

PERCEIVED ROLES OF ELEMENTARY SCHOOL PERSONNEL IN  
AN INTEGRATED NUTRITION EDUCATION PROGRAM--  
IMPLICATIONS FOR IN-SERVICE EDUCATION

By

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## CHAPTER I

### INTRODUCTION

A nutrition education program that is developed and enacted in the elementary school could help to develop desirable food habits in a child. A child's habits are most easily influenced in the elementary years; therefore, the elementary years are an opportune time to try to establish sound nutritional habits (31, 40). With an effective nutrition education program beginning in elementary school, it is more likely that the individual would develop desirable eating habits.

An integrated approach to nutrition education could contribute to an effective nutrition education program. An integrated approach to nutrition includes the combined effort of school administrators, teachers, and foodservice directors each taking an active role in the nutrition education program. In an integrated nutrition education program, the teaching of nutrition is included within the teaching of other school subjects such as geography, music, math, and science. For school personnel to work together, they should be aware of their role in an integrated nutrition education program. The degree to which all the school-related personnel take an active role in a nutrition education program determines the effectiveness of the program. The lack of active support from school personnel has hindered nutrition education programs in the past (46).

### Significance of the Study

The food habits of Americans have not improved the nutritional status of the population in spite of increasing personal wealth of Americans. Nutrition education programs have been seen as a means of helping to improve nutrition knowledge and the application of this knowledge. If the public is more aware of sound nutrition practices through nutrition education programs, it is hoped that the public will improve their food habits.

A summary of dietary studies from 1957-1967 showed that the diets of individuals were lacking in needed nutrients from infancy through adulthood. Infants and preschool children had low intakes of iron, ascorbic acid, vitamin A, calcium, and niacin. Adolescents had low intakes of calcium, iron, ascorbic acid, and vitamin A. College-age people had low intakes of calcium, iron, and ascorbic acid (35).

Over a period of years, results of surveys have shown no improvement in the child's diet, even though the National School Lunch Program was established in 1945 to help alleviate the malnourishment problem. One of the ideals of the school lunch program was that the "day-to-day participation in the program would develop good food habits which carry on through adulthood and into the community" (24, p. 29). However, nutrition status surveys have revealed that children do not learn good food habits just because they eat school lunch.

Concern for the nutritional status of the nation brought about the White House Conference on Food, Nutrition, and Health, 1969. Recommendations included the integration of nutrition education programs in the schools across the nation (70). These nutrition education programs

could be carried out with cooperation and support from the administrators, teachers, and school foodservice personnel.

The teachers can work with the school foodservice personnel for a more effective program by co-ordinating classroom instruction with the lunchroom (48). The administrators have a supportive role to play for the teacher and foodservice director. The Child Nutrition Council in 1972 (42) reported,

A crucial unmet need in the continuing progress of nutrition education is the need to make school administrators aware of the importance of nutrition education and their responsibility for seeing that such education is an integral part of the school experiences (p. 4).

If the school personnel work together on a nutrition education program in the elementary school, there could be a more effective program. The combined resources of the school personnel working together is far greater than the total of each individual working alone (67). For the school personnel to work together, they must be aware of their individual role in an integrated nutrition education program. To better understand and apply their role in nutrition education, school personnel could attend in-service nutrition education programs.

The National Advisory Council on Child Nutrition for 1971 urged that curricula for in-service training in nutrition education be developed (42). However, before the curricula for in-service education can be developed, the perceived roles of school personnel need to be identified. With the perceived roles identified, curricula for in-service education can be planned which may aid the school personnel in teaching the students how and why to improve their eating habits.

### Statement of the Problem

An integrated nutrition education program in the elementary school might effectively help a child learn desirable food habits. Each school personnel has specific roles in working together in an integrated nutrition education program. To have a more effective nutrition education program, it is important for all school personnel, including teachers, administrators, and school foodservice directors to be aware of their roles. A knowledge of the perceived roles of school personnel may be useful in planning curriculum for in-service nutrition education programs. In-service nutrition education programs may aid school personnel in becoming aware of their roles in nutrition education. This study determined: The perceived role of administrator, elementary teacher and school foodservice director in an integrated nutrition education program in selected Oklahoma elementary schools--with implications for in-service education.

### Objectives

1. Develop an instrument to aid in determining the perceived roles of selected school personnel.
2. Identify the perceived role of the administrator, teacher, and multi-unit school foodservice directors in an integrated nutrition education program in selected elementary schools by analysis of the response to the instrument.
3. Determine the relationship of selected variables, such as age, type and level of college degree, length of time employed in present job, other jobs held, helping to organize in-service education workshops, and participation in an in-service nutrition education workshop, to the

responses of the school personnel.

4. Compare similarities and differences of roles identified by the administrator, teacher, and foodservice director.
5. Make suggestions and recommendations for in-service nutrition education curricula.

#### Definition of Terms

1. Nutrition education--to establish good food habits which will result in an intelligent food selection, day by day, throughout life (13).
2. Integrated nutrition education program--a nutrition education program in which nutrition is incorporated into the school subjects such as math, language and music.
3. Multi-unit school foodservice directors--foodservice directors responsible for the feeding of elementary children in a designated area of Oklahoma. The multi-unit school foodservice directors are also referred to as foodservice directors in this study.
4. School administrators--principals of the elementary schools.
5. Elementary school teachers--school teachers in the first through sixth grades.
6. Role--the responsibility of the school personnel in an integrated nutrition education program.
7. Perceived role--the responsibility the school personnel believe that they have in an integrated nutrition education program.
8. In-service education--educational procedure for increasing competence and professional growth of teaching personnel during their service in schools (33).

