



Communication and education for training of school food service directors in Pennsylvania, United States

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School meals programmes are achieving increasing attention as a method for improving the health and education of the world's children. The United States of America has a long history of school meals projects, starting with the recognition that hunger prevents children from learning. Early programmes typically provided food for the poorest children in the larger metropolitan areas such as New York, Milwaukee, Chicago, Los Angeles, Philadelphia and Boston, all of which had programmes by the early 1900s (USDA, Food and Nutrition Service Web site: background). Many of these programmes were started by voluntary organizations and then taken over by the Boards of Education at the urging of anti-hunger advocates and parent-teacher organizations. The nutritional health of the nation became a national security issue during the Second

World War as a consequence of the identification of malnutrition among men attempting to enlist in the armed forces (Martin, 1999). Immediately after the war, President Harry Truman authorized the National School Lunch Act (NSLA) as a national defence initiative. By the end of the first year (1946–47), 7.1 million children were participating in the programme (USDA, Food and Nutrition Service Web site: fact sheet). Today, more than 27 million children eat school lunch in the United States (ibid.).

While the problems of poverty and hunger persist in the United States, many children are now at risk of chronic diseases related to obesity associated with diets of high caloric and low nutrient density. To address these changing dietary problems, the United States Department of Agriculture (USDA), which oversees the school meals programmes, implemented the School

Meals Initiative for Healthy Children (SMI) in 1995, revising the nutrient requirements to ensure that school meals meet guidelines for fat and saturated fat in addition to the requirements for calories, protein and micronutrients that were required previously (USDA, 1995) (Table 1). The SMI also required that schools assume additional recording and reporting responsibilities, which triggered an urgent need for training the nation's school foodservice (SFS) directors. To meet this training need, USDA implemented a programme to provide materials and encourage education to facilitate the development of training programmes. This article describes the effort of the Commonwealth of Pennsylvania to meet the training needs for its 3 954 public and private schools participating in the National School Lunch Program (NSLP).

Training needs

Several challenges existed in the development of training programmes designed to facilitate implementation of the SMI in SFS operations in Pennsylvania:

- The education levels of SFS directors range from high school diploma to postgraduate degree. Their nutrition knowledge and expertise also vary across a wide spectrum of experience and background.
- Community and school demographics are also diverse. There are 501 public school districts in Pennsylvania. Student enrolments range from 267 to 214 288. The

number of schools operating in school districts ranges from one to 264. In addition, there are 314 non-public schools and public and private residential child care institutions participating in the NSLP in Pennsylvania (The Center for Rural Pennsylvania Web site; Pennsylvania Department of Education Web site).

- Pennsylvania is characterized by a large, geographically dispersed population, with several urban areas of very high population concentrations as well as many rural, fairly isolated schools and districts. The total population in 2000 was 12 281 054. Slightly more than 30 percent of the population live in rural areas. Twenty-one percent of the municipalities have populations under 1 000; 13.8 percent have populations of 10 000 or above (The Center for Rural Pennsylvania Web site).
- Complex skills are necessary to meet the SMI regulations, including an understanding of the nutrient content of foods, documentation and reporting requirements, and details of the various menu-planning options.
- High levels of confusion and anxiety about implementing the SMI were identified among SFS directors in 1995. The regulations represented a significant change to the menu planning approaches being used at the time. Some initial misunderstanding of the new requirements and mis-interpretation of the repercussions

resulting from not meeting them added to this anxiety.

Project PA

To address the training needs for SFS personnel in Pennsylvania, Project PA was initiated in September 1995 at the Pennsylvania State University (PSU). Under the authority and direction of the Pennsylvania Department of Education, and with the guidance of SFS directors throughout the state, two nutritionists from PSU planned and implemented the first training programme. Over the subsequent eight years, training activities have targeted an expanding network of school and community members under the auspices of Project PA. Target audiences have included SFS personnel, teachers, school administrators and parents.

Project PA is funded by the Pennsylvania Department of Education, Division of Food and Nutrition, with federal USDA "State Administrative Expense" (SAE) funds, as well as federal USDA Team Nutrition grants. While a variety of projects have been conducted by Project PA, three major programmes will be described in this article: satellite teleconferences, the Master Instructor Program and the Project PA Web site. These all demonstrate Project PA's communication strategy, incorporating an array of technology methodologies that have been developed to reach urban concentrations as well as the scattered rural population of the state.

