA FNS/State Agency Cooperative Agreement, was awarded to four States: Idaho (lead State), Iowa, Kansas, and Michigan, through a competitive award process. Grant activities began in October 1999. Each State agency designated a Project Director (PD) to coordinate the implementation of required grant activities in participating schools and a Social Scientist (SS) to provide leadership for implementation assessment, data collection and analysis, and dissemination of findings through development of this final report and appendices. Additionally, the PD from the lead State, Idaho, was designated as Principal Investigator.

During the first year (1999-2000) of the three-year grant, State agency staff focused on meeting with project staff from the other grantee States and USDA FNS, recruiting and selecting schools to participate, training school site coordinators and school-based teams, and developing logs/forms to collect data needed to achieve grant project goals. The implementation phase began at the start of the 2000-2001 School Year and ended with the completion of the 2001-2002 School Year. FNS extended the State grants until February 28, 2003, to allow time to synthesize data and develop a draft of the final report.

Schools that participated in the Demonstration Project during the two-year implementation phase had these responsibilities:

- Selection of a site coordinator;
- Formation of a school-based team;
- Development of a project plan and budget for both implementation years;
- Participation in training provided by the Project Director and Social Scientist in respective States;
- Conducting TN activities in all six-communication channels (classroom, cafeteria, school-wide, home, community, and media);
- Use and review of the draft TN Technical Assistance/Implementation Guide and post-project suggestions for the final TN Guidance appropriate for other States;
- Documentation of steps followed, time spent, and resources used to promote TN messages using all six-communication channels;
- Testing and feedback on a TN Routine Reporting System;
- Participation in an end-of-the-project qualitative interview or survey to provide feedback about the challenges, solution, and keys to success related to comprehensive implementation of TN at the school level.

Methodology

A total of 61 schools were selected by project staff in the four States to participate in comprehensive implementation of TN during a two-year time period (2000-2002). There were 60 schools in Year 1. In Year 2, one school in Michigan left the TNDP and two additional schools from Idaho joined the TNDP for a total of 61 schools. A site coordinator provided leadership for the project at the school/district level. Coordinators were trained by State-level project staff in each State and were provided TN lesson materials (age or grade specific, classroom modules), technical assistance, and funding to cover costs for supplies and services

to implement activities in classrooms and the other five communication channels.

Teachers provided TN lessons to 11,374 students in Year 1 and 11,339 students in Year 2 using the four TN lesson modules/kits. In addition to the classroom lessons, students were involved in promotions/events in the cafeteria, participated in activities involving their parents (at home and/or school), and attended TN events that were available to the entire student body as well as the community. Schools were required to link with the media to promote or provide coverage for the nutrition and physical activities conducted in school, at home or in the community. Classroom teachers completed logs for each lesson taught to document steps involved, time spent, and resources used—including cost of purchased and donated items. Coordinators of cafeteria, school-wide, home/parent, community, and media events also completed similar logs for each event.

Key Findings

Classroom Activities

Steps. Classroom teachers took primary responsibility for offering the TN lessons to the 11,000+ students from Pre Kindergarten through eighth grade in the four participating States. They were assisted by school foodservice staff, teaching assistants and parents. Just over half of approximately 21,000 students in participating schools received TN lessons within their classrooms; but all enrolled students in the schools had the opportunity to gain exposure to activities in the non-classroom channels (cafeteria, school-wide, home, community, and media).

Time. Teachers in the TNDP were required to teach at least one of the five or more activities offered from each of the eight (Food & Me) or nine (Food Time or Food Works) lessons in the module that was appropriate for their grade level. The average number of activities taught per lesson was three, and each activity took about 30 minutes of instructional time. The average lesson time was about 90 minutes (but would have been longer if teachers had used all

of the activities). The total teaching time for all lessons in a classroom module was about 12 hours. Time to plan the lesson activities was almost half of the total teaching time (about 5½ hours). Time to plan and teach a lesson increased with the grade level of students taught - from kindergarten through fifth grade. The yourSELF module for sixth through eighth grade took an average of eight hours to plan and teach. Based on the data from this project, it would take 24 days or five weeks to offer a nutrition unit if one activity was covered per school day. One solution to the "time" problem is to integrate the activities into other subject areas so that no "extra" classroom time is needed. Some teachers did merge nutrition lessons into health, reading and science, but many indicated that nutrition was taught as a stand-alone subject. Some teachers reduced planning time by team teaching (they taught selected activities or lessons to multiple classes) or by involving others in the instruction.

Resources. Teachers reported frequent use of materials that were provided with the classroom modules such as the Teacher's Guide, posters, and parent reproducibles. Curriculum components that were not replaceable (student magazines and parent newsletters) were used less in the second year than the first year, even though FNS was able to provide replacements. If teachers are expected to use the materials for more than one year, they need to be able to replenish their supplies by purchasing replacements, being able to download masters from a web site, or having copy-ready masters included with the module/kit. In addition to the materials that were provided as part of the modules, many teachers used additional materials and supplies to assist in teaching the lessons. Use of computers/Internet was more frequent in upper grades; books were used more in lower grades. Food was the supply used most often for the classroom lessons.