## CHAPTER II

### REVIEW OF LITERATURE

#### Introduction

The importance of nutrition education in the elementary schools has been brought to national attention. The Recommendations of the White House Conference of Food, Nutrition, and Health in 1969 lended support to nutrition education. One of the factors leading to the White House Conference on Food, Nutrition and Health were nutritional studies that have been conducted in many parts of America.

#### Nutritional Status Surveys

Several nutritional status studies of children have been conducted since World War II. These surveys have been conducted in local regions and with certain age groups. However, the results from all the surveys have shown definite trends in the decline of adequate nutritional intake over the years. Food habits and attitudes are factors in evaluating the nutritional status of children.

Even though most Americans may have money to buy nutritionally adequate food, they are not doing so. People develop attitudes towards food which may determine their food habits. The attitude a person has toward a food will determine if he likes or dislikes the food, if he eats the food, and how often he eats the food. The consumption of

certain kinds of food over a period of time will determine the food habits of a person. Children can develop good food habits very early in life. These habits can be practiced throughout their lifetime. Many surveys have been conducted to determine food habits and food attitudes and the effect these factors have on nutritional status.

New York Nutrition Survey, 1949. A nutritional survey was made of 10,000 nine-year and fifteen-year old school children in the state of New York. The school children kept a three-day dietary record of their food intake. The daily intake of each child was then calculated for nutritional value. The grade school children's intake of Vitamin A and Vitamin C were the lowest of all nutrients consumed. Only 22 per cent of the grade school children met the recommended number of servings from all Four Food Groups (66).

Food Habits in Connecticut, 1954. A survey of food habits was made by Potgieter and Morse (50) in Connecticut in 1954. Lists of food intakes of 1,242 school children in the fifth through eighth grades were kept by the children. For seven days, the children recorded how many servings they ate of each food, but not the size of the serving. Using the Basic Four Food Guide of recommended servings, each child's listing of servings was compared to recommended servings for each food group. It was found that the children had adequate servings of milk, bread, and meat. The foods most lacking in the diets were green and yellow vegetables and the ascorbic acid foods.

Food Consumption Survey, 1955-1965. In 1955 and 1965, nationwide surveys were conducted of household food consumption. By using the recall method for both surveys, homemakers reported the food consumption of her household for one week. The results for both surveys found

that children have low nutrient intakes of iron, ascorbic acid, vitamin A, calcium, and niacin (35).

In a review of the two surveys, Adelson (2) reported that the diets of the families did not improve over the ten year period, but the diets declined in nutritional status. For a diet to be rated "good", the daily allowances must be met for protein, calcium, iron, vitamin A, thiamine, riboflavin, and ascorbic acid. In 1955, six out of ten families surveyed were rated "good". In 1965, five out of ten families surveyed were rated "good". About 20 percent of the diets in 1965 were rated "poor" compared to 15 percent in 1955. Poor diets were those which included two-thirds or less of the recommended allowances for one or more nutrients.

Over the ten year period, meat was the only major food group where consumption increased. In the other food groups, milk, vegetables, fruit, and bread all dropped in consumption. At the same time, the consumption of sugar and sweets increased. This shift in food habits meant that fewer people met their daily minimum allowance for calcium, vitamin A, ascorbic acid, iron, thiamine, and riboflavin in 1965 than in 1955. Adelson (2) recommended that nutrition education programs be designed to meet the needs of children so as to bring about the increased consumption of milk products, fruits, and vegetables.

Attitudes Towards Foods, 1959. Breckenridge (15) conducted a survey to determine the attitudes children have towards food. The 51 elementary school children were interviewed at a summer camp in Detroit. The children were given a list of foods and asked to designate if they liked, disliked, or had not tried the food. Cooked vegetables of all kinds comprised the largest number of dislikes. Eggs were the second



most disliked food, with raw vegetables and raw fruit rated third and fourth. Breckenridge found these results to be comparable with other surveys of children's food preferences.

Food Habits Survey, 1965. A survey of food habits of children was conducted by Dierks and Morse (21) in Minnesota. The survey was of 121 preschool children of families living in married student housing at the University of Minnesota. The mothers were asked to keep a three-day record of what their child consumed estimating the size of the serving. Nutrient intake was then calculated from the records. The most outstanding result of the survey was that most vegetables were disliked and not eaten by the children. Of the 121 children, fourteen of them refused all vegetables that their mothers served. Dierks also found that intake of iron was significantly below the recommended daily intake for 1964.

Ten State Nutrition Survey, 1967. In the fall of 1967, the Department of Health, Education and Welfare undertook a survey to identify the prevalence, magnitude and distribution of malnutrition in the United States (30). Over fifty percent of the participants in the ten states were under the age of sixteen. This group had the highest prevalence of unsatisfactory nutritional status. Both the 6-9 year group and 10-16 year group were found to have low nutritional status in vitamin A, ascorbic acid, riboflavin and thiamine. Between-meal snacks of high carbohydrate foods such as candies, soft drinks, and pastries were associated with the development of dental cavities in adolescents (30). This finding illustrates the potential detrimental effect of poor nutrition on dental health. A high prevalence of low hemoglobin and hematocrit values was found throughout all segments of

the population. These results show a low intake level of iron.

Health and Nutrition Examination Survey, 1973. The most recent national survey has been done within the last three years by the Public Health Service, and the preliminary results have been reported. The survey, called the HANES (Health and Nutrition Examination Survey), has examined 10,126 participants' caloric and nutrient intake on a 24-hour recall. Blood tests and urine tests with a physical examination were also administered to each participant. Results revealed that 95 percent of all preschool children had iron intakes below the standards set by the Food and Nutrition Board of the National Academy of Science (43). From the early results, it was also identified that children were more deficient in vitamins A and C than other age groups. Further analysis of results from the survey will give the adequacy of other nutrients.

