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PROPOSED STANDARDS, EVALUATION TOPICS, CRITERIA, AND AN ASSESSMENT
TOOL FOR SCHOOL FOOD AND NUTRITION PROGRAMS

by

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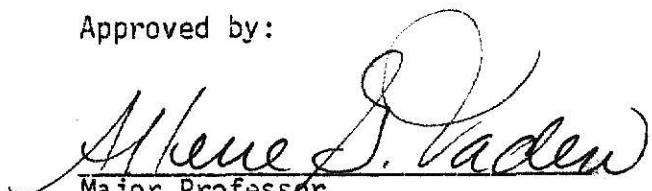
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TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS	ii
LIST OF FIGURES	v
INTRODUCTION	1
REVIEW OF LITERATURE	3
Development of Child Nutrition Programs	3
Problems Impacting on Effectiveness of Child Nutrition Programs	7
Labor Skills	7
Purchased Foods and USDA Commodities	9
Operational Funds	11
Management Skills	12
Purchasing, Production, and Distribution	12
Meal Quality and Student Participation	13
Accountability	15
Standards for Dietetic Services	18
Standards in Child Nutrition Programs	22
Recommended Standards	22
Mandatory Standards	24
Assessment Tools	26
The Systems Approach in Foodservice	26
Inputs	28
Transformation	28
Outputs	29

Control	29
Feedback	29
Memory	30
Environment	30
DEVELOPMENT OF A SCHOOL FOODSERVICE SYSTEMS MODEL	31
DEVELOPMENT OF PROPOSED STANDARDS, EVALUATION TOPICS, CRITERIA, AND AN ASSESSMENT TOOL FOR SCHOOL FOOD AND NUTRITION PROGRAMS	36
Proposed Standards	36
Evaluation Topics, Suggested Criteria, and An Assessment Tool	37
Proposed Standards and Evaluation Topics	38
Proposed Standards and Evaluation Topics with Suggested Criteria	42
Assessment Tool for School Food and Nutrition Program	59
SUMMARY	76
REFERENCES	78

LIST OF FIGURES

Figure	Page
1. School Lunch Pattern - Approximate per Lunch Minimums	16
2. Standards and Related Criteria for an Administrative Audit	21
3. Program Responsibilities in Child Nutrition Programs	23
4. Proposed Assessment, Improvement and Monitoring System - Performance Standards	25
5. Foodservice System	32
6. School Foodservice Systems Model	33
7. School Food and Nutrition Program, Evaluation Checklist	60

INTRODUCTION

The major objectives of the child nutrition programs have been to safeguard the health of the nation's children and to increase consumption of surplus agricultural commodities and other foods (1). Services of the child nutrition programs have gradually expanded from the mere service of food for school children to a sophisticated system of providing quality meals, developing nutrition education programs, stimulating student participation and satisfaction, maintaining employee satisfaction, and maintaining financial accountability.

Problems in school foodservices have raised questions challenging whether the objectives of the child nutrition programs are being met (2-4). Well defined standards for school foodservices are necessary for effective evaluations. All groups who evaluate the child nutrition programs may be correct in their assessment based on their own views of standards for the program objectives. With the increase of services being provided by the child nutrition programs, a set of standards are needed to make assessments on levels of performance for program objectives.

The systems concept has been used as a means of viewing an organization as a totality and assisting in decision making (5). The systems concept can be adapted to the school foodservice organization and used as an aid in developing standards for the major areas of the school food and nutrition system.

The review of literature includes discussions on the development of the National School Lunch Program (NSLP) and other Child Nutrition

Programs (CNP), problems affecting performance of school foodservice programs, standards in dietetic services, standards in school foodservice programs, use of assessment tools in dietetic services, and the systems approach in foodservice systems.

Assessment tools have been utilized in health care facilities and long term care facilities to facilitate effective operations (6-8). The United States Department of Agriculture/Food and Nutrition Service (USDA/FNS), USDA/FNS regional offices, and state education agencies have provided assessment tools to the local school districts to assist in evaluation of daily operating functions of the school foodservice program. Many assessment tools such as observation checklists, policy and procedure models, and plate waste measures have been utilized in hospitals, long-term care facilities, and university feeding programs and can be adapted to school foodservices to facilitate internal assessment of school food and nutrition programs.

The major objectives of this paper are as follows:

1. to review the need for standards in school foodservices by examining the problems that have affected the operational effectiveness of school food and nutrition programs;
2. to adapt a systems model to school foodservices and utilize the systems approach in developing standards for the school food and nutrition program on a local school district level;
3. to develop suggested standards and criteria that could be used as the basis for evaluating the school food and nutrition program;
4. to develop a tool based on the suggested standards that could be utilized to facilitate the operation and internal assessment of school food and nutrition programs.

REVIEW OF LITERATURE

Development of Child Nutrition Programs

The beginning of school feeding dates to more than a century and a half ago in Europe. Programs began in Munich, Germany, in 1790, when Count Rumford established a soup kitchen for unemployed workmen and invited hungry schoolchildren to eat also (9). Other similar programs existed in France, England, Holland, and Switzerland (1, 9).

The Children's Aid Society of New York City in 1853 (1, 9) is credited with initiating the first school feeding program in the United States. Meals were served free of charge to the children who attended vocational schools for the poor. The early programs in the United States were influenced strongly by a book written by Hunter entitled Poverty. Hunter wrote about the concern for children of poverty-stricken families and their inability to learn in schools due to the ill effects of malnutrition.

In Philadelphia, Herrick, who was principal of William Penn High School for Girls when it first opened in 1909, is credited with accomplishing the transfer of responsibilities for operation and support of the lunch program from charitable organizations to the Philadelphia school board (9). He requested that a system be established to assure that the lunches served would be based upon sound principles of nutrition and required that the program be under the direction of a home economics graduate. The program was successful and led to other programs across the United States.

According to Gunderson (9), by 1937 fifteen states had passed laws specifically authorizing local school boards to operate lunch programs;

four states made provisions for needy children. States had the authorization to provide meals for children but could not provide the funds to maintain the increased financial load. The earliest federal financial aid came from the Reconstruction Finance Corporation in 1932 and 1933 through loans to help with labor costs of employees involved in preparing and serving meals. Such federal assistance was expanded to other areas in 1933 to 1934 under the operations of the Civil Works Administration and the Federal Emergency Relief Administration, reaching into thirty-nine states and covering the employment of 7,442 women.

The Commodity Donation Program was a result of the depression of the 1930's (9). Much of the farm production did not have a market. The government purchased commodities and redistributed them to school lunch programs as a means of diverting them from the normal channels of trade and commerce. The object of the legislation was to remove price-depressing surplus foods from the market (1, 9).

From 1932 to 1934, federal assistance was expanded by the Works Progress Administration through the assignment of unemployed needy women to the school lunch program (9). Another program was the National Youth Administration in 1935, which provided part-time workers in school lunch programs.

After the war, school lunch participation included approximately four million children. Uncertain of year-to-year funding, schools were reluctant to enter the program or to expand existing programs (1, 9). Recognizing this shortcoming, Congress enacted the National School Lunch Act (NSLA) of 1946, P.L. 396. This act authorized the creation of the National School Lunch Program (NSLP) (10). The United States Department of Agriculture's (USDA) food distribution authority was expanded further

by section 416 of the Agriculture Act of 1949, which authorized donations of food acquired by the Commodity Credit Corporation under price-support programs (9). In 1954, due to the need to increase milk consumption of children, the Special Milk Program was established (11).

In 1962, the Act was amended to provide for special assistance payments in direct response to President Kennedy's Economic Message to Congress in which he cited his commitment to alleviating hunger in America (11). Two years later Congress passed the Elementary and Secondary Education Act. Many school administrators used parts of the funds provided by this act to provide for meals to needy children. In 1965, the U.S. Department of Health, Education and Welfare (HEW) ruled it illegal to use these education funds for school nutrition purposes (1, 9, 11).

As a result, new legislation became necessary to provide funds for lunches and meals for needy children (11). The Child Nutrition Act (P.L. 89-642) passed in 1966 provided for a pilot breakfast program, foodservice equipment assistance, and additional lunch funds for especially needy children (12). In 1970, Congress amended the NSLA through P.L. 91-248 establishing standards for free and reduced price meals so that needy children would be able to participate in the NSLP (13).

From 1970 to 1973 legislation continued to amend the NSLA and the Child Nutrition Act of 1966 to provide for increased funding levels that would guarantee funds on the basis of number of meals served (11). In 1973, P.L. 93-150 (14) included an escalator clause to assure states that funding would not only be available for each meal served, but would be increased in accordance with the food away from home index. The

legislation provided for improved commodity programs and expanded breakfast programs.

In 1975, amendments to the National School Lunch Act and Child Nutrition Act of 1966 made the Breakfast Program permanent (15). P.L. 94-105 (16) included administrative guidelines for "offer versus serve," whereby senior high students were allowed the option of refusing part of the school lunch.

In 1977, P.L. 95-166 authorized the Secretary of Agriculture to carry out a program of nutrition information and education as part of foodservice programs for children (17). The amendments to the National School Lunch Act and the Child Nutrition Act of 1966 in the legislation revised the summer food program to make it more effective and contained a number of provisions affecting the regular school lunch and breakfast programs. Additional provisions extended the "offer vs serve" option for service in junior high schools. Public Law 95-166 also gave the Secretary of Agriculture the authority to regulate the sale of competitive foods in the schools.

In May of 1979, the final regulations (18) for the Nutrition Education and Training Program (NET) became effective. These regulations governed the application for nutrition education funds by the state agency, a needs assessment, development of the state plan, and other operational requirements of the NET program. Competitive food regulations (19), finalized in January 1980 for implementation on July 1, 1980, restricted the sale of certain foods until after the last lunch period.

Problems Impacting on Effectiveness of Child Nutrition Programs

Garvue et al. (4) identified various problems in school foodservice that have hampered the effectiveness of the program. Problems cited were unskilled personnel, inadequate funding, and a general weakness in all areas of fiscal management. Audit reports cited in the Assessment, Improvement, and Monitoring System (20) summary have raised significant questions regarding effectiveness of present school feeding program reimbursement claiming procedures, monitoring systems, and corrective action activities. These reports stated that problems in school foodservice can be detrimental to the NSLP in meeting its objectives (4, 20).

Labor Skills

Garvue et al. (4) stated that the goals of an effective NSLP cannot be realized unless competent personnel are available to direct and manage the program. In 1969 to 1971, results of a USDA-funded project, the National School Food Service and Nutrition Education Finance Project (SFSFP), indicated personnel in the NSLP were trained inadequately. The report of the SFSFP pointed out that the rapid development of the program in the late 1940's made the establishment of standards for supervisory personnel difficult, although the need was evident. Garvue et al. stressed that with the increasing numbers of central kitchens and increasing utilization of fabricated and convenience foods personnel capable of operating sophisticated equipment were needed. A conclusion from the project was that the personnel aspects of the program also need improvement through expanded course offerings and materials, and more qualified administrative and supervisory personnel.

In 1971, the National Advisory Council on Child Nutrition (NAC) (21), established by P.L. 91-248, recommended that USDA provide leadership and coordination with state departments of education and professional groups, such as the American School Food Service Association (ASFSA) to upgrade school foodservice personnel by developing staffing patterns and qualifications for foodservice personnel and by further encouraging community colleges, universities, and other training institutions to provide suitable training for school foodservice. The NAC recommendations were based on the results of a survey conducted by the Joint Committee of USDA and Land Grant Colleges on Education for Government Service showed that in ten states surveyed, 40 per cent of the school foodservice personnel did not have a high school diploma and only 2 per cent had college degrees. Garvue et al. (4) stated that there was a gap at the state and system level of over 5,000 positions between the actual number of trained supervisors available and the number needed in school foodservice.

In 1971, the NAC (21) recommended that standards and qualifications for personnel involved in foodservice work should be established. The NAC recommended that curricula for both preservice and inservice training of school foodservice personnel should be developed and that funds for training of personnel should be identified and used.

In 1976, a national survey (22) by USDA/FNS and Information Planning Associates, Inc. showed that more than six out of ten foodservice managers were promoted or hired as managers without prior training. Only three out of ten foodservice employees had completed training in the past ten years.