Project PA's educational strategy is based partly on Bandura's Social Cognitive Theory (Bandura, 1986). Bandura's theory, especially as it relates to role models, guided aspects of each of the three programmes described here: the satellite teleconferences have utilized well-known SFS directors as role models and to model the problem-solving processes they use to meet USDA requirements; an elite corps of well-respected SFS directors serve as role models and spokespersons in the Master Instructor Program; and successful SFS

TABLE 1		
School Meals Initiative nutrient standards		
	SCHOOL LUNCH	SCHOOL BREAKFAST
Protein, vitamin A, vitamin C, iron, calcium and calories	One-third of RDA ¹	One-quarter of RDA ¹
Fat	30 percent or less of total calories	30 percent or less of total calories
Saturated fat	Less than 10 percent of total calories	Less than 10 percent of total calories
¹ RDA = recommended dietary allowance.		

directors and their programmes are featured on the Project PA Web site.

Satellite teleconferences

Satellite teleconferences use an orbiting satellite to deliver programmes that are broadcast from a studio (uplink site) to local sites (downlink sites) equipped with receiving equipment. An almost unlimited number of these local sites can be provided with the broadcast coordinates and so participate in the teleconferences. The programmes are viewed at the local sites over television monitors. They are called “teleconferences” because a degree of interaction is possible whereby the local sites can telephone or fax questions and comments to the studio, which can then broadcast this communication to the entire audience.

Teleconferences have been used successfully in both business cooperative extension and education applications as they can reach a large number of people over a wide geographical area, providing them with precise, authoritative information at relatively low cost. They have been used less frequently for general audiences or those not particularly motivated or “rewarded” for attending. A criticism of teleconferences is that the typical lecture format – with questions and answers viewed over a television monitor – tends to be bland and uninteresting.

The decision to use the satellite teleconference format was taken because of the need to reach a large number of SFS directors across the entire state in a short time period. However, the wide range of educational levels, job knowledge and experience, and motivation to learn about and assume new responsibilities among SFS directors in Pennsylvania required that the teleconferences be both relevant and compelling.

Three teleconferences were developed and delivered, focusing on providing the motivation and skills needed for successful implementation of the SMI. Each teleconference built upon the education provided by the previous

one(s), taking into account the educational readiness of the target audience.

To increase the interest and applicability, a special interactive format was created. Trained facilitators conducted group activities at each local site for a set time period, during which the satellite broadcast was shut down. SFS directors and Pennsylvania Department of Education staff, trained to lead group activities and in the specifics of the broadcast content, and equipped with facilitator manuals with pre-tested, scripted activities and discussion questions, served as facilitators at the downlink sites in Pennsylvania and at the USDA headquarters in Washington, DC. Short, pre-recorded tapes using dramatic skits or “TV newsmagazine” features were developed to model common problems and solutions. The tapes were then broadcast, in combination with input from live experts and moderators, to provide interest and variety. During the later portion of each teleconference, comments and questions were faxed and telephoned into the studio from the local sites and addressed by expert panels.

The SMI presented an additional training challenge because new responsibilities and skills need to be conveyed and many SFS directors felt frustrated by the imposition of additional regulations. They feared that participation in the school lunch programme would drop because of the menu changes required by the new regulations. These fears needed to be recognized and addressed in order for the training to be effective. Teleconference I: “Making the Choice” opened with videotaped interviews of SFS directors expressing their concerns about their ability to meet the SMI requirements. These concerns were then addressed, one by one, and information and guidance that the directors needed to meet the initial challenges related to planning menus were provided.