The results of these nutritional surveys have shown that the diets of America's children have not improved in nutritional status, in spite of a rise of personal wealth for American families. There is more money for families to spend on food, yet American families are still lacking in selected nutrients. The nutritional status surveys reviewed in this research revealed that children from preschool age to adolescence have intakes of vegetables and fruits below the recommended amount. In the nutritional surveys, children were found to have low intakes of vitamins A and C, two vitamins that are found in most vegetables and fruits. Concern for the decline in nutritional status was a factor in bringing about the White House Conference on Food, Nutrition, and Health in 1969. This conference helped to bring about forward steps in nutrition education.

White House Conference on Food, Nutrition,  
and Health, 1969

The White House Conference on Food, Nutrition, and Health (70) was concerned with the need for improving nutrition education for all segments of the population. Among the recommendations, the White House Conference recommended that curriculum needs to be developed for nutrition education. Curriculum should be developed to meet a person's needs in nutrition. By developing curriculum along these guidelines, the teaching of nutrition can be relevant for the students. A person's needs are determined by:

- (1) his physiological state and physical activities,
- (2) his knowledge of nutrient composition of plant, animal, and formulated foods in his environment,
- (3) his ability to distinguish between truth and distortion in relation to foods, nutrition and health, and
- (4) his ability to use his available resources whatever they may be.

The following recommendations were made for nutrition education programs in the public school:

That a comprehensive and sequential program of nutrition education be included as an integral part of the curriculum of every school in the United States and its territories.

That a proposed conceptual framework be used as a resource in developing new curriculum and evaluating existing curriculum.

That a national interdisciplinary study group be appointed to give further study of the proposed conceptual framework, to assess the current status of nutrition education in the schools, to prepare curriculum guidelines and resource material for use by state and educational agencies and to suggest pilot programs to test, evaluate and revise materials (p. 177).

## National Nutrition Policy

Since the White House Conference on Food, Nutrition and Health in 1969, several recommendations for a national nutrition policy have been designated to serve as guidelines for the legislators and government when analyzing progress in nutrition education. The Society of Nutrition Education has reviewed a proposed National Nutrition Policy. Recommendations and concepts for the policy include that (1) the food industry should take upon themselves to produce nutritious foods and to advertise and label their products correctly; (2) nutrition education should be a part of the school program so that every child receives nutrition education; (3) nutrition education should also be included in training programs to provide leadership for implementing the programs; (4) a national nutrition council should be developed to coordinate all nutrition education efforts (45). Nutrition education planners can use these guides when developing a nutrition education program.

### Developing Nutrition Education Programs

Many states have developed health curriculum guides for the elementary school, which include a section on nutrition education. Many of these curriculum guides have been developed since 1969. Using the recommendations of the White House Conference on Food, Nutrition and Health (70) the following concepts can be used as guides for nutrition education programs:

1. Nutrition is the process by which food and other substance eaten becomes you. The food we eat enables us to live, to grow, to keep healthy and well, and to get energy for work and play.

2. Food is made up of certain chemical substances that work together and interact with body chemicals to serve the needs of the body. a) Many kinds and combinations of food can lead to a well-balanced diet.
3. The way a food is handled influences the amount of nutrients in the food, its safety, appearance, taste, and cost. Handling means everything that happens to food while it is being grown, processed, stored, and prepared for eating.
4. All persons, throughout life, have need for about the same nutrients, but in varying amounts.
5. Food uses relate to the cultural, social, economic, psychological aspects of living as well as the physiological. a) Attitudes toward food are a culmination of many experiences, past and present.
6. Foods play an important role in the physical and psychological health of a society or a nation just as they do for the individual and the family. a) Nutrition knowledge and social consciousness enable citizens to participate intelligently in the adoption of public policy affecting the nutrition of people around the world (p. 151).

These concepts could be used as guides for developing nutrition education programs both for the elementary school and for in-service nutrition education programs.

Developing an in-service curriculum applies the same principles as developing other types of educational curriculum. Tyler (68) reports that the question should be asked,

What is good teaching, what materials are significant, what topics are worth dealing with and how to present material and develop topics effectively with students? It is very necessary to have some concept of the goals that are being aimed at (p. 70).

Determining the goals of the program is the first step in developing in-service education. Defining the objectives and the goals can make the course relevant and worthwhile for the participants. They should be evaluated after the course has been taught--do these goals meet the objectives of the course?

To be an effective education program, the program must change the behavior patterns of the people. Often this cannot be evaluated in the course, but must be evaluated after the course to find any conclusive results. An evaluation procedure needs to be developed to measure the effectiveness of the program. Tyler (68) related, "The progress of evaluation is essentially the process of determining to what extent the educational objectives are actually being realized by the progress of curriculum and instruction" (p. 18). For the teachers to teach nutrition education effectively in the public school, they must understand nutrition. An effective in-service program could result in a more effective nutrition education program in the public school. An effective nutrition education program should help children to understand the principles of good nutrition and to practice these principles daily.

#### An Effective Nutrition Education Program

If nutrition education in the elementary school is integrated into the school curriculum, children may better comprehend the principles of nutrition. It is now realized that the lunchroom and classroom could be co-ordinated into an integrated nutrition education program. Whitehead (69) states that a nutrition education program should become a part of the existing school curriculum, based on the needs of the children.