In the National School Lunch and Child Nutrition Amendments of 1977 (18), as part of the NET program requirements, standards for personnel in

the NET program were established. The amendments stated that the nutrition education programs should fully utilize the school foodservice program as a learning laboratory. The amendments required state departments of education as a part of the Annual Plan of Operation to establish standards and patterns for personnel at the state, district, and school levels for NET programs. The final regulations for the NET program specify that the state coordinator of nutrition education shall have a master's degree or equivalent experience. If the master's degree is not in foods and nutrition or dietetics, the B.S. degree shall include academic preparation in these disciplines. In addition, the state coordinator shall have recognized and demonstrated skills in management and education through at least three years experience in one or more of these areas: elementary or secondary education, but not limited to classroom teaching; foodservice management and training for adults; community nutrition or public health programs; foodservice operations for children; or community action or assistance programs.

Purchased Foods and USDA Commodities

A GAO report cited in the Assessment, Improvement and Monitoring System summary (20) in 1977 determined that in at least one city as much as 40 per cent of all meals served did not contain required food components or quantities. The Office of Inspector General (OIG) audits and studies cited that failure to comply fully with existing meal pattern requirements is a major problem impacting heavily on the ability of the programs to meet ultimate goals.

In April 1973, a proposal was published in the Federal Register to amend the regulations governing the National School Lunch Program, School Breakfast Program, and Special Service Programs for Children. Food items

proposed for use as alternatives for food components specified in meal requirements under program regulations were: textured vegetable protein products, formulated grain-fruit products, and enriched macaroni with fortified protein. Cheese alternate products were approved in 1974 for use in extending and replacing natural or processed cheese in lunches (23).

The USDA National Advisory Council (24-25) indicated that more study and monitoring were needed regarding the use of new food products. According to USDA reports to the Council, efforts have been made to see that new food products are used properly and that appropriate information materials regarding the use and contribution of new products are made available. A list of acceptable brands meeting FNS specifications was developed and released to USDA/FNS regional offices, state education agencies, and schools. The NAC (23) urged that USDA control the inspection and labeling of products used in the child nutrition programs to insure meeting nutritional standards. The Council identified the need for more training of school foodservice personnel in procurement and preparation of such foods for school lunch meals. The Council also stated that the use of new foods should be accompanied by appropriate nutrition education efforts in the lunchroom and classroom to inform children and parents on the nutritive value and use of the products.

Type of commodities received and timing of deliveries were reported by GAO officials to be major criticisms of the USDA commodity program (3). The following are comments in the GAO report from Kansas foodservice directors which changed to cash in lieu of commodities in 1975:

. . . (we) received 21,120 frankfurters to use in the month of May. They could not be held over the summer. Students were very unhappy with the lack of variety in the menus. Participation declined.

We received 120 cases of orange juice February 15 of 1974 and 142 cases of orange juice in August. We will still be using this orange juice most of 1975-1976.

It was such a pleasure to plan menus and not have to worry about a surge of commodities.

GAO officials (3) commented that similar problems were noted in other reports. According to the GAO report, these surges of commodities appeared to be avoidable. The USDA commodity program was criticized in the report to be a misapplication of food and a detriment to the NSLP's effectiveness as a nutrition program. GAO recommended that USDA investigate these situations and implement corrective procedures to see that nutritional objectives are not unnecessarily compromised by administrative difficulties or support of the agricultural market.

Operational Funds

According to Garvue et al. (4), insufficient funds have been responsible for many problems in school foodservice. Total income inadequacies have contributed to too little food, too little menu variety, understaffing, underpaying, and inability to meet free lunch needs adequately. A needs survey (26) prepared in 1973 by the staff of the Select Committee on Nutrition and Human Needs indicated that insufficient funds were a major concern among state school foodservice directors.

Legislation in 1973 provided for increased funding levels to guarantee states availability of funds on the basis of the number of meals served (14). In 1977, funds were appropriated for the expansion of the breakfast program, foodservice equipment assistance, additional funds for especially needy children, and the NET program (17).

According to Lachance (27), in 1978 school nutrition programs ranked second largest in the away-from-home food market, having a value of seven to eight billion dollars. Approximately twenty-five million children are served daily. According to Martin (28), the NSLP growth since 1970 is due to legislation and funding.

Management Skills

Garvue et al. (4) asserted that advance planning for school nutrition programs has been lacking in many school districts across the nation. Without planning and projection of needs and services, they contended that the program cannot develop as smoothly and effectively as desired. In their work on the SFSFP, they found program staffing often was not based upon a formula or needs assessment. A recommendation of the project was that research be directed toward determining the number, qualifications, and functions of program personnel at the federal, state, and local levels. Training programs, both preservice and inservice, needed to be refined. Research to identify training resources and analyze staffing formulas, and staff development programs of the total quantity foodservice industry for implications and adaptations suitable for the school foodservice program were recommended.

Purchasing, Production, and Distribution

Purchasing practices vary widely among school districts (4). Garvue et al. cited open market buying as the most commonly used method of purchasing food and supplies. Competitive bid buying is utilized in school systems of all enrollment sizes, but is more prevalent in districts with a large number of students and schools.

Garvue et al. (4) described a number of problems existing with purchasing. Open market buying makes the purchaser susceptible to fluctuating food costs; competitive bid buying is of little benefit without a sufficient number of purveyors to compete; and centralized purchasing is subject to problems with warehousing and transportation. They concluded that there is no one most effective system of purchasing and that purchasing should be suited individually to each school foodservice operation. The USDA National Advisory Council (24) has urged USDA to control inspection and labeling of products purchased for use in the school lunch meal. In 1978, procurement standards (29) were established by USDA providing guidelines to school foodservices on purchasing practices.

Officials of the OIG audit reported in the proposed AIMS summary (20) that in the five school districts they sampled the percentage of ineligible meals served ranged from 35 to 91.1 per cent. GAO audits demonstrated the seriousness of meal pattern noncompliance. The GAO report on a major city school lunch program indicated 40 per cent of all meals served in the reviewed schools did not contain required components or quantities. Officials of the audit noted that, on the average, at least one component was short or missing.

Meal Quality and Student Participation

GAO officials (3) attributed the low participation rates to the school lunch meal standards. Student meal surveys rated the school meal quality as "average." In achieving the objective of appetizing, nutritious meals, GAO officials have expressed the following concerns:

1. Low levels of student participation--The problem was attributed to student's dislike of the school lunch meal. In the fiscal

year 1975, only 56.7 per cent of the NSLP school enrollment participated.

2. Excessive amounts of plate waste--This problem was attributed to unappetizing or too large servings that result in children not consuming the nutritive value planned for them.

The GAO report (3) stated that the meal standard may be retarding the program's nutritional effectiveness. The meal standard is based on the following components:

1. Meat or meat alternate
2. Vegetable and/or fruit
3. Bread
4. Milk

The pattern is designed to provide one-third or more of the Recommended Dietary Allowances (RDA) (30). The school lunch pattern included a component for fat in the original Type A pattern introduced in 1946 (31). According to Daniels there have been a number of modifications in the pattern. Guidelines in 1971 recommended the amounts of food to meet nutritional needs of children of specified ages. In 1973, all types of fluid milk were authorized rather than only fluid whole milk. In 1974, guidelines were issued defining and expanding bread and bread alternates. In 1976, the butter/margarine component was removed from the requirements. In 1979 (32) the bread alternates were expanded to include rice and pasta; service of unflavored lowfat, skim, or buttermilk was required; and meat/meat alternate were specified to be served no more than three times per week in the same form or type. The final rule on the school lunch pattern in May 1980 recommends that schools vary portion sizes for children of various ages. The rule changes the bread requirement to

specify the number of servings by week and to increase the total number of servings required (Figure 1).

The food-based lunch pattern provides a practical approach ensuring that all foodservice personnel, regardless of training, can understand the program's nutritional requirements (3). The pattern limits the flexibility of meal-planning, as the choice of items must come within specified food groups.

GAO officials (3) stated that by eliminating the pattern requirement and prescribing the standard in relation to nutrient allowances, the school lunch would continue to be an acceptable meal but menu planners would be accorded greater flexibility in designing menus. The GAO report also stated that this action might provide lower cost lunches and, at the same time, be more effective in achieving the program's nutritional objectives.

Accountability

The Inspector General (20) cited several accountability deficiencies that USDA auditors had encountered repeatedly in school nutrition programs. These included overstated meal counts, meals claimed for free and reduced price reimbursement not supported by approved applications, and meals not meeting FNS meal requirements. According to the Inspector General, these uncorrected deficiencies had generated, or had potential to generate, large dollar losses to the federal government.

USDA audits (20) have shown over the years that a significant percentage of applications were approved improperly. In some cases, approved applications filled out by parents were incomplete; in addition, in some the income reported was not low enough to qualify the child for a free or reduced price meal. FNS reviews and OIG audits frequently

Figure 1

SCHOOL LUNCH PATTERN - APPROXIMATE PER LUNCH MINIMUMS

COMPONENTS	MINIMUM QUANTITIES					RECOMMENDED QUANTITIES	
	Group I age 1-2 (Preschool)	Group II age 3-4	Group III age 5-8	Group IV age 9 and older (4-12)	Group V 12 years and older (7-12) ¹		
Milk	3/4 cup (6 fl. oz.)	3/4 cup (6 fl. oz.)	1/2 pint (8 fl. oz.)	1/2 pint (8 fl. oz.)	1/2 pint (8 fl. oz.)		1/2 pint (8 fl. oz.)
Meat or Meat Alternate (quantity of the edible portion as served)	unflavored, fluid lowfat, skim, or buttermilk must be offered ²	lean meat, poultry, or fish cheese large egg cooked dry beans or peas peanut butter or an equivalent quantity of any combination of any of above	1 oz. 1 oz. 1 1/2 cup 2 Tbsp	1 1/2 oz. 1 1/2 oz. 1 1/2 3/4 cup 3 Tbsp	1 1/2 oz. 1 1/2 oz. 1 1/2 3/4 cup 3 Tbsp	2 oz. 2 oz. 2 1 cup 4 Tbsp	3 oz. 3 oz. 3 1 1/2 cup 6 Tbsp
Vegetable or Fruit	2 or more servings of vegetable or fruit or both	1/2 cup	1/2 cup	1/2 cup	3/4 cup		3/4 cup
Bread or Bread Alternate (servings per week)	must be enriched or whole- grain -at least 1/2 serving ³ for group I or one serving ³ for groups II-V must be served daily	5	8	8	8		10

¹The minimum portion sizes for these children are the portion sizes for group IV.

²If a school serves another form of milk (whole or flavored), it must offer its children unflavored fluid lowfat milk, skim milk, or buttermilk as a beverage choice.

³Serving = 1 slice of bread; or 1/2 cup of cooked rice, macaroni, noodles, other pasta products, other cereal products such as bulgur and corn grits; or as stated in the Food Buying Guide for biscuits, rolls, muffins, and similar products.

Source: Fed. Reg. 45(97):32516 (May 16), 1980.

found 8 to 10 per cent of the applications invalid on their face value. The Office of Management and Budget (OMB) reviewed USDA's audit reports in 1978. In an August 4, 1978 report analyzing USDA audits, OMB concluded that over 80 per cent of the 186 school food authorities audited had submitted claims for meal service for students whose eligibility was not properly established. More than 11 per cent of the applications approved at sampled schools either lacked required information (7.7 per cent), or contained information showing the student was ineligible (3.5 per cent) (20).

USDA auditors (20) observed that some school food authorities claimed more free and reduced price meals than there were applications on file. In the GAO report, the following situations were cited:

1. Where a school receives meals from a vendor, or central commissary, or high school kitchen, some schools claim all the meals delivered whether they are served or not.
2. Ineligible meals, such as a la carte meals or meals served to teachers, are claimed for reimbursement in some schools.
3. The offer versus serve provision, which allows junior and senior high school students to take as few as three of the five food items offered in a reimbursable school lunch, is administered haphazardly. Some of these meals claimed for reimbursement are not properly reimbursable and should be counted as a la carte meals.

Another problem in accountability noted by USDA auditors (20) was the practice in some schools of claiming as free and reduced price meals served, a number equivalent to number of applications on file. The number of paid meals then were computed as the residual after free and

reduced price applications were subtracted from total meals served. USDA auditors found that many school districts do not keep adequate accounting records. These school districts cannot substantiate the reimbursement they are receiving. OIG also has found cases in which costs appeared to be less than reimbursement.