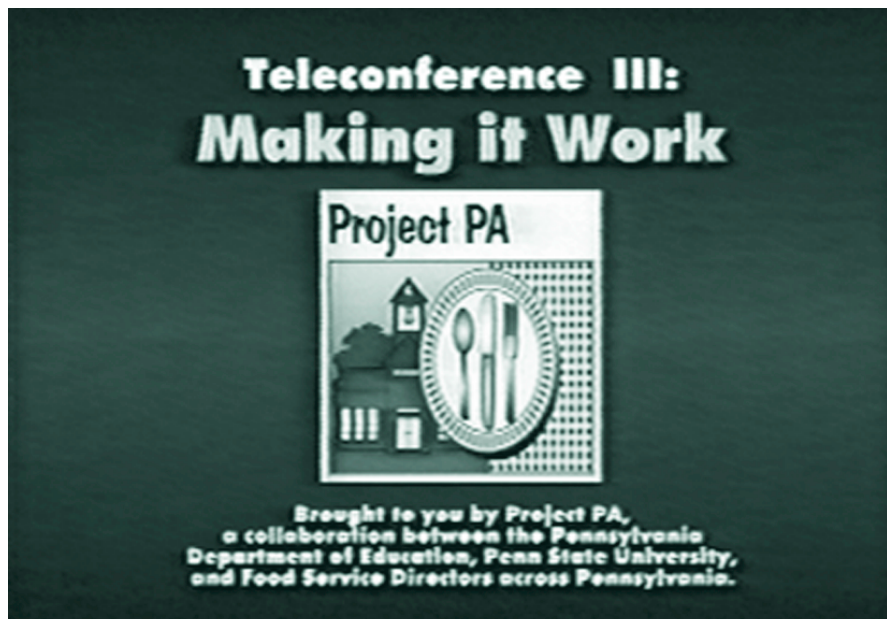
The SFS directors were anxious about the review process and the possibility of



Project PA

losing funding if they failed the review. To address this concern, the second teleconference, “Taking the Steps”, showed a successful simulated review of the school meals programmes in one school district and explained the SFS documentation and reporting requirements. The same individuals who had featured in the first teleconference were re-interviewed about their progress. Each said that the process had not been as difficult as he or she had feared initially. The teleconference ended with the videotapes of these very positive interviews. Teleconference III: “Making it Work”, presented a video documentary featuring two new SFS directors as they progressed through the steps over a one-year period and modelled the implementation of the SMI in their districts. It also showcased a variety of “best practices” related to SMI implementation drawn from directors throughout the state.

The three satellite teleconferences reached approximately 2 000 SFS directors at the 30 downlink sites throughout the state. Edited videotapes of each have been distributed to all NSLP sponsors in Pennsylvania and used for training at the local level. Evaluation has proved that this medium can be an effective tool for the provision of training for SFS personnel. Significant improvements in knowledge and attitudes were noted following each teleconference. The interactive nature of the teleconferences, the facility this gave for the audience to communicate directly with government



regulators and other experts at the studio and have their questions and concerns answered, and the relevant and compelling format were all factors that were credited with their success.

Master Instructor Program

SFS directors were the primary target audience of Project PA's initial training efforts. However, as their understanding of and comfort with the new requirements related to the introduction of the SMI grew, needs assessments identified the need for training for other levels of SFS employees such as cafeteria managers and other school-level personnel. A cost-effective strategy to provide consistent, authoritative, standardized information was needed for training this much larger, geographically dispersed, group.

In 1998, Project PA initiated an SFS Master Instructor Program to provide this local-level training. Twenty-eight SFS directors were recruited by the Pennsylvania Department of Education to serve as master instructors on the basis of their knowledge and experience of school meals programmes and the quality of their own programmes. Master instructors make a commitment to conduct a minimum number of local-level workshops over a two-year period.

They receive a small financial compensation for each workshop conducted, primarily to cover travel and incidental costs. Project PA develops and delivers one-day training sessions for master instructors, providing them with a training kit – including detailed lesson plans, activity ideas, visual aids, videos, detailed background information and strategies for presenting the educational content – for use at the workshops.

While the initial topics were related to the SMI, training sessions have since been conducted on eleven topics, including nutrients in school meals, marketing school meals programmes, serving students with special needs, childhood obesity and school breakfasts. This programme is ongoing and provides a statewide infrastructure for the dissemination of up-to-date, authoritative information; further topics are decided as new issues evolve. Project PA master instructors have trained more than 4 000 individuals through 162 local-level workshops. Their contributions are highly valued and publicly recognized by Project PA, and they are seen as leaders among their colleagues in the state. In a recent assessment of the programme, master instructors indicated that they were proud to be involved, valued the professional development opportunities the programme afforded and believed

that it was meeting the training needs of SFS employees in Pennsylvania.

Project PA Web site

A strategy was needed to provide a method for ongoing, rapid communication with SFS personnel to promote project activities, distribute resources and materials, and provide a venue for SFS personnel to share successful practices with others in the field. The Project PA Web site (<http://nutrition.psu.edu/projectpa>) was developed to meet these goals.