A survey of nutrition education practices in Hawaii by Cortes (20) resulted in the following recommendations for an effective nutrition education program:

1. Appropriate teaching techniques should be used in order to develop the techniques, a survey of the use of guidelines

should be conducted.

2. The teacher should possess a good background in basic nutrition. Nutrition education courses for teachers should include current information on innovative techniques to teach nutrition.
3. Attractive and interesting materials for children should be available for ready use by the teacher.
4. Techniques which catch the imagination of the children should be developed.
5. The school lunchroom should serve as a teaching laboratory where children and teachers put nutrition facts into operation.
6. Continuing communication between teachers and professionals in nutrition should be established through evening or summer courses, summer workshops, follow-up in-service training and/or during PTA meetings (p. 20).

Some surveys have been conducted to determine the effectiveness of nutrition education programs in the elementary school. These programs used a variety of innovative methods to catch the children's attention and interest in nutrition.

A study conducted by Baker (8) in 1972 was conducted to determine the influence of nutrition education on fourth and fifth graders. Baker developed an integrated nutrition education program which included activities such as cartoons, bulletin boards, growth graphs of the students, and science experiments relating to nutrition including an animal feeding experiment. A pre-test was given, a test after the lesson series, and a test five months later. Children were also asked for a 24-hour recall before and after the nutrition lessons. The

results showed that the scores on the tests were raised significantly over the pre-tests, but no significant changes in diet due to the program were observed. A factor in the lack of change of diets of the students could be due to the length of time of the nutrition lessons. Perhaps the results would have been more favorable if the program had been continued over a longer period of time than the study allowed.

A study was undertaken by Head (28) in 1973 to determine whether nutrition education could bring about changes in diets and an increased acceptability of the school lunch program. Her program for the fifth grade integrated nutrition into other courses, in particular reading, math, history, art, music, and science. The results showed that all fifth grade classes and one seventh grade class significantly improved their knowledge of nutrition, as measured by cognitive tests. With plate waste decreasing significantly, it was determined the diets of the fifth grade class improved. The amount of change of diets decreased in proportion to the age of the student. The younger the student is when he begins to learn good nutritional habits, the more he utilizes his nutritional habits. A younger student does not have well established food habits. Head (28) chose schools whose administration had favorable attitudes toward nutrition education.

#### The Role of the School Administrator

The school administrator has a leadership role in his school. The administrator can use this role to integrate nutrition education into the school curriculum. Schubert (62) believes the key factor in the nutrition education programs in the schools is the administrator's updating and strengthening of curricula and instruction in relation to



school health. When administrators realize the importance their school can have in a nutrition education program, they should take the initiative in developing the nutrition education program. The school administrator must take the leadership position to see that nutrition education is an integrated process in his school (16, 31, 51, 60).

The importance of the school administrator's support of an integrated nutrition education program was emphasized by the White House Conference on Food, Nutrition and Health in 1969 (70).

Administrative leadership personnel at all levels, from the state commission to education to the principal of the smallest elementary school in the smallest independent school district, must understand, accept, and actively support a nutrition education program if it is to be implemented and carried out with any appreciable degree of harmony and effectiveness. This is essential regardless of the competency, dedication, or determination of individual teachers, supervisors, or professional organizations, or of the quality or need of the program proposed (p. 149).

Head (28) developed an integrated nutrition education program for the elementary schools. Selection of the schools was based on the willingness of administrators to participate. She noted:

There was more success where administration was committed to the importance of nutrition education. The closest communication and cooperation was noted between teachers and school foodservice personnel in that administrative unit (28, p. 59).

There are many ways in which an administrator can co-ordinate nutrition education activities. The teachers will need innovative materials for their teaching of nutrition. These materials must be kept up to date and relevant. The administrator should make sure that the teachers have innovative materials for teaching nutrition education (13, 60).

In 1969, Texas had a conference on Optimum School Health. The school health teams attending the conference included school board members, superintendents of schools, elementary and secondary principals, teachers and curriculum specialists. A "Model Nutrition Program in a School Setting" was drawn up, and the guide has been used across the state. The efforts of the school administrator have brought about the use of the nutrition education guide in local schools (62).

In West Virginia, school administrators have taken a leadership role in minimizing the problem of malnutrition through a statewide nutrition education effort. These school administrators are taking the first step in establishing nutrition education in West Virginia (62).

In a similar project, a school administrator on an Indian reservation in Washington took the initiative in establishing a nutrition education program. By assuring each child two well-planned meals a day, providing dental and physical examinations on a regularly scheduled basis, and supplying health service when necessary, the administrator was able to increase school attendance and the overall alertness and stamina of the elementary students (62).

Schubert (60) believes that the administrator has many roles in a nutrition education program. The administrator should consider new ways to include nutritional health units in family living and science courses, and to incorporate aspects of food and agricultural awareness in courses such as geography, world history, and foreign languages. The administrator has an important role outside the classroom. He should develop a community awareness of the significance and importance that the school is placing on proper nutritional health practices.

The administrator also has a responsibility to aid the other school personnel by providing in-service training in updated instructional methods and techniques in nutritional health, and the use of new materials and aids, to appropriate teaching personnel. He should also give school lunch personnel the opportunity to participate in refresher courses or in-service workshops related to food selection preparation, and at the same time, making the school cafeteria available for laboratory purposes. With the aid of the administrator, the school foodservice director can better develop his role in nutrition education programs.

#### The Role of the Teacher

The support and cooperation of the teachers in teaching nutrition in the classroom is the first step in reaching the children in an integrated nutrition education program. The teacher has the closest contact with the students and has the teaching ability and experience to communicate with the students. The students will trust the teacher and will follow the teacher's example because of the close contact.