A review of fiscal year 1978 FNS management evaluation reports covering state agency operations disclosed that twelve state agency operations had significant problems concerning reimbursement rates exceeding meal costs (20). Additionally, of the thirty-three OIG audit reports that were analyzed, twelve (33 per cent) noted instances of reimbursement rates exceeding cost. Proposed regulations (20) for the Assessment, Improvement and Monitoring System (AIMS) were designed to analyze current school lunch and breakfast program management by state agencies, to foster improvements in program management by states, to monitor the use of federal funds effectively, and to protect the nutritional integrity of meals served under the programs. The AIMS regulations are thought necessary by the OIG based on findings from OMB audits. The proposed regulations (33) that were to be finalized in January 1980 have been extended for further comment.

Standards for Dietetic Services

A standard has been defined as "something set up as a rule or basis of comparison in measuring or judging quality, quantity, value, etc." (34). According to Schiller and Bartlett (35), foodservices have used standards to assess the quality of food, equipment, sanitation, and work methods for several decades. David (36) stated that professionals in dietetics have traditionally been accountable for defining quality

standards related to production, distribution, preparation, conservation, and consumption of food. This task has involved concern not only for efficiency and economy, but also for quality attributes of food, nutritional, microbiologic, and sensory. According to David, the heritage in dietetics of establishing standards continues to be a challenge to the profession and its commitment to the improvement of the nutrition of people. According to Schiller and Behm (37), in order to establish and maintain standards of high quality care, dietitians must:

1. establish systems in which their professional services are ensured,
2. establish standards and criteria by which their practices can be evaluated,
3. participate in a system for review through which their dietetic services practices can be evaluated by other professionals, and
4. correct deficiencies in the review process so that improved nutritional care of patients and clients can be ensured.

Standards define top quality practice. Standards for the administrative dietitian delineate the parameters of effectiveness. An audit is a form of evaluation that has distinct characteristics of purpose, criteria, procedures, and personnel involved. Audits are performed for the purpose of ensuring high-quality service or care. Audits are designated to help managers solve problems--that is to identify substandard performance or outcomes and to analyze and implement feasible solutions. Audit topics are selected from a list of trouble spots, and the objective of the audit is to upgrade deficient performance or products (35).

The objective of an evaluation is to assess past performance, or the status quo, in order to determine the extent to which standards or objectives have been maintained or accomplished (35). According to Schiller and Bartlett (35), employees and products are evaluated; systems, processes, and functions are audited. Criteria for audits or evaluations should be stated in terms that are reliable, understandable, measurable, behavioral, and achievable (RUMBA). Brainstorming sessions are used to develop criteria. Criteria and performance standards described should compare favorably with standards established by state and national organizations.

Figure 2 shows how broadly stated standards are broken down into smaller topics for evaluation. Figure 2 also shows that patient tray service is only one topic related to the larger standard--"establishes and maintains standards of food production and service, sanitation, safety, and security." The criteria list enumerates those aspects of service that characterize high-quality tray service.

The Joint Commission on Accreditation of Hospitals (JCAH) (38) has developed standards for hospitals and nursing homes in all aspects of health care inclusive of foodservice. JCAH stated that a standard is established because there is an identifiable need to measure or enhance the quality of a particular aspect of care or service. Innovations in techniques or the demand by consumers for accountability can bring about the need to revise or develop standards. JCAH identified cost consciousness to be an integral part of the standards development process.

Figure 2

STANDARDS AND RELATED CRITERIA FOR AN ADMINISTRATIVE AUDIT¹

Standard: Establishes and maintains standards of food production and service, sanitation, safety, and security

Audit topic: Quality of tray service for hospitalized patients

Criteria:

1. Trays are clearly marked with patient name and room number.
2. Patient receives meal according to current diet order.
3. Trays are served accurately according to food items, beverages, and condiments marked on menu.
4. Designated portions of food and beverages are served.
5. Trays are served complete with napkin and appropriate utensils.
6. Trays are free of spillage.
7. Hot food is hot and chilled food is chilled according to established standards both at the point of tray set-up and at the point of delivery to patient.

¹Source: Schiller, R. and Behm, V.: Auditing dietetic services, first of a series. Hospitals 53:122 (April 16), 1979.

Standards in Child Nutrition Programs

Recommended Standards

The Southern States Work Conference, sponsored by state departments of education and state education associations representing fourteen southern states, developed school lunch policies and standards, first published in 1947. These standards were revised in 1953 and again in 1967 (39).

In 1948, a joint committee of the American School Food Service Association, The American Dietetic Association, and the American Home Economics Association developed recommended standards for the selection of personnel responsible for the supervision and management of school lunch programs. Garvue et al. (4) pointed out that professional associations can only recommend standards; government agencies are the decision makers regarding standards. Generally, federal aid programs prescribe minimum qualifications and functions of administrative and operational personnel, as well as funding, facility, and service standards and operational procedures. After the passage of the NSL Act, states were permitted to establish their own standards and procedures in most matters.

The NAC (40) identified as a major point of concern the tripartite administration of the program, involving three levels of government at which roles can be confused and in which responsibilities can be neglected. The NAC recommended that local administrative controls over the programs be reiterated. In the 1977 GAO report (3), administration of child nutrition programs is described (Figure 3). The USDA Food and Nutrition Service is responsible for the national administration of the NSLP. The program normally is administered in cooperation with state

PROGRAM RESPONSIBILITIES IN CHILD NUTRITION PROGRAMS¹

National:

At the national level, FNS headquarters and six regional offices:

1. Supervise the States' administration of the program.
 2. Administer the program for private schools in those States where the State educational agencies are prohibited from disbursing funds to private schools.
 3. Distribute commodities to the States and private schools where applicable.
 4. Review State and local school operations.
 5. Apportion funds to the States.
 6. Provide technical and administrative assistance to States.
 7. Fund the Food and Nutrition Information and Educational Materials Center at the National Agricultural Library.
 8. Set standards for nutritious meals.
-

State:

At the State level, educational agencies administer the program in public schools, and private schools where permitted. Each agency:

1. Submits an annual State plan of child nutrition operations for FNS approval.
 2. Establishes a system of accounting under which school food authorities will report program information.
 3. Maintains current records on schools' operations and accounts for program funds.
 4. Determines whether the matching requirements of the act are being met.
 5. Provides supervisory assistance to local schools.
 6. Provides the schools with monthly information on foods determined by USDA to be in plentiful supply.
 7. Investigates complaints.
-

Local:

At the local level, schools or school districts operate the program and determine which students are eligible for the free or reduced-price lunches. In order to receive Federal funds to each school:

1. Operates on a nonprofit basis and observes limitations on the use of program funds.
 2. Serves lunches meeting the minimum nutritional requirements as prescribed by the Secretary of Agriculture.
 3. Offers lunch to all children attending school.
 4. Provides free and reduced-price lunches for children from families with incomes below the applicable guidelines prescribed by legislation.
 5. Complies with all requirements of the Civil Rights Act and related program regulations.
 6. Purchases, and uses to the extent possible, commodities designated as being in abundance, and foods donated by USDA.
 7. Maintains full, accurate records for supporting reimbursement claims.
-

¹Source: U.S. Comptroller General (3).

departments of education. Where the state agency is prohibited by law or otherwise unable to disburse federal funds to private schools, an FNS regional office acts as the administering agency. Participation in the NSLP at the local level is voluntary.

Mandatory Standards

The NSL Act in 1946, established the following three basic operating standards (3):

1. School lunches should conform to nutritional standards established by USDA,
2. Free or reduced-price lunches should be provided to children unable to pay the regular price, and
3. The program should be operated on a nonprofit basis.

Amendments to the NSLP and CNP have provided guidelines on menu planning, competitive food regulations, and funding.

In 1977, USDA program officials (20) believed that increased emphasis on monitoring and management efforts were needed to resolve problems of financial accountability. The USDA proposed an Assessment, Improvement and Monitoring System (AIMS) that would be implemented with cooperation with the state agencies to assist them in identifying and correcting operational and management problems in the administering of school nutrition programs. AIMS established six performance standards (Figure 4) for school food authorities in the following areas:

1. Application review procedures for free and reduced price meals;
2. Counting, claiming, and costing procedures for meals served; and
3. Nutritional integrity of meals claimed for reimbursement.

In 1978, procurement standards (29) were established by USDA requiring bidding by school food authorities at the local level for all

Figure 4

PROPOSED ASSESSMENT, IMPROVEMENT AND MONITORING
SYSTEM - PERFORMANCE STANDARDS¹

Performance Standard 1 - All applications for free and reduced price meals are validly approved or correctly denied.

Performance Standard 2 - Free and reduced price meals claimed for reimbursement are less than or equal to the number of currently enrolled children approved for (1) free and (2) reduced price meals, respectively, times the days of operation for the reporting period.

Performance Standard 3 - The total number of meals claimed for reimbursement is equal to or less than the average daily attendance for days of operation times the days of operation for the reporting period.

Performance Standard 4 - The system for counting and recording meal totals for paid, free and reduced price meals claimed for reimbursement at both School Food Authority and school levels yields correct claims.

Performance Standard 5 - Reimbursements claimed for meals are limited to allowable costs as documented by reviewable records.

Performance Standard 6 - Meals claimed for reimbursement contain food components and quantities as required by regulations and as documents by reviewable production and student participation records.

¹Source: USDA/FNS (20).

purchases or purchasing contracts of more than \$10,000 and construction contracts exceeding \$2,000. These standards also provided approved purchasing practices. In 1979, final regulations on the Nutrition Education and Training Program included personnel standards for state coordinators of the program (18).

Assessment Tools

According to Schiller and Bartlett (35), data for administrative audits may be obtained from observation of activities; from various forms, records, and reports; from evaluation of food products; and from administrative surveys and questionnaires. These forms, records, reports, and surveys can be referred to as assessment tools. "Tools" are defined as instruments used to get something done (34). Assessment is defined as the process of estimating or determining the value. Fenwick and Vaden (7) prepared an observational checklist as an assessment tool for consulting dietitians. The California Dietetic Association (6) listed tools for use in foodservices in health care facilities to include resources such as state and local health departments, professional organizations, the Department of Agriculture, community agencies, and the Food and Drug Administration. Other assessment tools in the consulting process have included menu evaluation forms, food production schedule forms, and job descriptions (7).

The Systems Approach in Foodservice

Luchsinger and Dock (5) state the objective of general systems theory is to assist managers to plan, organize, and control in an integrated manner. Systems theory concentrates on interactions,

interrelationships, and integration of parts into a whole. Systems theory discourages acting or thinking in a vacuum. Luchsinger and Dock define the systems approach as a means of applying relevant concepts from the general systems theory to facilitate understanding of organization theory and management practice. The systems approach, when applied to an organization, provides a manager with the following:

1. a way of thinking about the performance of managerial functions,
2. a method of analysis for problem solving, and
3. a style of management of organizational systems.

Fisherman and Nathanson (41) define a system as the assemblage or combination of things or parts (components, elements, variables, etc.) which are so interrelated that a change in any one part will result in a change in one or more other parts and possibly, in the overall system output. A model is defined as a simplified, stylized representation of the real world that abstracts the cause and effect relationships essential to the question studied.

Fenwick and Vaden (42) developed a foodservice systems model utilizing the basic elements and design of Richards and Greenlaw's information decision model (43). The model provides a method to view the hospital foodservice system and its relationship to the total hospital system of which it is a part and to a changing environment in the achievement of optimum quality of food, service, and care of its patients or clients. The model contains the major parts of a system: inputs, transformation, and output, and additional elements of control, memory, feedback and environmental factors.

Inputs

According to Fenwick and Vaden (42), the inputs into the system are the human, physical, and operational resources that are transformed to produce the outputs. Human resources are the skill, knowledge, and energies of people required for the system to function. The physical resources include the materials such as food and supplies and the facilities which involve space and equipment. Operational resources refer to such items as time, money, and information. Fisher and Nathanson (41) stated that the reception of inputs into a system is selective. The input requirements are dependent upon, and specified by, the objectives of the organization (42).