The Web site's homepage provides links to all current projects. Some of the key components of the site are described below.

Online access to Master Instructor Program information

The Web site provides a description of the Master Instructor Program, a map of Pennsylvania indicating the locations of each master instructor, and links to individual master instructor Web pages. The individual Web pages provide contact information, a list of topics that each particular master instructor is certified to teach and a small bio-sketch and picture of the master instructor, which serve to introduce them to the Web site users.

Downloadable resources

Many of the resources developed by Project PA are accessible through the Web site in a variety of formats. Examples include a "Showcase Schools" manual, which documents nutrition education activities that took place at four schools in Pennsylvania as part of a Project PA start-up grant project. This 78-page, full-colour manual was distributed to all school districts in Pennsylvania. The online version allows individual sections to be printed, or the complete manual. Other materials accessible through the Web site include handouts, booklets and PowerPoint presentations.

Online “best practices” submissions

One of the educational strategies employed throughout much of Project PA’s work is the presentation of successful approaches for addressing problems or enhancing SFS programmes or nutrition education activities. The Project PA Web site provides a venue for sharing these model programmes or “best practices.” An online activity reporting form is available through the site; this allows users to submit details of approaches they have found to be successful. On submission, the information on the form is sent as an e-mail message to the Project PA office, where it is used to develop a project description, which is then showcased through the Web site.

Rapid communication

An example of how the Web site can be used for rapid communication was its use to publicize and provide application information and forms for the recent Healthy School Nutrition Environments Grant project. A link was provided on



Project PA

the homepage to specific information on how schools could apply for start-up grant funding to assess their nutrition environments and submit action plans to create more Nutrition Friendly Schools. In combination with other recruitment efforts, the Web site contributed to 23 applications being submitted and seven projects being funded.

Conclusions

School meals programmes have proved successful in supporting national nutrition and education goals. However, fulfilling the responsibilities of providing high-quality, safe, nutritious foods to children requires the education and training of many different types of personnel, in a variety of content areas – including food safety, sanitation and

A screenshot of the Project PA Master Instructors website. The top navigation bar includes links for HOME, Activity Reporting, Breakfast Brigade, Image Gallery, Master Instructors, News, Nutrition Friendly Schools, PDE Food and Nutrition Programs, and Resources. Below the navigation bar is a search box and a "Search" button. The main heading is "Master Instructors" with the tagline "Train the Trainer". To the right of the heading is a link to "Email this page to a friend." Below the heading is a group photo of the Master Instructors. To the right of the photo is a text box explaining that Project PA Master Instructors are foodservice directors who have completed training provided by Project PA on a variety of topics. They are available to conduct workshops on these topics for school foodservice personnel in Pennsylvania free of charge. Below the text box is a "Master Instructor Login" link. At the bottom of the page is a "Master Instructor Pennsylvania Map Locator" which includes a map of Pennsylvania and a list of Master Instructors with their names and locations. The list includes Sharon Adami, Ann Anderson, Bonnie Baehr, Janet Boyer, Candice Hartranft, Cathleen Kenefick, Joanne Kinsey, and Susan Meadows.

storage, foods and nutrition, leadership and administration, and record-keeping. Providing this training to a diverse population, located in concentrated urban centres as well as scattered rural communities, was a challenging task requiring a variety of strategies and methods. Project PA developed a communication strategy based on an array of technological methodologies, ranging from a low-tech, “train-the-trainer” Master Instructor Program, to a promotional Web site, to a series of satellite teleconferences using highly sophisticated technology. Theory-driven educational strategies were developed to complement the communication efforts, specifically drawing on Bandura’s theory concerning the importance of role models in the education process.

While not every country has access to the technology required for the communication strategies described here, other methods of communication – such as radio broadcasts, pre-recorded video tapes, scripted or interactive drama or small group presentations – can be utilized to adapt the programmes described in this article. The concepts that were particularly successful were those that addressed the specific needs of the target audience, those that showcased successful programmes and practices and those that used precise, accurate, relevant and compelling training materials in a “train-the-trainer” programme. By using an array of communication strategies and education methodologies, training objectives for school meals programmes can be met successfully.