Because of daily contact with the students, the teacher can be the first to notice any signs of nutritional inadequacy in the students. By checking physical examinations of the children, the teacher can be aware of possible nutritional inadequacies of the children. If the teacher eats with the students in the cafeteria, the teacher can also observe their food habits, and if they are eating certain types of foods.

After the teacher is aware of the nutritional status and food habits of the students, the teaching of nutrition should be directed

towards the areas needing improvement. Spitze (59) states that "the best technique for teaching that diet affects various aspects of appearance and health is to work on real problems of the students." There are several ways for the teacher to direct the attention of the students toward good nutrition. These methods include bulletin boards, games that can be developed using nutrition, such as Tic-Tac-Toe, Challenge Concentration, and Guessing Games (59). Games can motivate and should also teach concepts.

The teacher can also be the first to create an interest in new foods in the classroom. Because the students are used to their teacher, they will follow the example of the teacher if enthusiasm is shown for the foods (13, 19, 30, 54). A popular method of introducing new foods to children is through tasting parties. A teacher of nutrition from Columbus, Indiana, introduced new foods to the children, while stressing that these foods are served in the school lunch and the students should try them there. The results have been that the children are eating more foods prepared in a variety of ways (4). It is important for the teacher to take the correct approach to teaching about new foods and the value of foods to her students.

The mass media has been an important influence on the food habits of children. Gussow (25) believes that "whoever teaches a person which foods to like (because they're fun, because they taste good, because they'll make him happy, healthy, strong, popular) is teaching him nutrition" (p. 2). The mass media has been successfully selling foods to children, which can be seen by the increase of sweets consumption by the population. The teacher of nutrition should be aware of the influence that the mass media has on a student's diets, and should try to

meet this influence. "Nutrition educators must hard sell good nutrition with as much sophistication as the fun food manufacturers now use to hard sell malnutrition. And we must sell people on the foods we think they ought to eat" (25, p. 4). The teacher should not denounce sweet, snack foods completely. The teacher needs to put these foods in the proper perspective for the students, so that the students will not be turned "off" to the lessons on nutrition (12).

An extensive teaching of nutrition in an integrated nutrition program was developed by teachers in Ohio. The students were first exposed to the eating habits of 33 countries. The students then compared these habits to their own. Each student took a country and developed a study of habits of that country. On this basis, nutrition was interwoven into every area of the curriculum. Nutrition was included in science, art, music, language, social studies, and physical education. The entire project was "successful because the children were working with something real. They were exposed to activities in all curriculum areas" (65, p. 81).

The school teacher can also work with the school foodservice director to expand a nutrition education program. Teachers and foodservice personnel worked together in a diversified study of America and foreign lands. The lunchroom was decorated, costumes and meals were based on a theme dealing with a certain country. Students in language class wrote themes on their countries and invitations to their parents to attend the special meal. The children gained an interest in the lunchroom, and took more participation in it (62).

With cooperative working in nutrition education, and the teacher providing a favorable attitude towards new foods and the lunchroom,

nutrition education can be more effective. Breckenridge (15) found that at a camp, students began enjoying more foods because of the way they were prepared and the favorable atmosphere in which they were introduced to the foods.

Many teachers are reluctant to teach nutrition because they do not feel qualified. Many teachers have not had any nutrition course in their school background. A possibility is for teachers to receive nutrition background through in-service nutrition education.

#### The Role of the School Foodservice Director

The school foodservice director's first responsibility in a nutrition education program is to the school lunch program. The lunchroom must serve nutritious, yet appealing foods for its students. The White House Conference on Food, Nutrition and Health, recommended (70) "That lunch and breakfast to insure good nutrition, be provided when needed to all school children including those in pre-kindergarten and Day Care Centers." The administration of foodservice should be a responsibility of school authorities. School authorities must set standards of sanitation, nutrition and costing, and provide a comfortable, pleasant place for eating and allow time for good eating behavior and social interaction (70).

If the school foodservice director were to see that the school lunchroom provides a pleasant atmosphere for the students, he/she would be helping to meet the psychological needs of the students. "Food can be chosen so as to fulfill physiological needs and at the same time satisfy social, cultural, and psychological wants" (70, p. 151). If the student is not having his psychological needs met, he will not eat and

gain the physiological benefit from foods. Bettelheim (11), a University of Chicago psychologist, world-renowned authority on the problems of children, states: "Food given to children unwillingly and without love is not good nutrition, but an insult. That is why hardly any school lunch program I know of is truly a success" (p. 31).

The foodservice director can gain information on the physical condition of the students by thorough physical examination records, and by taking checks on plate waste in the cafeteria. The school foodservice director can then work with the teacher to introduce these foods to the student in the classroom. In this way, the school lunchroom can be coordinated with the classroom instruction.

In Virginia Beach, Virginia, the school foodservice director helps to meet both the physiological and psychological needs of the students in her school. The foodservice director goes into the classroom to teach nutrition. She tells the student about a balanced diet and brings food into the classroom for the children to taste. She holds art contests and conducts a Parents Day in the cafeteria, using the children's menu. The children know they are being served nutritious foods and that someone in the lunchroom cares for them (71).

Other foodservice directors in other grade schools have taken on fun activities as special holiday meals to generate interest in the school lunch program (61). By the foodservice director taking an interest and creating a "fun" atmosphere in the lunchroom, children gain a more favorable attitude towards the school lunch. According to Hinton (32), a school foodservice can help to develop good food practices in students if the school does the following: sees that the meal supplied is nutritious, adequate and appetizing, and uses the meal to

reinforce the nutrition teaching in the classroom. The foodservice program should be considered a part of the total educational program and can be used as a positive force for good nutrition.

