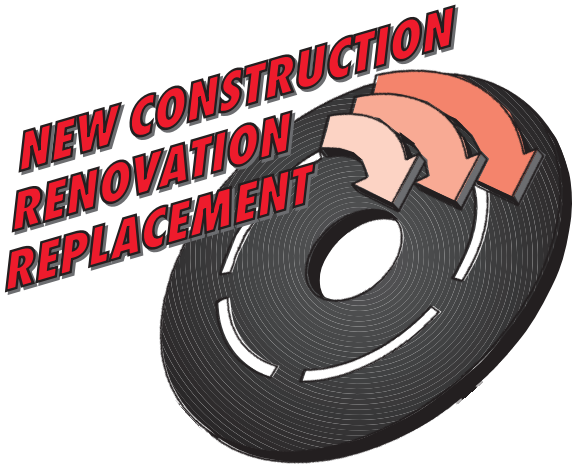
OVERVIEW

Child Nutrition Programs face challenges from external factors of commercial foodservice operations and from internal factors of design and operation constraints. In summary the challenges are:

- operating a foodservice program as a business within an educational arena
- successfully competing with the commercial marketplace
- providing quality foods that are nutritious and safe in an informative manner (nutrition education)

This makes school foodservice programs a living laboratory. These challenges result from eight trends that impact CNPs and their equipment purchasing decisions. This chapter is designed to give you several points of view to assist you in your critical path planning.



Challenges and Changes

The foodservice industry as a whole is slow to change even when there are influences all around working to facilitate a change. It usually takes an *act of Congress* (and it literally does) to bring about change in school foodservice programs.

This chapter is designed to offer the traveler several points of view. Recommended readings are *Current and Future Directions of Child Nutrition Programs* (Bergenson et al, 1996) and the conference proceedings from *Trends: School Food Service in the Year 2000 and Beyond* (1992). You will find the comments of Louise O'Sullivan, who at that time was President of NAFEM and President of Groen, of particular interest. As you travel down the Purchasing Parkway, you will find no shortage of opinions. You should, however, seek the advice and counsel of industry resources. They will be an important source of information as you formulate guiding principles.

From an educational viewpoint, school enrollments are fluctuating. School administrators are building new schools, closing old schools, and renovating other schools to meet the needs of student populations. Changes in school foodservice programs resulting from current trends have taken on many forms. An overview of the literature has identified changes in the following areas:

- customer expectations and resulting menu offerings
- purchased food products
- commodity food products available
- serving systems
- production techniques
- foodservice equipment technology
- food and equipment distribution systems
- flow of information to the end user, i.e., school foodservice directors/supervisors, managers, technicians
- competition
- federal regulations
- labor pool availability
- CNP director's role in leading the program

With all these changes, has anything remained the same? YES! The mission of the National School Lunch Program and School Breakfast Program has remained the same — to serve nutritious meals to children. However, the way in which the mission is achieved has changed. As the introduction of the *High School Student Satisfaction Survey* (NFSMI, 1997) concludes, "Child nutrition programs today are much different from those of 1946...students today are more sophisticated and are exposed at an earlier age to a variety of types of food. CNPs today are competing with fast foods, vending machines, and competitive food sales for program participation." (p.v). In other words, we can expect that as long as there are CNP the way in which the mission is achieved will continue to change in order to accommodate changes in the customer.

The result is that equipment purchasing decisions will be made based on program profiles and planning for future demands of the customers. In chapter four, the program profile is developed.

Eight Trends Impacting School Foodservice Equipment Purchases

Trends impacting the CNP can be categorized as follows:

Trend 1. Customer expectations
Trend 2. Alternate food production systems
Trend 3. New technology
Trend 4. Food safety initiative
Trend 5. Manufacturing of foodservice equipment
Trend 6. Equipment distribution
Trend 7. Changes in regulations governing CNPs
Trend 8. Changes in the leadership role of the CNP professional

Let's identify how each trend may affect foodservice equipment purchasing decisions.

1 Trend 1 Customer Expectations

The customers have changed and will continue to change as they are influenced by the information age. Jeffrey J. Hallet, in his presentation titled *The Process of Change and How Education will be Affected* (Trends, 1992), points out the impact of having access to more than 300 channels of television. He notes "it means that access to and control over information and knowledge is being driven right down to the individual at a small group level" (p.1).