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Communication and education for training of school food service directors in Pennsylvania, United States

School meals programmes have been an important method of providing nutrition to children in the United States of America and worldwide. To address changing dietary problems, the United States Department of Agriculture (USDA), which oversees the school meals programmes, implemented the School Meals Initiative for Healthy Children (SMI) in 1995. The initiative changed nutrient requirements to ensure that school meals meet guidelines for dietary fat and saturated fat in addition to the requirements for dietary energy, protein and micronutrients that were required previously. This article describes the communication and educational strategy of Pennsylvania, a large and diverse state with specific challenges, to meet new USDA requirements for the school meals programmes operating within the state. It outlines the effort of the Commonwealth of Pennsylvania to meet the training needs of its 3 954 public and private schools participating in the National School Lunch Program (NSLP).

This strategy employs both high and low technology and includes educational methodologies and theory that may have applications in other countries that are initiating or expanding their school meals programmes. Three major programmes illustrating the communication strategy are described: satellite teleconferences, the Master Instructor Program and the Project PA Web site.

Communication et éducation: formation des directeurs de services d'alimentation scolaire en Pennsylvanie (Etats-Unis)

Les programmes d'alimentation scolaire jouent un rôle majeur en matière de nutrition des enfants, aussi bien aux Etats-Unis qu'à l'échelle internationale. Soucieux de faire face à l'évolution des problèmes diététiques, le Ministère de l'agriculture des Etats-Unis (USDA), qui est chargé de la supervision des programmes d'alimentation scolaire, a mis en œuvre en 1995 un projet d'alimentation axé sur la santé des enfants, *School Meals Initiative for Healthy Children*. Dans le cadre de ce projet, les besoins en nutriments ont été modifiés, afin d'assurer que les repas scolaires respectent les directives concernant les graisses alimentaires et les graisses saturées, en plus des exigences qui prévalaient jusqu'à présent en matière d'apport énergétique alimentaire, de protéines et d'oligo-éléments. Le présent article traite de la stratégie de communication et d'éducation mise en œuvre en Pennsylvanie, Etat caractérisé par sa grande superficie et sa diversité et présentant des défis spécifiques, pour que les programmes de repas scolaires de cet Etat respectent les nouvelles exigences du Ministère de l'agriculture américain. L'article souligne les efforts déployés par l'Etat de Pennsylvanie pour répondre aux besoins en formation des 3 954 écoles publiques et privées participant au Programme national d'alimentation scolaire (NSLP).

Cette stratégie, qui fait appel à des techniques aussi bien rudimentaires que sophistiquées, intègre des méthodes et des théories pédagogiques susceptibles d'être appliquées dans d'autres pays, où des programmes d'alimentation scolaire sont en phase de lancement ou de renforcement. Trois grands programmes représentatifs de la stratégie de communication sont présentés: les téléconférences par satellite, le programme de formation des formateurs *Master Instructor Program* et le site Web *Project PA*.

Comunicación y educación para capacitar a los directores de servicios de comidas escolares en Pensilvania, Estados Unidos de América

Los programas de almuerzos escolares han constituido un modo importante de proporcionar alimentos a los niños, en los Estados Unidos de América y en todo el mundo. En 1995, el Departamento de Agricultura de los Estados Unidos (USDA), que supervisa los programas de alimentación en las escuelas, puso en práctica la Iniciativa de almuerzos escolares con el fin de hacer frente a los nuevos problemas dietéticos. La iniciativa cambió los requisitos de nutrientes a fin de asegurar que los almuerzos escolares

cumplieran las directrices sobre la grasa comestible y la grasa saturada, además de los relativos a la energía alimentaria, proteínas y micronutrientes que se exigían anteriormente. En este artículo se describe la estrategia de comunicación y educación de Pensilvania, un estado extenso con gran variedad de condiciones y problemas específicos, para cumplir los nuevos requisitos del USDA con respecto a los programas de almuerzos escolares que se aplican en ese estado. Se describen también los esfuerzos realizados por el estado de Pensilvania con la finalidad de satisfacer las necesidades de capacitación de sus 3 954 escuelas públicas y privadas que participan en el Programa nacional de almuerzos escolares.

En esta estrategia se emplea tecnología sencilla y compleja; además, se utilizan teorías y metodologías educativas que podrían aplicarse en otros países que están iniciando o ampliando sus programas de almuerzos escolares. Los tres programas principales que ilustran la estrategia de comunicación empleada son los siguientes: videoconferencias por satélite, el programa para directores y el sitio Web del proyecto.