The school foodservice director can take the responsibility of being a resource for nutrition education efforts for other school personnel, if he/she is qualified (42, 48, 51). The school foodservice director with a nutrition background can help the teacher, student, school and community by being available to answer questions on nutrition.

The foodservice director can assist the teachers in their role in nutrition education programs. The teachers and foodservice directors might determine the effectiveness of the nutrition education program in the school classroom by observing the children's food practices in the lunchroom.

#### In-Service Nutrition Education

In-service nutrition education for the teacher, school foodservice director and the administrator can mean a more effective nutrition education program in the elementary school. The White House Conference on Food, Nutrition and Health recommended that in-service nutrition education programs be developed for school personnel to "highlight and focus attention on the critical need to recognize the growing importance of nutrition education in the school" (70, p. 151). In-service education can help school personnel realize the importance of nutrition education. School personnel can learn their role in nutrition education at an in-service nutrition education program.



However, the school personnel must be interested in attending in-service education programs. School personnel are more receptive to attending in-service education programs if the programs meet their needs. A survey of Missouri teachers concluded that in-service education must meet the needs of the school personnel to be effective (33). If the school personnel need in-service education in nutrition, and are aware of this need, the in-service program can be more effective.

Sodowsky conducted an in-service nutrition education workshop for elementary teachers. Due to the workshop, the teachers began to integrate nutrition education into all areas of curriculum. The teachers also became more aware of resource materials available to them, and began to use them in their teaching of nutrition. Sodowsky conducted a nutrition education workshop and enacted a nutrition education program in the elementary schools where there was not one before (58).

In-service nutrition education can help in teaching a more effective nutrition lesson. If the teacher does not have the necessary training in college, it can be gained through in-service education. Harris (27) states, "An effective in-service program makes up for inadequacies in pre-service training, strengthens public support through increased understanding, and implements new concepts in the teaching-learning process" (p. 260). In-service education can improve instruction in the school by increasing the competency of the teaching personnel (33).

Callahan (17) believes that in-service teacher training workshops are the most effective means of teaching teachers nutrition education. When teachers become aware of the nutritional inadequacies of their students as reported in nutritional surveys, they are likely to take a

more active interest in nutrition education. Pre-tests are given to teachers to establish their understanding of nutrition. A course outline with objectives is given to the teachers. By studying the objectives, the teachers can see how their needs in nutrition education are going to be met through in-service nutrition education (17).

Although nutrition education for the teachers is especially important because they will do the teaching to the students, in-service training is important for all school personnel. The White House Conference on Food, Nutrition and Health (70) recommends for in-service education:

- (a) Teachers and supervisors in related areas, school health personnel, and school foodservice should keep up to date in nutrition education and educational techniques.
- (b) Opportunities for continuing education should be made available through workshops, extension courses, in-service institutions, individualized instruction and educational television (p. 152).

When in-service education in nutrition is available to all school personnel, and the school personnel all take advantage of the learning opportunities, they will become better informed about nutrition and so will the students they teach.

## CHAPTER III

### PROCEDURE

This chapter includes the procedure for attaining objectives, selecting the population, and analyzing results of the research.

#### Procedure for Attaining Objectives

The first objective, "develop an instrument to aid in determining the perceived roles of selected school personnel", was completed by the researcher. As the researcher reviewed the literature, data on what constituted the role of selected school personnel in an integrated nutrition education program for the elementary school was identified. From this investigation, nineteen questions that identified different responsibilities in an integrated nutrition education program were formulated by the researcher.

To check for clarity of the questions, the instrument was presented to a graduate class in evaluation at Oklahoma State University. The class made suggestions for clarity of the background information questions, and these suggestions were incorporated by the researcher. The clarity of the questions relating to the perceived roles was determined by the supervisor of School Foodservice in Oklahoma and three Oklahoma State University faculty members familiar with nutrition education and the school lunch program in the Oklahoma public schools. The 19 questions were formulated so that the respondents could identify their

perceived role and the role of other school personnel for each question. (See Appendix A).

Objective two, "identify the perceived role of the administrator, teacher, and multi-unit school foodservice director in an integrated nutrition education program in the elementary school by analysis of the response to the instrument," was achieved by mailing the questionnaire to selected school personnel in Oklahoma. The returned questionnaires were categorized and analyzed to determine perceived roles of the school personnel. A list of the 50 multi-unit school foodservice directors was obtained from the Oklahoma State Department of School Lunch. The state of Oklahoma is divided into fifty areas, with one multi-unit school foodservice director in each area. One elementary school was randomly chosen in each of the fifty areas in which the multi-unit school foodservice directors are employed.

The name of the elementary school and the principal from each school was obtained from the State Director of Oklahoma Schools. A visit to the Oklahoma State Department of Education was made by the researcher to identify the elementary teachers from the chosen schools. Two teachers were randomly chosen from each elementary school by using the Table of Random Numbers for a total of 100 teachers.

Therefore, the population used in the study included 50 principals, 100 elementary teachers, and 50 multi-unit school foodservice directors in Oklahoma. The 200 questionnaires were mailed to the selected school personnel in the spring of 1974. Self-addressed, stamped envelopes were included with the questionnaire. The respondents were requested to reply within two weeks. It was felt by the researcher that those interested in the survey would reply in the two week period, therefore,

no follow-up technique was employed by the researcher.