Consider, too, the impact of choice on the customer – entertainment choice, dress choice, commercial foodservice choice. This commercial marketplace influence is reported in results from major findings of the *High School Foodservice Survey* (NFSMI, 1997). Students have higher expectations resulting from their dining-out experiences. Their expectations demand a wider variety of foods, better quality, increased foodservice choices, and an enhanced dining atmosphere. Menu demands include healthier foods, more "ethnic" menu items, and retail appeal.

Customer expectations drive changes in menu offerings, menu merchandising, program marketing, production techniques, form of purchased food, and serving systems. Student customers whose expectations are not met will look to the competition for their food choices. Every CNP wants to keep customers.

The competition with commercial enterprise has motivated CNP directors to respond to the trends in displaying and serving foods. Speed of service, however, will always remain a key factor regardless of the type of service. Seelye (1996) reported school foodservice operations will introduce innovative serving systems based on the expectations of more sophisticated customers.

Innovations in serving systems will impact equipment purchase decisions. Serving systems such as:

- Food court concepts
  students select from various specialty stations (as observed in local shopping malls) such as burger and fry bar, salad bar, pizza bar

- Retail, commercial, and/or self-branding foods
  popular branding of fast food items or self-branding which usually includes school name or mascot (example: Bulldog Burger)
- Kiosks
  a small, free-standing structure with one or more open sides used for point-of-service and point-of-sale
- Packaged "componentized" meals
  prepackaged, reimbursable meals, pick-up and go, i.e., sandwich and fruit
- Food boutiques
  a retail activity zone where specialized foods and meal components are served
- Marché concepts
  based on European open-air marketplaces, the emphasis is on visual display, exhibition preparation, and random points of service

The long term trend in school foodservice programs will be a blend of self service and operator service with greater showcasing of food. This will include visible line-of-site preparation areas allowing for some part of the food preparation to be seen and appreciated by the student customer.

Rounding out Trend 1 is the desire for foodservice operations to expand the use of school kitchens to prepare meals for non-student populations. If your program provides meals to groups outside of the school population or is considering it in the next five years, you have an additional set of customer expectations to address in your purchase of foodservice equipment.

Remember the guiding principles. The challenge is to make equipment purchasing decisions with flexibility to meet future needs of your customers. This will allow operations to handle incoming fads and long-term trends while maintaining operation viability.

2 Trend 2 Alternate Food Production Systems

The United States Department of Labor's November 1997 monthly survey reported a jobless rate of 4.6 percent (Pine, 1997). This is the lowest monthly jobless rate since October 1973. When the national jobless rate is low, the foodservice industry usually experiences a shortage in qualified labor in many geographic areas. As this occurs, strong

consideration will be given to centralized management and centralized production facilities. Centralized food production may be as small or as large as the demands require. In addition, the systems may accommodate a single food item or a group of items such as bakery offerings or basic sauces. These systems may also handle the production of all food items. Programs considering centralized food production systems must consider these factors in the decision-making and value-analysis process:

- make vs. buy
- labor availability and cost (including benefits)
- menu flexibility requirements
- cost control demands
- space demands
- quality control and "fresh prepared" expectations

Once a decision is made to use a centralized food production facility, the next step is to select a food transportation system. Factors to consider in analyzing a transport system for hot or cold foods include:

- satellite rethermalization capabilities
  Is there equipment located at the school site to reheat food that is transported cold?
- geographic boundaries, transportation times
  Are the satellite school locations geographically close enough to transport food in a reasonable length of time while maintaining food in the appropriate hot or cold temperature zones?
- temperature retention and food safety considerations
  Is transport equipment available to maintain appropriate hot or cold temperatures during the length of transportation to satellite schools?
- labor availability
  Are qualified personnel available to transport food, receive food, finish preparation, and serve food items?
- cost
  What is the initial start-up expense of a food transport system?

Programs selecting a chilled food system have a variety of methods to consider:

- blast chill
  Foods are rapidly chilled by circulating cold air bringing the temperature from the appropriate internal temperature to 34˚ F within 90 to 120 minutes (commonly solid foods larger than 2 inches in diameter). This method is also used when smaller

production needs are required on a variety of menu items.