Cost. Across all four modules and all four States, food was the most frequently used supply. There was much variability across and within States related to the amount spent on food and other supplies purchased to teach the lessons (classroom modules were provided at no cost to

schools). Some schools were able to use food purchased with school foodservice funds or were able to obtain monetary donations from the Parent Teacher Organization (PTO)/Parent Teacher Association (PTA) or community organizations to buy food and other supplies. Art supplies were the second most frequently used supply.

The cost to teach Food & Me lessons ranged from \$53 to \$171 per classroom in the four TN DP States; Food Time lesson costs ranged from \$18 to \$112; Food Works lesson costs ranged from \$38 to \$71; and the yourSELF lessons ranged from \$34 to \$99 per classroom respectively.

Non-Classroom Channel Events/Activities (School-Wide, Cafeteria, Home, Community and Media Channels)

Steps. Steps associated with the TN DP total school events offered in non-classroom channels (cafeteria, school-wide, home, community, and media) included planning and conducting the activities with leadership from a coordinator. The coordinators were typically foodservice staff, classroom teachers, or school nurses. Individuals who helped plan and/or conduct events were typically school foodservice staff or classroom teachers.

Time and Cost. Events/activities offered in the cafeteria, school-wide, home, community, and media channels had an average cost of \$243 per event for schools in all States and ranged from \$0 to \$1,317 per channel event; home and community events had the highest average cost. In addition to that expense there was also a "time" cost. A typical event that was offered one time took from three to seven hours of the coordinator's time to plan and four to five hours from the helpers. Time to conduct the events was about four hours for coordinators and five to ten hours for helpers. Generally, more than one person helped the coordinators with the events, usually a classroom teacher or school foodservice staff person. Finding the time and money to offer events in these various channels was not easy for school-based staff. If schools are to be expected to implement TN activities to

reach students, parents, and others in the cafeteria, school-wide, home, community, and media channels, funding and technical assistance must be provided for schools to accomplish comprehensive TN programming.

Resources. Across all channels, the resources used most often for activities included food, print materials, posters or banners, and art supplies. Although some items were donated, most of the supplies were purchased with funding from the TNDP grants to schools.

Overlap in Channels and with Messages. An FNS guideline for channel events/activities was that they must communicate at least one of the four TN messages. Another guideline was to offer activities not only in the classroom but also in the cafeteria, for the school as a whole, in the community, for parents (by sending things home or involving them at school), and by involving the media to promote or cover TN events.

As project teams developed their TN project plans, it became apparent that there was overlap across the channels and the messages. School-wide events were strongly linked with both the cafeteria and the home channel, and activities offered in the community channel often involved the media. For example, an event, such as a health fair, often involved all the channels since it was a school-wide activity that used the cafeteria and was targeted to parents, students and the community with coverage by the media. Such an event could convey all four TN messages by offering demonstrations, information, taste testing and resources to teach students how to select a variety of foods including lower-fat choices such as fruits, vegetables and grains. Health fairs could also offer opportunities for families to be physically active by including dancing, hallway walking; demonstrating stretching or movement; or offering activities in the gym or outdoors as part of the fair. As the schools followed the TNDP grant guidelines for offering comprehensive implementation of TN; they were able to transform the school environment into one that conveyed the basic messages about eating healthy and being active. Encouraging schools to plan fewer events or activities that involve more

of the channels, instead of lots of events offered in singular channels, may be more consistent with how schools can approach comprehensive implementation while being less overwhelming.

Project Coordination and Reporting

Site Coordinators. All participating schools (school districts in Idaho) were required by their States to have a minimum of one person designated as site coordinators to provide leadership for the TNDP at the local level. School foodservice directors were the most common type of site coordinator but almost 20% of coordination was accomplished by teachers. Each coordinator was assisted by a school-based team with typical members being (in order of frequency): school foodservice staff, classroom teachers, administrators, and physical education (PE) teachers.

Estimated time spent, per year, by coordinators ranged across States from 58 to 87 hours during Year 1 of the implementation phase and from 32 to 177 hours in Year 2 of the implementation phase. They worked on: developing and distributing information about the project, purchasing materials and supplies, meetings with teachers and foodservice staff, and talking to administrators about the project. They held an average of four to eleven meetings in Year 1 of the implementation phase and three to six meetings in the Year 2 of the implementation phase. At the end of the two-year implementation phase, site coordinators in each State were asked to provide input about "what it takes" to plan and implement nutrition education and nutrition-related messages throughout the school and community environment. The key findings and lessons learned from their input are summarized here:

Commitment

Effective implementation of TN requires the commitment, leadership ability, time and energy of TN coordinators/co-coordinators. The leader guided the team/group and kept the momentum going.

As TNDP schools discovered, finding time for the team to meet on a regular basis is challenging. Preparing a written plan was found to be more important than frequent meetings for carrying out events and activities. The TNDP schools recommended keeping the plan do-able, not taking on too many activities at once and incorporating TN events and activities into existing programs whenever possible.