Objective three, "determine the relationship of selected variables, such as age, type and level of college degree, length of time employed in present job, other jobs held, helping to organize in-service workshops, and participation in an in-service nutrition education workshop, to the responses of the school personnel," was determined by the use of chi-square. If the chi-square was less than 1.0, the variable was considered not significant to the results of the survey.

Objective four, "evaluate similarities and differences of roles identified by the administrator, teachers, and foodservice director," was achieved by first sorting the returned questionnaires by occupation of the school personnel. The responses were categorized by administrators, teachers, and multi-unit school foodservice directors. The responses from the questionnaires were then transferred to computer cards. A computer analysis system program was employed to find the frequency responses of role perception and the chi-square value was distributed in relation to each variable. The analysis of the data was to reveal differences and similarities of the response to the questions by the three different school personnel. The roles each school personnel identified for each statement was included in Appendix B. The comparison of the perceived role of the school personnel could be used for determining suggestions and recommendations for in-service curricula.

Objective five, "make suggestions and recommendations for in-service nutrition education curricula," was obtained by comparing the responses of each school personnel as to their role in an integrated

nutrition education program. This analysis was a basis for making recommendations for in-service education. Suggestions for further research in nutrition education were also given by the researcher. These recommendations and suggestions were based upon the perceived roles identified by the school personnel.

## CHAPTER IV

### SURVEY RESULTS, DISCUSSION AND CONCLUSIONS

To determine the perceived roles of the administrator, teacher, and school foodservice director in an integrated nutrition education program in selected elementary schools in Oklahoma, questionnaires were mailed to selected school personnel. The perceived roles of the administrator, teacher, and foodservice director were determined by analyzing each question in the survey for similarities and differences in perceived roles of the school personnel. Of the 200 questionnaires mailed, 112 (56 percent) of the questionnaires were returned. The responses of the returned questionnaires were analyzed by computer for frequency of responses. The returns of each respondent were categorized by their profession: administrator, elementary teacher, or foodservice director. A table was developed from the results for each statement in the questionnaire. Due to rounding of percentage, the totals in the table may not be 100 percent. The responses of each professional for all statements are included in Appendix B. If one-half or more of the respondents in each specified profession identified a role as their self-perceived role, it constituted a role perception for that professional group.

The Role Identified by the Administrator  
and Other Respondents' Perception  
of the Administrator's Role

Over 50 percent (14) of the 28 administrators who responded identified the following as their perceived role:

- Role 16. Enlist parental interest in nutrition education by informing them of the program and seeking their advice.

Results of All Respondents for Role Sixteen

Of the 112 returned questionnaires, 110 identified data concerning role sixteen. Thirty-nine percent (43) perceived the foodservice director as the school personnel responsible for informing parents of the nutrition education program in the school. The administrators were perceived by 31 percent (35) of the respondents, the teachers were perceived by 26 percent (29) of the respondents, and 2 percent (3) perceived others. In the category of others, the three responses were designated as the Parents-Teachers Association.

Responses of Each Professional Group  
for Role Sixteen

Fifty-one percent (14) of the administrators perceived themselves as the professional group to inform parents of the nutrition education program. However, the foodservice directors and teachers did not perceive the administrators in this role. Forty-six percent (23) of the teachers perceived the foodservice director in this role, while only 36 percent (14) of the teachers perceived the administrator in this role. Forty-four percent (15) of the foodservice directors perceived



themselves in this role, compared to 20 percent (7) who perceived the administrator in this role. (See Table I).

TABLE I  
SCHOOL PERSONNEL PERCEIVED BY RESPONDENTS IN  
ROLE OF ENLISTING PARENTAL INTEREST  
IN NUTRITION EDUCATION<sup>1</sup>

	Administrator		Elementary Teacher		Multi-Unit School Service Director		Others		Total <sup>3</sup>	
	N	%	N	%	N	%	N	%	N	%
Administrator	14	51	7	25	5	18	1	9	27	100
Elementary Teacher	14	51	11	22	23	46	2	4	49	100
Multi-Unit School Food Service Director	7	20	11	32	15	44	0	0	34	100
Total <sup>2</sup>	35	31	29	26	43	39	3	2	110	100

1. Role 16. Enlist parental interest in nutrition education by informing them of the program and seeking their advice.
2. Number and percentage of school personnel perceived in this role by all respondents.
3. Number and percentage of responses by each professional.

The researcher suggested that the teachers and foodservice directors might have assumed that if the nutrition education program begins in the school lunchroom, the foodservice director should inform the

parents of the nutrition education program. The administrators saw themselves as the school personnel who should communicate with the parents, as evidenced by the fact that over 50 percent (14) of the administrators perceived themselves in this role. However, the administrator was perceived by less than 50 percent of all respondents in this role. This lack of consistency in role perception suggests that this role may not have been clearly defined for the school personnel.

The Roles Identified by the Elementary School  
Teachers and Others Respondents' Perception  
of the Elementary School Teachers' Roles

The following statements constitute the perceived roles of the teachers in an integrated nutrition education program. Over 50 percent (25) of the elementary teachers who responded identified the following as the perceived roles:

- Role 2. Implement curriculum to include nutrition in different areas of study such as: health, math, geography.
- Role 9. Convey to elementary students the importance of eating nutritious foods by the use of visual aids, animal feeding experiments, demonstrations, and the like.
- Role 10. Provide learning experiences in nutrition for the elementary student that begins with basic concepts and progresses towards more complex concepts about nutrition.
- Role 11. Recognize the signs of good nutrition, such as alertness, proper weights, and physical fitness.
- Role 12. Be aware of the students' present food habits and preferences and how these affect his nutritional status.
- Role 14. Utilize innovative nutrition education materials in the classroom.
- Role 17. Recognize a student's improvement in eating habits as one means of measuring the success of the nutrition education program.