Transformation

According to Fenwick and Vaden (42) the transformation element involves any action or activity that is inherent to the systems design that is utilized to change the inputs to outputs. This element includes the management functions, the linking processes, and the functional subsystems. These are all interdependent and interrelated parts of the transformation element as illustrated by the overlapping circles within the model.

The functional subsystems of a foodservice organization were classified by Fenwick and Vaden according to their purpose. These subsystems can be client or patient counseling, procurement, production, distribution, service, and sanitation. These subsystems must be integrated and interrelated with all other elements of the total system.

Outputs

Fenwick and Vaden (42) define outputs as the products and services that result from transforming the inputs. The outputs for the dietetic system are described as follows:

1. Quantity and quality of the meals according to the differing needs of clients and others,
2. Client and personnel satisfaction,
3. Financial integrity and services, and
4. Nutrition education and patient or client counseling in the health care facility.

These system goals are compatible with the overall goal of the total health care system, that of quality care.

Control

According to Fenwick and Vaden (42), the control element encompasses the objectives and goals and policies, procedures, and programs of the dietetic or foodservice operations. This element also includes standards and controls for achievement of objectives, contracts, and federal, state, or local legislation, among other components. The control element interfaces with the input, transformation, and output elements by defining standards and constraints within which the system must operate. According to Richards and Greenlaw (43), this element should contain the types of controls that are needed to facilitate staff meeting their responsibilities to the organization.

Feedback

Luchsinger and Dock (5) define the feedback system as an element that measures output against standards, usually in a system involving

communication and control. Fenwick and Vaden (42) stated that in the dietetic system, client comments, employee performance and morale, patronage, and plate waste observations are types of information needed and utilized by the foodservice system.

Memory

According to Fenwick and Vaden (42), the memory element stores and updates information in the system for future use. Examples cited are financial, forecasting, and personnel records; menus; and patient records. The number of items and the content of the information in this element will vary depending on the needs of the operation. According to Richards and Greenlaw (43), the information is updated by the input, transformation, and feedback elements of the system.

Environment

According to Luchsinger and Dock (5), the environment is the larger setting in which the system exists. Fenwick and Vaden (42) stated that the internal and external environment factors are the physical, economical, technological, and sociological factors that have an impact on the total system. These factors confronting dietetics or a foodservice system include increasing food and labor costs, unionization, automation, organizational size and complexity, and increasing specialization. They also stated that the systems approach has practical application for the dietetics subsystem of a health care system that is interacting continuously with a changing environment.

DEVELOPMENT OF A SCHOOL FOODSERVICE SYSTEMS MODEL

According to Luchsinger and Dock (5), a system is a collection of interrelated parts unified by design to obtain one or more objectives. The objective of the study of a system is the recognition of the managerial functions and the interrelations between the subsystems of the overall organizational system. Another objective is the awareness of the variables involved in executing managerial functions so that decisions will be made in light of the effect on the overall organization and its objectives. The systems approach considers the impact of both the external and internal environmental factors upon the organizational system and on the managing process.

The foodservice systems approach provides an orderly model (43) for designing and analyzing a foodservice organization. The school foodservice systems model in this report was adapted from the foodservice systems model developed at Kansas State University (Figure 5) (44). The school foodservice model (Figure 6) consists of the following essential elements:

Inputs:

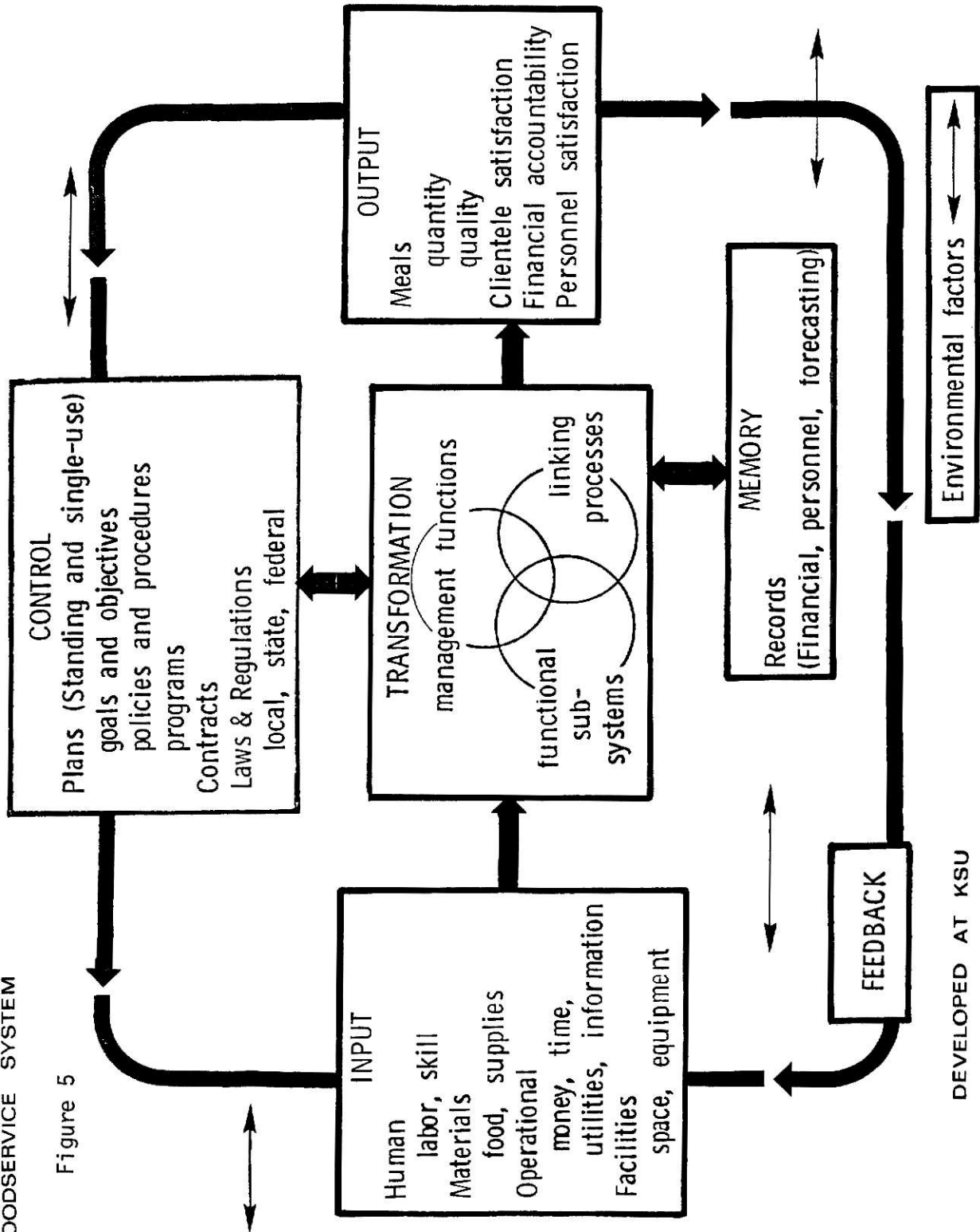
Inputs are the physical and human resources which are transformed to produce the outputs (7, 42). In school foodservice, human resources include personnel and skills; materials which are purchased food, USDA commodities, and supplies; operational resources which are time, federal reimbursements for claimed free and reduced meals, non-food assistance funds for equipment, money from paid student and adult meals and foods sold in addition to school meals, nutrition education and training funds; and facilities, or space and equipment.

Transformation:

Transformation is the collective change of inputs into outputs (7, 42). This element includes the management functions,

FOODSERVICE SYSTEM

Figure 5

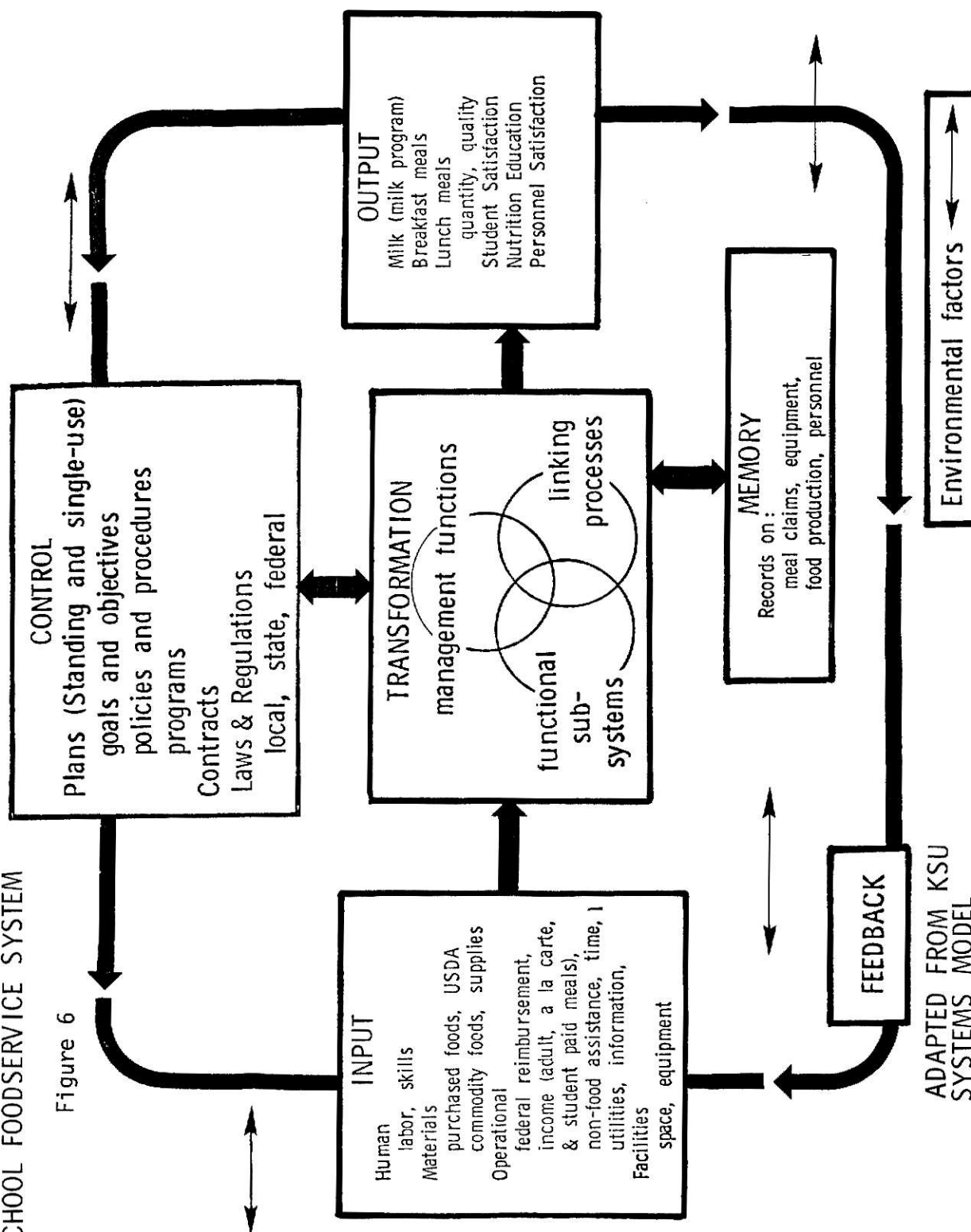


DEVELOPED AT KSU

Dietetics, Restaurant and
Institutional Management Department

SCHOOL FOODSERVICE SYSTEM

Figure 6



ADAPTED FROM KSU
SYSTEMS MODEL

Dietetics, Restaurant and
Institutional Management Department

the linking processes, and the functional subsystems. These are all interdependent and interrelated parts of the transformation element.

The functional subsystems in school foodservice are procurement (purchasing any foods needed that are not supplied through USDA, and purchasing supplies and equipment), pre-processing, production, distribution, service, and sanitation.

Linking processes in school foodservice are the interaction between parts. The interaction within the system in school foodservices is accomplished through departmental meetings, inservice training, student advisory councils, or parent advisory councils.

Outputs:

Outputs are the products and services that result from transforming the inputs (7, 42). The outputs in school foodservice are meals (school breakfasts and lunches) of appropriate quality and quantity; student participation and satisfaction; nutrition education; and financial accountability.