- water bath chill
  Foods are rapidly chilled by circulating cold water in a contained tank bringing the temperature from appropriate degree of doneness to 34˚ F within 90 to 120 minutes. Items chilled are placed in plastic bags and securely closed. Liquid or partial liquid food items such as soups, stews, gravies, and sauces are chilled in tumble chillers. Meat roasts and whole poultry items may be chilled in bags in circulating cold water tanks.
- combination system (blast and water bath)
  Both types of chilling equipment are available to chill the appropriate menu item.
- partial system
  This method addresses automated packaging with hot transport or blast chilled with chilled transport.

Rethermalization methods will be implemented using conventional equipment such as combination ovens, convection ovens, steamers, kettles, and braising pans. Rethermalization can also be accomplished using specialized equipment such as controlled humidity cabinets.

In the coming years, you can expect variations of all types of systems to be implemented. There are no pure methods, and the needs of individual school systems vary.

Traveler's Tip

In new construction or a major renovation ask for a 3-dimensional drawing from the consultant/architect. Bringing the functional area alive helps many directors who feel a lack of confidence about the responsibility of purchasing equipment.

3 Trend 3 New Technology

There are any number of new technologies that will impact current and future pieces of foodservice equipment.

- Combination oven-steamer
  this equipment has been available but is just now gaining

acceptance. Available in either gas or electric, these "work horses" provide speed, higher yields, food quality, less handling, ability to cook more than one food at a time with no flavor transfer, and ease of cleaning.

- Induction cooking
  means instant heat with no open flames or hot spots (heats the food, not the kitchen) and it is easy to clean. Induction uses a magnetic field to "heat" the pan or pot while the unit itself stays cool. Look for induction cook tops, woks, griddles, and fryers.

- Holding cabinets
  may seem to be the lowest tech equipment in the kitchen, but there is news in humidity control. By properly holding and controlling food, the texture of the food is maintained. Not all cabinets are the same and you should test before you buy.

- Boiler-less and variable-temperature steaming
  provides speed and preserves color, texture, and nutrients. There are a few new steamers that create saturated steam without a boiler. This cuts water, energy, and maintenance costs dramatically.

- Hot air tumble fryer
  will produce very successful fries using a normal blanched fry with only 5% fat. An added benefit is that these fries can be reheated to fresh quality. Prices have fallen, but this item is still at a premium. However, if you also consider the oil, hood, and exhaust system savings, the payback can be relatively short.

- Cooking with light
  has the speed of a microwave, yet cooks and browns naturally. For now, this type of oven can be used to prepare special meals or meals at odd hours.

- Combination convection-microwave oven
  bakes a whole chicken in 18 minutes. You will find it has the speed of a microwave and the browning of a convection oven.

4 Trend 4 Food Safety Initiative

The practice of providing safe food makes good sense. With this in mind, the national implementation of a Hazard Analysis Critical

Control Point (HACCP) food safety system will eventually become enforced. It moves food safety from inspection to prevention. HACCP standards will influence all areas of the school foodservice operation such as:

- increased chilling requirements
- implementation of chilled food systems
- monitoring technology - method of tracking and documenting temperatures and times of food products whether in a cooking, chilling, reheating, transporting, or holding status
- greater emphasis being placed on the ease of cleaning and sanitizing of all equipment and supplies

Look for the food safety initiative to impact equipment purchase decisions. Expect an increase in computer temperature tracking. This computer technology will provide a vital data link to monitor temperatures from the delivery of food products through receiving, production, and service. These data are an integral part of due diligence that is required to certify safe food.

5 Trend 5 Manufacturing of Foodservice Equipment

Manufacturers face a substantial challenge. They want to produce quality equipment with value-added features while maintaining profitability. In turn they are expected to offer the equipment at an affordable price, even though the cost of manufacturing is very expensive. Few manufacturers use robotics. As a matter of fact, most foodservice equipment is made by hand including hand welding and hand polishing. Manufacturers address this challenge by implementing cost reductions and developing advancements. In many cases, the cost reductions become an enhancement.

Manufacturers strive to provide equipment that will withstand constant use by a variety of employees. Also, they strive to provide the most reliable component parts not only for the benefit of their customers but also to reduce warranty costs. For example, the trend to move to electro-processor based controls from electro-mechanical controls will become the standard. Electro-processor based controls may be seen as digital read outs, touch pads, and computer programming options.