Funding and Resources

Funding is critical in implementing TN. Availability of the TN mini grants to local schools was helpful in planning and conducting TN events.

Training and Administrative Support

Administrative support is crucial if comprehensive nutrition education is offered. State agencies' leadership for local TN schools is important to comprehensive TN implementation. TNDP State agencies provided school leaders with encouragement, continual updates about TN, served as a clearinghouse for local TN schools' ideas and best practices in nutrition education and physical activity.

Role of School Foodservice Staff. More school foodservice staff were site coordinators, members of the school-based project teams, and coordinated and/or helped with the channel events/activities than any other group. Clearly, foodservice staff was involved in a leadership role for this project by, focusing on comprehensive implementation of TN throughout the school, not just in the cafeteria. At the end-of-project interviews, site coordinators indicated the importance of buy-in from the foodservice department (and also administrators) for the success of such a project. It is interesting to note that involvement of classroom teachers in the foodservice program increased from 43% (of foodservice staff involving classroom teachers) during the year prior to implementation to 92% during the first year of implementation. Other groups also increased their involvement in the foodservice program. Involvement of community partners

increased from 27% to 70% and involvement of parents increased from 38% to 68%.

Benefits. Outcome evaluation was not a component of the TNDP. However, on an End-of-Project Questionnaire, States asked site coordinators to share information about the benefits associated with comprehensive implementation of TN for these various groups. Project Coordinators benefited by feeling that they made a difference at the school and student levels - from being able to provide students with new opportunities and information and seeing students choose nutritious foods, from participating in a national project that could help other schools and States, and from the grant management experience and interaction with others.

Teachers benefited from the resources/materials received and the chance to enhance and align the curriculum to include nutrition education/concepts.

Foodservice Staff benefited by being included as active members of the school team, by improving their relationship with teachers, and by receiving recognition for their role in school nutrition education and programming.

Schools benefited from the funding received to pay for events/activities, from collaboration and communication (team effort) among staff, from increased parent and community involvement, and from good public relations that resulted from school involvement in a project targeting student health.

Students benefited from increased knowledge and awareness about nutrition and physical activity, from the opportunity to try new foods and engage in fun learning activities about nutrition and from learning about healthy habits from their classroom teachers, their fellow students, and other role models inside and outside of the school.

Parents benefited from tasting healthy foods when attending school functions, from obtaining ideas for snacks and meals, from receiving information to help their children make better

choices for good health, and by gaining a better understanding of nutrition and TN.

Communities benefited by connecting with school staff, from being part of a comprehensive health project and from the nutrition information they received.

Routine Reporting. Schools outside of the TNDP provided feedback about the format and content of a proposed TN Reporting System for possible national use with all enrolled TN schools in all States. The pilot test of the Reporting System indicated that it was currently not practical for FNS to go forward with a nationwide routine TN Reporting System.

Contribution of State Project Staff. A time or resource cost that was not tracked in the TNDP but that was important to the success of comprehensive implementation was the time commitment of the State-level staff that coordinated this grant project. Hundreds, or possibly thousands or hours, were needed to support school-based staff through the planning phase as well as to train teachers, make site visits involving travel throughout the States, maintain ongoing communication, and manage the administrative aspects of the project, such as budget and reimbursement. The total number of hours was not reported but the involvement of State staff was crucial in coordinating comprehensive TN efforts in schools in their State. It is clear that just providing funding to schools is not enough. They need encouragement, support, and resources from State staff to accomplish and sustain nutrition education and positive changes in school environments.

Recommendations

The results of the TNDP indicated that it was possible to implement TN throughout schools and involve parents, community members, and the media. It took time (to plan, gather resources, and teach lessons or conduct events), involved a committed team (that had the support of the principal and school foodservice staff), and required resources (particularly classroom lessons, food, printed materials, and art supplies)

for events in all channels. The following is a list of recommendations, generated through this project, which may assist others in comprehensively implementing TN:

Successful implementation requires a committed, energetic, and enthusiastic leader. Given the potential times demands of implementing TN, sharing of leadership responsibilities between two individuals should be considered.

Enough people should be involved so that turnover doesn't affect continuity and momentum. Ideally, a team that involves teachers, foodservice staff, administrators, parents, students, and community members should be formed.

Money/funding is needed for resources, release time, and food. These can be funded through TN mini grants from the State agency. Food costs may be absorbed or offset by support from the school foodservice department.

Support for nutrition training for teachers and foodservice staff by school administrators and release of staff time to plan and conduct TN events is crucial. The training needs to be ongoing.

Cooperation of school foodservice staff is integral to implementing and sustaining TN in schools.

State agency support is an important component of successful TN implementation. The State agency can provide training and technical assistance to districts and schools, encouragement to school leaders, updates about TN, assistance with the media to promote TN and healthy school environments, and information linking nutrition lessons and State learning standards and benchmarks.

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