Control:

The control element encompasses the objectives and goals, policies, procedures, and programs of the foodservice operations (7, 42). This element in school foodservice includes contracts, policies, procedures, and regulations of local, state, and federal agencies.

Feedback:

Feedback is information for evaluation of the school food and nutrition program effectiveness. Examples of feedback in school foodservice are administrative reviews by education agencies, student comments, information from student surveys, employee performance records, plate waste studies, or participation statistics.

Memory:

The memory element stores and updates information in foodservice systems (7, 42). In school foodservice operations, records to be stored and updated include personnel files, meal count records, food production records, meal reimbursement claim reports and supporting documents, USDA commodity inventory records, and non-food assistance claims.

Environmental factors:

Environmental factors are the physical, economical, technical, political, and sociological factors that have an impact on the total system (7, 42).

According to David (45), measurable objectives and standards are inherent in the systems approach. Effective utilization of resources through systematic management processes is necessary. This requires coordinated planning of the functions or subsystems of the total food-service operation, with recognition and understanding of the importance of the functions of management. In this report, the systems approach has been adapted to school foodservice so that it may be used as an aide in viewing the school foodservice organization as a systematic whole.

DEVELOPMENT OF PROPOSED STANDARDS, EVALUATION TOPICS,
CRITERIA, AND AN ASSESSMENT TOOL FOR SCHOOL
FOOD AND NUTRITION PROGRAMS

The school foodservice systems model was used as a systematic method in developing proposed standards for school food and nutrition programs. The school foodservice policies and standards developed by the Southern States Work Conference (39) and dietetic services standards developed by the Joint Commission on Accreditation of Hospitals (38) were used as key references in the process.

Proposed Standards

Proposed standards were stated broadly to define high quality performance for school food and nutrition programs. The following nine standards were developed:

- STANDARD I: The school food and nutrition program shall be staffed with personnel qualified for their responsibilities through appropriate education and training.
- STANDARD II: Quality foodservice shall be provided to students through proper food procurement, production, distribution, and maintenance of sanitation, safety, and security.
- STANDARD III: Operational funds shall be utilized appropriately toward attainment of objectives of the special milk, breakfast, and lunch programs.
- STANDARD IV: Layout and facilities shall be designed to function effectively and efficiently in facilitating the service of high quality meals to student participants.
- STANDARD V: School food and nutrition programs shall be guided by policies and procedures that are designed to maintain and improve the programs.
- STANDARD VI: Effectiveness of the school food and nutrition program system shall be reviewed and evaluated regularly.

STANDARD VII: The school food and nutrition department shall develop, maintain, and use effective record keeping systems.

STANDARD VIII: The school food and nutrition program shall support a planned program of student and parent involvement.

STANDARD IX: The school food and nutrition program shall be coordinated with an effective nutrition education and training program in the school system.

Evaluation Topics, Suggested Criteria, and An Assessment Tool

Evaluation topics were developed stating areas in school food and nutrition programs that should be reviewed and evaluated to ensure high quality meals, student satisfaction, nutrition education, program accountability, and employee satisfaction. Suggested criteria, or measurable characteristics that pertain to specific standards, were developed from the evaluation topics. The criteria define specific action needed to meet the specific evaluation topic. Criteria were developed to be reliable, understandable, measurable, behavioral, and achievable (35). Criteria for evaluation topics were developed using the following tools as major references:

1. The Dietary Consultant in Health Care Facilities (6)
2. Tools for the Consultant Dietitian (7)
3. Guidelines for Consultant Dietitian in Longterm Care Facilities (8)
4. U.S.D.A. Child Nutrition Program regulations

A school food and nutrition program evaluation checklist was developed from the criteria. The checklist could serve as an assessment tool for school food and nutrition programs.

Standards, evaluation topics, and criteria developed can be used as guides for professional standards reviews for school food and nutrition

programs. Criteria should be individualized to the needs and objectives of the system. Personnel involved in the performance of the evaluation topic function (or audit topic function in an audit) should be involved in the development of the criteria. In the pages that follow, proposed standards with developed topics, then the proposed standards and evaluation topics with suggested criteria are listed. The school food and nutrition program assessment tool also is included in this section of the report.

Proposed Standards and Evaluation Topics

STANDARD I: The school food and nutrition program shall be staffed with personnel qualified for their responsibilities through appropriate education and training.

Evaluation topics:

- (a) The school food and nutrition department at the system level shall be directed on a full-time basis by an individual who by education and specialized training and experience is knowledgeable in foodservice management, nutrition, and educational methodology and philosophy.
- (b) The foodservice at the school level shall be supervised and staffed by a sufficient number of competent personnel.
- (c) School food and nutrition personnel shall receive appropriate inservice training to maintain competence for job responsibilities.

STANDARD II: Quality foodservice shall be provided to students through proper food procurement, production, distribution, and maintenance of sanitation, safety, and security.

Evaluation topics:

- (a) Menus shall be planned according to child nutrition program guidelines and shall be coordinated with foods available (purchased foods and USDA commodities), equipment and facilities available, personnel skills, and student food preferences.
- (b) Purchasing procedures, to include use of commodities, shall be developed and guided by the purchasing guidelines established by USDA.

(c) Food production shall be guided by proper food production principles and standardized recipes.

(d) High quality meal service shall be provided to student participants.

(e) Overall food production and distribution shall be guided by adequate sanitation, safety, and security practices.

STANDARD III: Operational funds shall be utilized appropriately toward attainment of objectives of the special milk, breakfast, and lunch programs.

Evaluation topics:

(a) A coordinated cost accounting system shall be operational for child nutrition programs in which the school district participates (i.e., special milk program, school breakfast program, national school lunch program).

(b) An inventory and control system shall be developed for purchased foods, USDA commodities, and materials.

(c) Staffing needs shall be developed by the school foodservice system.

(d) An efficient system for claiming reimbursement for meals served shall be maintained.

STANDARD IV: Layout and facilities shall be designed to function effectively and efficiently in facilitating the service of high quality meals to student participants.

Evaluation topics:

(a) Equipment and layout design shall be coordinated with production needs, personnel skills, and work flow.

(b) Equipment shall be maintained for efficient utilization.

(c) Storage space for food and supplies shall be adequate in size, sanitary, and secure.

(d) Dining facilities shall be designed to provide adequate meal service to student participants.

STANDARD V: School food and nutrition programs shall be guided by policies and procedures that are designed to maintain and improve the programs.

Evaluation topics:

- (a) Policies and procedures shall be written concerning the scope and conduct of school foodservice.
- (b) Procedures and information on application for free and reduced price meals shall be provided to all school children.
- (c) Food items sold in addition to school meals shall be foods that are appropriate for service as items on breakfast or lunch meals.
- (d) Policies shall be developed which ensure high nutritional standards for school meals.

STANDARD VI: Effectiveness of the school food and nutrition program system shall be reviewed and evaluated regularly.

Evaluation topics:

- (a) The milk, breakfast, and lunch programs shall be reviewed and evaluated for student satisfaction, nutritional adequacy, student participation, and financial accountability.
- (b) Employee performance, attitudes, and satisfaction shall be periodically reviewed and evaluated.

STANDARD VII: The school food and nutrition department shall develop, maintain, and use effective record keeping systems.

Evaluation topics:

- (a) Accurate records providing supportive documents for operational funds expenditures shall be maintained.
- (b) Food production records documenting compliance with nutritional standards shall be maintained.
- (c) Applications for free and reduced price meals shall be complete and correct for verifying eligibility of students in the child nutrition programs.
- (d) Contracts and amendments with state education agencies or regional offices shall be maintained.
- (e) Comprehensive personnel files shall be maintained.

(f) Accurate records on expenditure of equipment assistance funds shall be maintained.

(g) Records on meals served, along with supporting documentation, shall be maintained.

STANDARD VIII: The school food and nutrition program shall support a planned program of student and parent involvement.

Evaluation topics:

(a) Youth and parent advisory committees shall be involved in menu planning and review of services.

(b) Youth and parent advisory committees shall be involved in increasing student participation in the child nutrition programs.

(c) The school food and nutrition programs shall sponsor public information activities and other activities to involve students.

(d) Youth and parent advisory committees shall be involved in programs to enhance student eating environment.

STANDARD IX: The school food and nutrition program shall be coordinated with an effective nutrition education and training program in the school system.

Evaluation topics:

(a) The school food and nutrition program shall provide or assist in providing inservice training related to nutrition education for appropriate school system personnel.

(b) Students shall be involved in promotion of nutrition education through planned activities.

(c) Sequential classroom learning experiences on nutrition education shall be integrated with the planned curriculum of the school system and the school and food and nutrition program.

(d) Nutrition education and training programs shall be monitored for fulfillment of program objectives, student participation, and financial accountability.

Proposed Standards and Evaluation Topics
with Suggested Criteria

STANDARD I: The school food and nutrition program shall be staffed with personnel qualified for their responsibilities through appropriate education and training.

Evaluation topic (a): The school food and nutrition department at the system level shall be directed on a full-time basis by an individual who by education and specialized training and experience is knowledgeable in foodservice management, nutrition, and education methodology and philosophy.

Criteria:

1. The school foodservice director shall have at least a four year degree, including academic work in foodservice management, nutrition, and nutrition education.¹
2. The school foodservice director shall meet all other requirements for state and/or professional certification based on requirements for the job functions to be performed.
3. Documentation of foodservice director qualifications shall be on record.
4. The director shall be responsible to the school district superintendent or designee.
5. The director shall have the authority and responsibility for assuring that established foodservice policies are carried out.
6. The director shall function as a member of the system wide administrative staff.

STANDARD I: The school food and nutrition program shall be staffed with personnel qualified for their responsibilities through appropriate education and training.

Evaluation topic (b): The foodservice at the school level shall be supervised and staffed by a sufficient number of competent personnel.

Criteria:

1. Every food production unit shall have a qualified manager.

¹Preferably, at least nine semester hours in nutrition and food-service management, and six hours in education philosophy.

2. The manager of the production unit shall have completed specialized training in the area of foodservice supervision and food production through state education agency workshops and/or specialized training in junior college or university.
3. The school foodservice manager shall have met performance requirements for the jobs to be performed.
4. Personnel in the school food preparation units shall be staffed on the basis of a documented formula.

STANDARD I: The school food and nutrition program shall be staffed with personnel qualified for their responsibilities through appropriate education and training.

Evaluation topic (c): School food and nutrition personnel shall receive appropriate inservice training to maintain competence for job responsibilities.

Criteria:

1. Personnel shall receive training on a regular basis in the areas of:
 - (a) food production
 - (b) nutrition and nutrition education
 - (c) service
 - (d) sanitation
 - (e) school foodservice meal patterns
 - (f) safety
 - (g) student involvement
2. Training for personnel shall be documented.
3. School foodservice employees shall meet all requirements for state and/or professional certification based on requirements for job functions performed.

STANDARD II: Quality foodservice shall be provided to students through proper food procurement, production, distribution, and the maintenance of sanitation, safety, and security.

Evaluation topic (a): Menus shall be planned according to child nutrition program guidelines and shall be coordinated with foods available (purchased foods and USDA commodities), equipment and facilities available, personnel skills, and student food preferences.

Criteria:

1. Menu planning shall be guided by current established school meal patterns for breakfast and lunch.

2. Data on students' food preferences from surveys and/or recommendations of advisory councils shall be considered in menu planning.
3. The menu planner shall utilize food product information, inventory on USDA commodities and other foods, and standardized recipe files.
4. Recommended portion sizes on menu items for the various age groups shall be considered in menu planning.
5. Menu planning shall include alternatives to school lunch meals (i.e., salad bar, soup and sandwich combos, choice in meal components).
6. Menu portion sizes shall be posted by serving area for personnel.
7. Menus shall be available to students and others and posted in cafeteria dining areas at least one week prior to service.

STANDARD II: Quality foodservice shall be provided to students through proper food procurement, production, distribution, and the maintenance of sanitation, safety, and security.

Evaluation topic (b): Purchasing procedures, to include use of commodities, shall be developed and guided by the purchasing guidelines established by USDA.

Criteria:

1. USDA purchasing guidelines shall be available to authorized purchasing agent.
2. USDA commodities and purchased food inventories shall be consulted prior to purchasing.
3. Specifications shall be developed for food and supply purchases.
4. Procedures shall be written on purchasing and shall include responsibility for specifications and invoices and procedures for price quotations and contract bids.