These controls have become more reliable and multi-functional, and they require a smaller housing. The enhancement results in a smaller piece of equipment with the same or greater production capacity.

The trend toward manufacturing equipment with built-in maintenance operations will be observed across the board in many types of equipment. As it becomes a value-added feature, it will also reduce warranty cost.

Manufacturers have learned that not everything has to be made of metal and stainless steel to exist successfully in a kitchen environment. New materials are being developed and used that are recognized as safe and more reliable. This cost reduction also becomes an enhancement.

Manufacturers continue to meet the growing demands on environmental concerns. These concerns include energy usage, air quality, water quality, and water use. Other concerns involve the work environment. Examples may include better safety features for the protection of the operator and better insulation to enhance the working climate.

Manufacturers are responding to the needs of a diverse workforce and are offering universal or multilingual labels. Other trends in technology will emphasize interactive information — integrating point of sale (POS), production, and food safety monitoring functions.

Manufacturers are introducing new types of production and service system equipment that will:

- meet customer expectations for food quality
- incorporate flexibility for changing needs
- require fewer employees to operate

Manufacturers are not bound by “the way we have always done things.” As a matter of fact, you may find a manufacturer that is willing to custom-design a piece of equipment to meet your innovation. Equipment design engineers are continuously developing and testing new foodservice systems to meet the needs of the everchanging foodservice environment. The manufacturer’s representative is a key player in identifying solutions to your equipment purchasing needs. Other sources of information include online resources, foodservice equipment shows, and professional journals. Foodservice equipment testing facilities also give you an opportunity to “test drive” the equipment before making a final purchasing decision.

6 Trend 6 Equipment Distribution

Once foodservice equipment has been identified for specification, a source of distribution must be found. The channels of equipment distribution are changing. Traditionally, all foodservice equipment was purchased through a foodservice equipment dealer. Now other channels are available. For example, foodservice equipment can be purchased through a food distributor (broadline distributor) or directly from the manufacturer. If one of these channels is used, the dealer will be bypassed. The channel of distribution chosen by the school district will depend upon the specific needs of the purchaser, the accessibility of each option, and the experience of the buyer. The channels of distribution are discussed in detail in Chapter 3.

7 Trend 7 Changes in Regulations Governing CNPs

The influence of regulations can affect equipment purchase decisions. For example, the United States Department of Agriculture has integrated the 1995 Dietary Guidelines for Americans into the CNP. The *School Meals Initiative for Healthy Children* (1995) requires the school lunch program over a week to:

- limit total fat to 30 percent of total calories
- limit saturated fat to less than 10 percent of total calories
- reduce the levels of sodium and cholesterol
- increase the levels of dietary fiber

Careful selection of foodservice equipment can be expected to enable compliance of the regulations by incorporating preparation methods to reduce fat.

Regulations may also impact the foodservice equipment purchasing decision in the following ways:

- Production methods are determined by the U. S. Dietary Guidelines.
- Regulations on food safety and sanitation standards determine the required rate of rising or falling temperatures, hot-holding, and cold-holding capabilities.
- Regulations on environmental standards determine ventilation requirements, energy efficiency, and disposal of waste.
- Regulations on building codes and local health department codes may also impact the choice of foodservice equipment.

Regulations need to be considered early in the equipment purchasing process because they can limit the choices available to you. Each CNP director must take responsibility to meet regulations and codes.

8 Trend 8 Changes in the Leadership Role of the CNP Professional

The CNP director plays a crucial role in guiding the foodservice equipment purchasing process. It is up to the CNP director to lead in the decision-making process. Keep in mind:

- You and your employees have the greatest insight into what types of equipment have and have not worked in the past.
- You have survey tools from NFSMI to determine customer expectations of the CNP.
- You have an understanding of the regulations governing the school foodservice program that no one else from the school system or outside the school system has.
- You bring to the planning team a level of expertise that no one else from the outside brings.
- You must convince the other interested parties that your guiding principles reflect what is truly best for your program.

These trends should demonstrate the challenge that each director has to operate the foodservice system as a business within the educational arena. Your job is to visualize the impact of each trend on your CNP in the next five years. The equipment purchasing decisions made today will impact outcomes from this point forward. The good news is that many resources are available. One of the most important resources is this *Guide* and the decision-making process it describes.

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