STANDARD II: Quality foodservice shall be provided to students through proper food procurement, production, distribution; and the maintenance of sanitation, safety, and security.

Evaluation topic (c): Food production shall be guided by proper food production principles and standardized recipes.

Criteria:

1. Food production shall be guided by proper food production principles.
2. Food preparation shall be guided by standardized recipes.
3. Food production shall be based on a food production count.
4. Standardized recipes shall be adjusted to production needs.
5. New standardized recipes shall be tested for quality and acceptance prior to food production for student meals.

STANDARD II: Quality foodservice shall be provided to students through proper food procurement, production, distribution, and the maintenance of sanitation, safety, and security.

Evaluation topic (d): High quality meal service shall be provided to student participants.

Criteria:

1. Student participant shall receive food items as planned on the menu.
2. Student participant shall receive all portions in the amounts specified by the menu pattern guidelines for school breakfast and lunch meals.
3. Student shall receive utensils and napkin with the tray.
4. Trays shall be free from spillage.
5. Foods shall be served at appropriate temperatures and according to established sanitation standards.
6. There shall be no less than three hours between the service of breakfast and lunch.
7. Lunch shall be served no more than four hours from first class period if the school does not participate in the breakfast program.
8. There shall be at least twenty minutes for students to eat after service of meal.
9. Students shall be served in a pleasant manner.

STANDARD II: Quality foodservice shall be provided to students through proper food procurement, production, distribution, and the maintenance of sanitation, safety, and security.

Evaluation topic (e): Overall food production and distribution shall be guided by adequate sanitation, safety, and security practices.

Criteria:

1. Food production procedures shall meet high standards of sanitation.
2. Food production shall be supervised by a qualified manager.
3. Local sanitation ordinances shall be available in each food production area.
4. Fire safety procedures shall be posted in the food production area.
5. The manager shall utilize an evaluation checklist for sanitation and safety.

STANDARD III: Operational funds shall be utilized appropriately toward attainment of objectives of the special milk, breakfast, and lunch programs.

Evaluation topic (a): A coordinated cost accounting system shall be operational for child nutrition programs in which the school district participates (i.e., special milk program, school breakfast program, national school lunch program).

Criteria:

1. Costs shall be calculated for each day's menus.
2. A monthly financial report for the milk, breakfast, and lunch program shall report:
 - (a) program income (a la carte, federal, reimbursement, other)
 - (b) program expenditures (food, labor, supplies, overhead)
 - (c) food, supply, labor, and overhead costs per meal
3. Cost accounting for equipment assistance funding shall be separate from meal program reports and shall show how equipment expenditures were made.
4. Meal pricing to students shall be in accordance with federal meal pricing policy.
5. Adult meals shall be priced to recover meal costs fully.

STANDARD III: Operational funds shall be utilized appropriately toward attainment of objectives of the special milk, breakfast, and lunch programs.

Evaluation topic (b): An inventory and control system shall be developed for purchased foods, USDA commodities, and materials.

Criteria:

1. Perpetual inventories shall be maintained for food and supplies.
2. Physical inventories shall be taken monthly and checked against perpetual inventories.
3. Food and supplies shall be stored in locked areas.
4. Access to food and materials shall be limited to authorized personnel.
5. A system of ordering, receiving, and issuing shall be documented.

STANDARD III: Operational funds shall be utilized appropriately toward attainment of objectives of the special milk, breakfast, and lunch programs.

Evaluation topic (c): Staffing needs shall be developed by the school foodservice system.

Criteria:

1. Personnel shall be assigned to cafeterias according to a documented formula based on meals per manhour.
2. Formulas shall be based on services provided, facilities available, and personnel skills.
3. A posted work schedule will be provided for employees.

STANDARD III: Operational funds shall be utilized appropriately toward attainment of objectives of the special milk, breakfast, and lunch programs.

Evaluation topic (d): An efficient system for claiming reimbursement for meals shall be maintained.

Criteria:¹

1. Free and reduced price meals claimed for reimbursement shall be less than or equal to the number of currently enrolled children approved for (1) free and (2) reduced meals, respectively, times the number of days of operation for a reporting period.
2. The total number of meals claimed for reimbursement shall be equal to or less than the average daily attendance for days of operation times the number of days of operation for the reporting period.
3. The system for counting and recording meal totals for paid, free, and reduced price meals claimed for reimbursement at both School Food Authority and school levels shall yield correct claims.
4. Reimbursements claimed for meals shall be limited to allowable costs as documented by reviewable records.
5. Meals claimed for reimbursement contain food components and quantities as required by regulations and as documented by reviewable production and student participation records.

STANDARD IV: Layout and facilities shall be designed to function effectively and efficiently in facilitating the service of high quality meals to student participants.

Evaluation topic (a): Equipment and layout design shall be coordinated with production needs, personnel skills, and work flow.

Criteria:

1. The school foodservice director shall provide professional input into layout design and equipment selection.
2. The director shall monitor layout design and equipment for efficiency and recommend replacement or rearrangement when indicated.

STANDARD IV: Layout and facilities shall be designed to function effectively and efficiently in facilitating the service of high quality meals to student participants.

Evaluation topic (b): Equipment shall be maintained for efficient utilization.

¹Adapted from proposed regulations for AIMS Program (20).

Criteria:

1. Employees shall receive instruction on care and use of equipment.
2. Equipment maintenance shall be monitored and documented.
3. A system of preventive maintenance shall be developed and documented.

STANDARD IV: Layout and facilities shall be designed to function effectively and efficiently in facilitating the service of high quality meals to student participants.

Evaluation topic (c): Storage space for food and supplies shall be adequate in size, sanitary, and secure.

Criteria:

1. Dry, refrigerated, and freezer storage shall be of adequate size to receive all deliverable goods.
2. Receiving and storage procedures shall be written to include:
 - (a) authorized personnel to receive and store,
 - (b) sanitation practices in storage area,
 - (c) rotation practice, and
 - (d) safety precautions.
3. The storage area shall be evaluated for needed improvements.

STANDARD IV: Layout and facilities shall be designed to function effectively and efficiently in facilitating the service of high quality meals to student participants.

Evaluation topic (d): Dining facilities shall be designed to provide adequate meal service to student participants.

Criteria:

1. Dining areas shall provide sufficient space for service of meals for students.
2. Dining areas will be designed to reduce the noise level.
3. When music is provided for students in dining area it shall be acceptable to student preferences.
4. Dining area shall be designed to provide pleasing decor, comfortable eating conditions, and sanitary and safe conditions.

STANDARD V: School food and nutrition programs shall be guided by policies and procedures that are designed to maintain and improve the programs.

Evaluation topic (a): Policies and procedures shall be written concerning the scope and conduct of school foodservice.

Criteria:

1. Development of policies and procedures for school food and nutrition programs shall be the responsibility of the school foodservice director and shall include consultation with appropriate school personnel.
2. Copies of policies and procedures shall be readily available to the manager and employees.
3. Policies and procedures shall include the following areas:
 - (a) organization structure,
 - (b) food purchasing, storage, inventory, preparation, and service,
 - (c) menu planning,
 - (d) nutritional assessment of menus,
 - (e) personnel hygiene and health of foodservice personnel,
 - (f) infection control,
 - (g) safety,
 - (h) compliance with applicable federal, state, and local laws and regulations,
 - (i) disaster plans,
 - (j) use of facilities for extracurricular activities,
 - (k) food disposal,
 - (l) foods sold in addition to school meals.

STANDARD V: School food and nutrition programs shall be guided by policies and procedures that are designed to maintain and improve the programs.

Evaluation topic (b): Procedures and information on application for free and reduced price meals shall be provided to all school children.

Criteria:

1. All students shall receive a letter to parents with a meal application and information for free and reduced price meals.
2. The letter to parents shall include the following information:
 - (a) price of meals and/or milk
 - (b) current income scale for free and reduced price meals
 - (c) statement about unemployed parents

- (d) confidentiality of meal application information
 - (e) foster children eligibility
 - (f) statement on nondiscrimination
 - (g) description of right to an appeal for denial of free or reduced meals.
3. The meal application for free or reduced meals shall include the following:
 - (a) fraud warning
 - (b) foster children eligibility
 - (c) action taken on application
 - (d) signature of adult family member
 - (e) number in family
 - (f) family income
 4. All applications for free and reduced price meals are approved or denied using valid and correct procedures.¹
 5. Students are not overtly identified as receiving free or reduced price meals.

STANDARD V: School food and nutrition programs shall be guided by policies and procedures that are designed to maintain and improve the programs.

Evaluation topic (c): Food items sold in addition to school meals shall be foods that are appropriate for service as items on breakfast or lunch meals.

Criteria:

1. Only foods that could be served as food items on the school breakfast or lunch meal shall be sold during the school day.
2. Foods sold during the breakfast and lunch periods shall be approved by the foodservice department director.

STANDARD V: School food and nutrition programs shall be guided by policies and procedures that are designed to maintain and improve the programs.

Evaluation topic (d): Policies shall be developed which ensure high nutritional standards for school meals.

Criteria:

1. School meals shall be planned to meet specified Recommended Dietary Allowances.

¹ Adapted from proposed regulations for AIMS Program (20).

2. Menu planning for school meals shall be guided by dietary guidelines for the U.S.
3. Nutrient content of meals planned shall be assessed periodically.
4. Plate waste studies shall be conducted periodically.

STANDARD VI: Effectiveness of the school food and nutrition program system shall be reviewed and evaluated regularly.

Evaluation topic (a): The milk, breakfast, and lunch programs shall be reviewed and evaluated for student satisfaction, nutritional adequacy, student participation, and financial accountability.

Criteria:

1. Satisfaction and quality of the programs shall be evaluated by means of:
 - (a) student surveys
 - (b) plate waste studies
 - (c) student advisory councils
 - (d) observation checklists on overall program
2. Student participation shall be measured by utilizing the following records:
 - (a) enrollment figures
 - (b) daily attendance records
 - (c) meal count records
3. Nutritional assessment of student meals shall be measured by means of:
 - (a) plate waste studies
 - (b) nutritional analysis of menus
4. Quantities prepared and served shall be compared against food production records.
5. Financial accountability shall be measured by means of:
 - (a) financial reports
 - (b) menu costing reports
 - (c) meal claim records
 - (d) daily meals served records and procedures

STANDARD VI: Effectiveness of the school food and nutrition program system shall be reviewed and evaluated regularly.

Evaluation topic (b): Employee performance, attitudes, and satisfaction shall be periodically reviewed and evaluated.

Criteria:

1. Employee performance shall be measured against required job tasks by direct supervisors.
2. Employee performance shall be reviewed periodically and discussed with individual employees.
3. Turnover rates, productivity, and attitudes of employees shall be documented and reviewed periodically.

STANDARD VII: The school food and nutrition department shall develop, maintain, and use effective record keeping systems.

Evaluation topic (a): Accurate records providing supportive documents for operational funds expenditures shall be maintained.

Criteria:

1. Purchase orders, invoices, statements, and receipts shall be on file and reviewed.
2. Persons with access for purchase files shall be specified.

STANDARD VII: The school food and nutrition department shall develop, maintain, and use effective record keeping systems.

Evaluation topic (b): Food production records documenting compliance with nutritional standards shall be maintained.

Criteria:

1. Food production records shall be kept at the food production site for a period of time required by state or federal agencies.
2. Food production record shall provide sufficient information to show food production of quantities required to provide an approved breakfast or lunch.
3. Personnel responsible for maintaining records on food production shall be specified.

STANDARD VII: The school food and nutrition department shall develop, maintain, and use effective record keeping systems.

Evaluation topic (c): Applications for free and reduced price meals shall be complete and correct for verifying eligibility of students in the child nutrition programs.

Criteria:

1. Meal applications shall be categorized and kept on file for a period of time required by state or federal agencies.
2. Periodic internal review of meal applications shall be documented.
3. Person responsible for approval of meal applications shall be specified.

STANDARD VII: The school food and nutrition department shall develop, maintain, and use effective record keeping systems.

Evaluation topic (d): Contracts and amendments with state education agencies or regional offices shall be maintained.

Criteria:

1. Files on contracts, administrative reviews, correspondence, and other communications shall be maintained in the school food and nutrition program central office.
2. Person responsible for maintaining files on program records shall be specified.

STANDARD VII: The school food and nutrition department shall develop, maintain, and use effective record keeping systems.

Evaluation topic (e): Comprehensive personnel files shall be maintained.

Criteria:

1. Confidentiality of personnel records shall be assured.
2. A checklist specifying items to be maintained in personnel files to assess content shall include the following:
 - (a) application for employment,
 - (b) health examinations,
 - (c) performance appraisals,
 - (d) counseling session reports,
 - (e) record of promotions, demotions, transfers, etc.

- (f) sick leave records,
- (g) insurance forms,
- (h) payrate records, and
- (i) training records.

STANDARD VII: The school food and nutrition department shall develop, maintain, and use effective record keeping systems.

Evaluation topic (f): Accurate records on expenditure of equipment assistance funds shall be maintained.

Criteria:

1. Purchase orders and invoices for equipment acquisitions shall be kept on file for the specified period of time as required by state and federal agencies.
2. Equipment assistance requisition forms shall be kept on file with equipment expenditures.
3. Receipts of payments shall be kept with files.
4. Persons responsible for maintaining equipment assistance funds files shall be specified.

STANDARD VII: The school food and nutrition department shall develop, maintain, and use effective record keeping systems.

Evaluation topic (g): Records on meals served, along with supporting documentation, shall be maintained.

Criteria:

1. Menus for school meals served shall be kept at food production site and central office for easy reference.
2. Menu portion size records shall document portion sizes for each food item served at each age level.
3. Evidence of coordination of menu planning with student food preferences and acceptance shall be recorded such as:
 - (a) student advisory council review of menus
 - (b) student survey of food choices and acceptance
4. Menu planning tools shall be accessible to menu planner:
 - (a) recipe files
 - (b) product information files
 - (c) school lunch pattern guides

- (d) food inventories
- (e) menu costing records
- (f) portion size charts

STANDARD VIII: The school food and nutrition program shall support a planned program of student and parent involvement.

Evaluation topic (a): Youth and parent advisory committees shall be involved in menu planning and review of services.

Criteria:

1. Students and parents shall provide input to the foodservice department on student food preferences.
2. Students and/or parents provide advice to the foodservice department on sale of nutritious food sold in addition to school meals.
3. Students and parents shall participate in assessment of student food preferences and satisfaction of meals served.
4. Students and parents shall participate in product tasting panels on new food products.

STANDARD VIII: The school food and nutrition program shall support a planned program of student and parent involvement.

Evaluation topic (b): Youth and parent advisory committees shall be involved in increasing student participation in the child nutrition programs.

Criteria:

1. Students and parents shall assist in planning and promoting activities to stimulate participation.
2. Periodic assessment of participation rates shall be conducted.

STANDARD VIII: The school food and nutrition program shall support a planned program of student and parent involvement.

Evaluation topic (c): The school food and nutrition program shall sponsor public information activities and other activities to involve students.

Criteria:

1. Class tours of school foodservice facilities shall be planned periodically.

2. The school foodservice shall promote activities during National School Lunch Week and National Nutrition Month.
3. The school foodservice shall promote activities in the dining areas for special events such as:
 - (a) Homecoming football games
 - (b) Spirit days
 - (c) Special holidays (i.e., Thanksgiving, Christmas, Valentine's Day)

STANDARD VIII: The school food and nutrition program shall support a planned program of student and parent involvement.

Evaluation topic (d): Youth and parent advisory committees shall be involved in programs to enhance student eating environment.

Criteria:

1. Students and parents shall be involved in decorating dining areas for special activities or holidays.
2. Students shall be involved in selecting music for dining area when appropriate.
3. Students and parents shall be involved in assisting to keep cafeteria clean (e.g., signs on keeping dining areas clean, school newspaper promotions, assignment of youth host and hostess to encourage cleanliness).

STANDARD IX: The school food and nutrition program shall be coordinated with an effective nutrition education and training program in the school system.

Evaluation topic (a): The school food and nutrition program shall provide or assist in providing inservice training related to nutrition education for appropriate school system personnel.

Criteria:

1. Sessions on nutrition shall be provided for teachers through coordination with planned school inservice programs for teachers and shall include learning experiences on:
 - (a) basic nutrition
 - (b) school meal patterns
 - (c) foods sold in addition to school meals
 - (d) integration of nutrition education in classroom curriculums
 - (e) instructional materials in nutrition education
 - (f) weight control

2. Inservice sessions for school foodservice employees shall include learning experiences on:
 - (a) basic nutrition
 - (b) food preparation and retention of nutrients
 - (c) school meal patterns
 - (d) nutrition education and merchandising
 - (e) foods sold in addition to school meals

STANDARD IX: The school food and nutrition program shall be coordinated with an effective nutrition education and training program in the school system.

Evaluation topic (b): Students shall be involved in promotion of nutrition education through planned activities.

Criteria:

1. Students shall be involved in planning nutrition education programs and activities such as:
 - (a) weight control groups
 - (b) organizing nutrition seminars for students (e.g., nutrition for the athlete, dietary guidelines)
 - (c) tasting panels on new foods
2. Periodic assessment of student's knowledge on nutrition shall be conducted (e.g., athlete's knowledge on nutrition, teenage knowledge on dieting).

STANDARD IX: The school food and nutrition program shall be coordinated with an effective nutrition education and training program in the school system.

Evaluation topic (c): Sequential classroom learning experiences on nutrition education shall be integrated with the planned curriculum of the school system and the school food and nutrition program.

Criteria:

1. Nutrition education shall be sequential for various grade levels and planned to build on previously learned concepts and avoid repetitive learning experiences.
2. Nutrition education shall be integrated in various subject matter areas such as:
 - (a) calculating calorie needs in math classes
 - (b) studying nutritive values of foods in health classes
 - (c) surveying foods from other countries in social studies

- (d) experimenting with food color as it relates to flavor in science classes
 - (e) developing puppet shows for younger children on nutrition in art and drama classes for upper level students
 - (f) singing songs about foods in music classes
3. School lunch and breakfast menus shall serve as teaching tools on balanced meals.
 4. School food and nutrition personnel shall work with teachers to plan and implement learning experiences such as tasting parties, animal feeding experiments, and tours of foodservice facilities.

STANDARD IX: The school food and nutrition program shall be coordinated with an effective nutrition education and training program in the school system.

Evaluation topic (d): Nutrition education and training programs shall be monitored for fulfillment of program objectives, student participation, and financial accountability.

Criteria:

1. Student participation in the nutrition education and training programs shall be documented.
2. Effectiveness of the nutrition education and training program shall be measured against educational objectives.
3. Nutrition education and training coordinator shall be responsible for maintaining records on use of program funds.

Assessment Tool for School Food and Nutrition Program

An assessment tool was developed (Figure 7), based on the proposed standards, evaluation topics, and suggested criteria. The tool was designed to assist the school foodservice director and other managerial personnel conduct an internal assessment of the school food and nutrition program.

Figure 7
SCHOOL FOOD AND NUTRITION PROGRAM
EVALUATION CHECKLIST

SCHOOL: _____ DATE: _____

I. Personnel	YES	NO
1. The qualifications of the school foodservice director are as follows:		
a. a master's degree in institutional management,	___	___
b. a B.S. degree in foods and nutrition or dietetics,	___	___
c. a B.S. degree in Home Economics,	___	___
d. other _____,	___	___
e. current state or professional certification as school foodservice director.	___	___
2. An organized job training program is provided for school foodservice personnel and includes:		
a. food production	___	___
b. nutrition and nutrition education	___	___
c. service	___	___
d. sanitation	___	___
e. school foodservice meal pattern	___	___
f. safety	___	___
g. student involvement	___	___
3. Scheduled training is provided to foodservice personnel on a scheduled basis.	___	___
4. The school foodservice director meets with the superintendent or designee:		
a. weekly,	___	___

I. Personnel	YES	NO
b. monthly,	___	___
c. other _____.	___	___
5. The qualifications of cafeteria manager responsible for food production are as follows:		
a. associate degree in school foodservice supervision,	___	___
b. associate degree in foodservice related course work,	___	___
c. high school diploma and experience, explain: _____	___	___
d. other _____	___	___
e. current state or professional certification as cafeteria manager.	___	___
6. Personnel are staffed utilizing a formula. If no, explain _____	___	___
7. Position control charts show adherence to formula.	___	___
8. Work schedules are posted for employees.	___	___
9. Job descriptions for each position are written and are available to employees.	___	___
II. Food Quality (Procurement, Food Production, Service)	YES	NO
<u>Menu Planning</u>		
1. All menus comply with federal guidelines.	___	___
2. Student food preferences are considered in menu planning.	___	___
3. Menu planner has on file the following:		
a. food product file,	___	___
b. USDA commodity information,	___	___
c. recipe file.	___	___

II. Food Quality (Procurement, Food Production, Service)	YES	NO
4. Menu portion charts for each days menu are posted.	___	___
5. Menu planning shall include alternatives to school lunch meals such as:		
a. salad bar	___	___
b. soup and sandwich	___	___
c. choice in meal components	___	___
6. Menus are evaluated prior to issuing by:		
a. school foodservice committee,	___	___
b. Youth Advisory Council,	___	___
c. other _____	___	___
7. Menus are advertised by the following means:		
a. radio,	___	___
b. newspaper,	___	___
c. classrooms,	___	___
d. dining rooms.	___	___

Food Purchasing

1. A copy of state purchasing guidelines is on file.	___	___
2. The school foodservice department maintains a purchasing schedule.	___	___
3. There is a written ordering procedure.	___	___
4. Price quotations or bids contain well defined food specifications.	___	___

Food Production

1. Standardized recipes are used and adjusted to food production needs.	___	___
---	-----	-----

II. Food Quality (Procurement, Food Production, Service)	YES	NO
2. Food product quality tests are done prior to food production. By whom: _____	_____	_____
3. Food production is based on a production count.	_____	_____
4. High standards of sanitation are maintained in food production.	_____	_____

Food Service

1. Student receives tray with correct portion sizes of required food components.	_____	_____
2. Utensils and napkin are provided with tray:		
a. breakfast,	_____	_____
b. lunch.	_____	_____
3. Trays are free from spillage.	_____	_____
4. Hot food is served hot and chilled food cold.		
Minimum serving temperatures: Hot food <u>140</u> °F	_____	_____
Cold food <u>50</u> °F	_____	_____
5. There is a minimum of three hours between the service of breakfast and lunch.	_____	_____
a. time of first breakfast service: _____		
b. time of last lunch service: _____		
c. time span between service: _____		
6. There are no more than four hours from first class period to meal time.	_____	_____
a. time of first period _____		
b. time of last lunch served _____		
c. time span _____		
7. There is at least 20 minutes of time for students to eat after service of meal.	_____	_____

II. Food Quality (Procurement, Food Production, Service)	YES	NO
8. Plate waste reports indicate plate waste is minimal,	___	___
moderate,	___	___
excessive.	___	___
9. The student meals are served by personnel in a pleasant manner.	___	___

Sanitation and Safety

1. Local sanitation ordinances are available in the food production area.	___	___
2. Fire safety procedures are posted in the food production area.	___	___
3. An evaluation checklist on sanitation and safety is used. How frequently? _____	___	___
4. A cleaning schedule is provided.	___	___

III. Operational Resources	YES	NO
----------------------------	-----	----

Financial Accounting

1. Menu costing is determined for breakfast and lunch meals daily. If not, how often? _____	___	___
2. A separate account for foodservice programs is maintained.	___	___
3. The accounting system provides the following:		
a. itemized program income (a la carte, federal reimbursement, and other)	___	___
b. itemized program expenditures (food, labor, supplies, overhead)	___	___
c. inventory costs.	___	___
4. A monthly food and nutrition program financial statement is prepared.	___	___

III. Operational Resources	YES	NO
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5. Pricing of breakfasts and lunches is adequate to recover meal costs.

	Full-price	Reduced-price	Adults
--	------------	---------------	--------

Breakfast	_____	_____	_____
-----------	-------	-------	-------

Lunch	_____	_____	_____
-------	-------	-------	-------

Milk	_____	_____	_____
------	-------	-------	-------

6. If adult price does not cover meal costs, the food-service program shows means of supplementing the foodservice program to defray the cost.

7. A record of Equipment Assistance funds expenditures shows intended use of funds is met.

Inventory

1. A perpetual inventory system is maintained for:

a. purchased foods,

b. USDA commodities.

2. A physical inventory is taken periodically to check perpetual inventory accuracy:

a. weekly,

b. monthly.

3. Food and supplies are stored in locked areas.

4. The school foodservice department has a written procedure for receiving.

5. Access to food and supplies is limited to authorized personnel.

III. Operational Resources
YES NO

Accountability of Meals Claimed

1. Free and reduced price meals claimed are less than or equal to number of currently enrolled students approved for free and reduced meals times the day of operation for the reporting period:

Meals Claimed
for reporting
period = Number
Eligible/
Day X Days of
Operation/
reporting
period

Free _____ = _____ X _____

Reduced _____ = _____ X _____

2. The total number of meals claimed for reimbursement is less than or equal to the average daily attendance for days of operation times the days of operation for the reporting period:

Meals Claimed
for reporting
period = Average
daily
attendance X Days of
Operation/
reporting
period

Free _____ = _____ X _____

Reduced _____ = _____ X _____

3. A written procedure for counting and recording meals shows efficiency in making correct claims.
4. Reimbursements claimed for meals can be supported by reviewable records.
5. Meals claimed for reimbursement can be substantiated by food production records and participation records.

IV. Equipment and Facilities
YES NO

1. The school foodservice director provides input into layout design and equipment selection.
2. A preventive maintenance program is maintained.

IV. Equipment and Facilities	YES	NO
3. Equipment maintenance is documented.	___	___
4. Storage size is adequate for:		
a. frozen goods,	___	___
b. refrigerated goods,	___	___
c. dry goods.	___	___
5. Storage procedures are written to include the following:		
a. authorized personnel,	___	___
b. sanitation in storeroom,	___	___
c. rotation practices,	___	___
d. safety precautions.	___	___
6. Dining areas have sufficient space to provide adequate meal service to students.	___	___
7. Dining area is designed to reduce noise levels.	___	___
8. Dining area is designed to provide pleasing decor, comfortable eating conditions, and sanitary and safe conditions.	___	___
<hr/>		
V. Policies and Procedures	YES	NO
1. Policies and procedures are written by school food and nutrition program director with advice and consent of superintendent or designee.	___	___
2. The policy and procedure manual is available to personnel in food production areas.	___	___
3. Policies and procedures are reviewed and updated.	___	___
4. Policies and procedures are dated to show time of last review.	___	___

V. Policies and Procedures	YES	NO
5. Policies and procedures include information on the following:		
a. organizational structure;	___	___
b. food purchasing, storage, inventory, preparation, and service;	___	___
c. menu planning;	___	___
d. nutritional assessment;	___	___
e. personnel hygiene and health (includes dress code);	___	___
f. infection control;	___	___
g. safety;	___	___
h. compliance with local, state and federal regulations;	___	___
i. disaster plans;	___	___
j. use of facilities for extracurricular activities;	___	___
k. food disposal;	___	___
l. foods sold in addition to school meals.	___	___

Specific Policy - Meal Applications

1. All students shall receive notice to parents about free and reduced price meals and an application form.	___	___
2. The notice to parents contains the following information:		
a. price of meals and/or milk,	___	___
b. current income scale for free and reduced meals,	___	___
c. statement about unemployed parents,	___	___
d. description of right to an appeal for denial of free or reduced meal,	___	___
e. confidentiality of meal application information,	___	___

V. Policies and Procedures	YES	NO
f. foster children eligibility,	___	___
g. statement on nondiscrimination,	___	___
h. eligibility based on hardship.	___	___
3. The school district provides the approved free and reduced-price meal policy to each school.	___	___
4. Meal applications are periodically reviewed for accuracy: frequency _____ per cent error _____	___	___
5. The meal application contains the following information:		
a. fraud warning,	___	___
b. space providing identification of foster child,	___	___
c. procedure for hardship application,	___	___
d. income of family,	___	___
e. number in family,	___	___
f. signature of adult family member,	___	___
g. approval or denial notification.	___	___

Specific Policy - Foods Sold in Addition to School Meals

1. Policy on foods sold in addition to school meals includes:		
a. description of approved foods,	___	___
b. approval of meals sold during mealtimes,	___	___
c. posting of permitted foods in dining rooms.	___	___

V. Policies and Procedures	YES	NO
----------------------------	-----	----

Specific Policy - Nutritional Value of Meals

- | | | |
|---|-------|-------|
| 1. Policy on school food and nutrition program standards on nutritional assessment shall include: | | |
| a. review of meals to show meeting specified recommended dietary allowances, | _____ | _____ |
| b. efforts to observe U.S. dietary guidelines are met by planning menus designed to: | | |
| (1) increase carbohydrate consumption | _____ | _____ |
| (2) reduce overall fat consumption | _____ | _____ |
| (3) reduce sugar consumption | _____ | _____ |
| (4) reduce salt consumption | _____ | _____ |
| c. adjustment of meal serving sizes for various age groups, | _____ | _____ |
| d. frequency of menu nutrient content analysis, | _____ | _____ |
| e. frequency of plate waste studies. | _____ | _____ |

VI. Feedback	YES	NO
--------------	-----	----

- | | | |
|---|-------|-------|
| 1. The school food and nutrition program maintains a system of periodic review. | _____ | _____ |
| 2. The review process includes evaluation of the following: | | |
| a. quality of meals, | _____ | _____ |
| b. student participation, | _____ | _____ |
| c. financial accountability, | _____ | _____ |
| d. employee satisfaction, | _____ | _____ |
| e. nutrition education programs. | _____ | _____ |

VII. Record keeping	YES	NO
1. Records providing supportive documents for operational funds expenditures are on file and are:	___	___
a. organized for easy reference,	___	___
b. kept for the required period of time according to local, state, and federal policy.	___	___
2. Food production records are available to show compliance of nutritional standards and are kept for the required period of time according to local, state, and federal policy.	___	___
3. Records for meal claims on free and reduced meals are maintained for the required period of time according to local, state, and federal policy including:	___	___
a. meal applications,	___	___
b. meal count records,	___	___
c. internal review of meal application records.	___	___
4. State and federal records, correspondence, newsletters, administrative reviews, contracts are kept on file the required period of time according to local, state, and federal policy and, are organized for easy reference.	___	___
5. Personnel files are maintained according to school district policy:	___	___
a. confidentiality is protected,	___	___
b. a checklist is used to assess content of files.	___	___
6. Menu planning records are kept for a required period of time according to local, state, and federal policy.	___	___
a. Menus are kept at the food production site and central office for easy reference.	___	___
b. Menu portion records are kept with menus showing portion sizes served for each menu served at each age level.	___	___
c. Student surveys on food preferences are recorded.	___	___

VIII. Youth and Parent Involvement	YES	NO
<u>Menu Planning and Review of Services</u>		
1. Students provide input on food preferences.	___	___
2. Students consult with food and nutrition programs on the foods sold in addition to school meals.	___	___
3. Students and parents participate in assessment of student food preferences and satisfaction with meals.	___	___
4. Students and parents participate in product tasting panels.	___	___
<u>Student Participation</u>		
1. Students and parents participate in planning and promoting activities to stimulate participation.	___	___
2. Students and parents are involved in assessment of student participation rates.	___	___
<u>Public Information Activities</u>		
1. Class tours of school foodservice facilities are conducted periodically.	___	___
2. Students and parents are involved in promoting National School Lunch Week and National Nutrition Month.	___	___
3. The school foodservice promotes activities on special holidays and events.	___	___
<u>Eating Environment</u>		
1. Students are involved in decorating dining areas for special events and holidays.	___	___
2. Students are involved in selecting music for dining area when appropriate.	___	___
3. Students are involved in assisting to maintain a clean dining area.	___	___

IX. Nutrition Education and Training Program	YES	NO
--	-----	----

Inservice on Nutrition Education for School System Personnel

- | | | |
|--|--|--|
| 1. Inservice sessions on nutrition are provided for teachers during inservice training days and include learning experiences on: | | |
| a. basic nutrition | | |
| b. school meal patterns | | |
| c. foods sold in addition to school meals | | |
| d. integration of nutrition education in classroom curriculums | | |
| e. instructional materials available | | |
| f. weight control | | |
| 2. Inservice training for school foodservice employees is provided and includes learning experiences on: | | |
| a. basic nutrition | | |
| b. food preparation and retention of nutrients | | |
| c. school meal patterns | | |
| d. nutrition education and merchandising | | |
| e. foods sold in addition to school meals | | |

Promotion of Planned Activities on Nutrition Education

- | | | |
|---|--|--|
| 1. Students are involved in planning nutrition education programs and activities. | | |
| 2. Periodic assessment of student's knowledge on nutrition is conducted. | | |

Integration of Nutrition Education with School System Curriculum

- | | | |
|---|--|--|
| 1. A sequential nutrition education curriculum for various grade levels is operational. | | |
| 2. Nutrition education is integrated in classroom activities. | | |

IX. Nutrition Education and Training Program	YES	NO
--	-----	----

3. Menus are provided to classrooms for use as teaching tools.	___	___
--	-----	-----

4. School food and nutrition personnel assist teachers in planning nutrition education learning experiences.	___	___
--	-----	-----

Monitoring of Nutrition Education and Training Program

1. Student participation in the nutrition education and training programs is documented.	___	___
--	-----	-----

2. Effectiveness of nutrition education and training programs are measured against educational objectives.	___	___
--	-----	-----

3. The nutrition education and training coordinator maintains accurate records on use of program funds.	___	___
---	-----	-----

Name of Evaluator: _____

Title: _____ Date: _____

Item Number

Comments and Recommendations

SUMMARY

The objective of this report was to develop suggested standards and an assessment tool for school food and nutrition programs. Literature topics reviewed included school foodservice program development, problems impacting on school foodservice effectiveness, dietetic standards, and systems theory.

The history of school foodservice began in the 18th century in Europe. Count Rumford established a soup kitchen for unemployed workers in 1790 and invited hungry schoolchildren to participate. Other similar programs existed in France, England, Holland, and Switzerland. Early programs in the United States were encouraged by a book written by Hunter entitled Poverty. School foodservice programs received their first financial assistance in 1932 and 1933 through labor programs during the reconstruction period. Legislation after the National School Lunch Act in 1946 has expanded feeding to children, through the free milk program established in 1954, pilot school breakfast in 1966, free and reduced price guidelines for serving needy children in 1970, permanent breakfast program in 1975, and the nutrition education and training program in 1977.

Garvue et al. identified various problems in school foodservice programs that have influenced the effectiveness of the program. Problems cited have been unskilled personnel, inadequate funding, and a general weakness in all areas of fiscal management. Reports from the U.S. Comptroller General, General Accounting Office (GAO) have cited serious problems in the areas of accountability.

David emphasized the importance of maintaining quality standards in the profession of dietetics. The needs for standards in dietetic practice have been described by Schiller and Behm. The Joint Commission on Accreditation of Hospitals has developed standards for dietetic services which are used by hospital foodservices across the country.

Standards for school foodservices have been recommended by the Southern States Work Conference in 1947 and revised in 1953 and 1967. Also, a Joint Committee of the American School Food Service Association, The American Dietetic Association, and the American Home Economics Association recommended personnel standards in 1948. Professional associations can only recommend standards; legislation and subsequent regulations mandate minimum standards in public feeding programs. Operational standards have been developed for school food and nutrition programs by the United States Department of Agriculture (USDA), Food and Nutrition Service. The USDA National Advisory Council on Child Nutrition has recommended that comprehensive standards for the school foodservice program are needed.

In this report, a foodservice systems model was adapted to school foodservice so that it could be used as a tool to provide a systematic method in developing school foodservice standards, evaluation topics, and criteria. A set of suggested standards for school food and nutrition programs was developed, as well as a set of criteria and an assessment tool. The assessment tool can be used for evaluating operations in a school foodservice system.

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PROPOSED STANDARDS, EVALUATION TOPICS, CRITERIA, AND AN ASSESSMENT
TOOL FOR SCHOOL FOOD AND NUTRITION PROGRAMS

by

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B.S., Texas Arts and Industries University, 1972

AN ABSTRACT OF A MASTER'S REPORT

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