Role 18. Aid the student to recognize changes in their own eating habits.

#### Results of All Respondents for Role Two

Of the 112 respondents, 50 percent (56) perceived the elementary teachers as the school personnel to implement curriculum to include nutrition in different areas of study. Of the remaining respondents, 36 percent (41) perceived the administrator, seven percent (8) perceived others, and five percent (6) the foodservice director in this role. In the category of others, the eight responses were designated as two physical education teachers, three curriculum coordinators and three directors of elementary education.

#### Responses of Each Professional

##### Group for Role Two

Sixty-three percent (31) of the elementary teachers perceived themselves as the professional responsible to implement curriculum to include nutrition in other areas of study. Nearly one-half, 46 percent (13) of the administrators perceived the elementary teachers in this role. However, of the foodservice directors who responded, over one-half, 57 percent (20) of the respondents, perceived the foodservice director as the professional to implement curriculum. Only 34 percent (12) of the foodservice directors perceived the teachers as the professional responsible for implementing curriculum. (See Table II).

Over 50 percent (44) of the administrators and teachers agreed that curriculum implementation is the role of the teacher. These school personnel perhaps had perceived the teacher as the school personnel who would use the new curriculum that was implemented;

therefore, the teacher should take part in the implementation of the curriculum. However, the foodservice directors could have assumed that their background in nutrition is better than the teacher, therefore, the foodservice director should implement the curriculum. The researcher concluded that perhaps the foodservice director and teacher could work together in implementing curriculum.

TABLE II  
SCHOOL PERSONNEL PERCEIVED BY RESPONDENTS IN  
ROLE OF CURRICULUM IMPLEMENTATION<sup>1</sup>

	Administrators		Elementary Teacher		Multi-Unit School Food Service Director		Others		Total <sup>3</sup>	
	N	%	N	%	N	%	N	%	N	%
Administrator	10	36	13	46	2	7	2	7	28	100
Elementary Teacher	11	22	31	63	3	6	4	8	49	100
Multi-Unit School Food Service Director	20	57	12	34	1	2	2	5	35	100
Total <sup>2</sup>	41	36	56	50	6	5	8	7	112	100

1. Role 2. Implement curriculum to include nutrition in different areas of study such as: health, math, geography.
2. Number and percentage of school personnel perceived in this role by all respondents.
3. Number and percentage of responses by each professional.

### Results of All Respondents for Role Nine

Of the 112 returned questionnaires, 111 identified data concerning role nine. Eighty-three percent (93) of these perceived the teachers as responsible for conveying to students the importance of eating nutritious foods through visual aids, animal feeding experiments and demonstrations. Ten percent (12) of the respondents perceived the foodservice directors, six percent (5) perceived others, and zero percent (1) perceived the administrators in this role. In the category of others, the five responses were designated by the respondents as one physical education teacher, two librarians, one parent, and one school nurse.

### Responses of Each Professional

#### Group for Role Nine

There were 49 elementary teachers who responded to this statement, 89 percent (44) of them perceived themselves as the school personnel responsible for conveying to students the importance of eating nutritious foods through visual aids and other means. Eighty-two percent (23) of the administrators and 76 percent (26) foodservice directors perceived the teachers as responsible for this role. (See Table III).

The agreement among the school personnel was that the teachers should have the role of conveying to students the importance of eating nutritious foods by the use of visual aids and other means. The researcher concluded that this role could have been defined by the school personnel as the role of the teacher, by the obvious terminology of the statement. The use of visual aids, animal feeding experiments and demonstrations are usually done in the classroom by the teacher.

TABLE III

SCHOOL PERSONNEL PERCEIVED BY RESPONDENTS IN  
ROLE OF CONVEYING TO STUDENTS THE IMPORTANCE  
OF EATING NUTRITIOUS FOODS<sup>1</sup>

	Administrator		Elementary Teacher		Multi-Unit School Food Service Director		Others		Total <sup>3</sup>	
	N	%	N	%	N	%	N	%	N	%
Administrator	1	3	23	82	3	10	1	3	28	100
Elementary Teacher	0	0	44	89	3	6	2	4	49	100
Multi-Unit School Food Service Director	0	0	26	76	6	17	2	5	34	100
Total <sup>2</sup>	1	0	93	83	12	10	5	6	111	100

1. Role 9. Convey to elementary students the importance of eating nutritious foods by the use of visual aids, animal feeding experiments, demonstrations, and the like.
2. Number and percentage of school personnel perceived in this role by all respondents.
3. Number and percentage of responses by each professional.

Results of All Respondents for Role Ten

Of the 112 respondents, 84 percent (95) perceived the teacher as the school personnel to provide learning experiences in nutrition for the elementary student that begins with basic concepts and progresses towards more complex concepts about nutrition. Of the remaining respondents, nine percent (11) perceived the foodservice director, two

percent (3) the administrator, and two percent (3) perceived others in this role. In the category of others, the three responses were designated by the respondents as one physical education teacher, one school nurse, and one parent.

### Responses of Each Professional

#### Group for Role Ten

Eighty-seven percent (43) of the elementary teachers perceived themselves as the school personnel responsible for providing learning experiences. Eighty-two percent (23 administrators and 29 foodservice directors) of both the administrators and foodservice directors designated the teachers as the school personnel to have this responsibility. (See Table IV). However, nine percent (11) of the respondents perceived the foodservice director in the role of providing learning experiences.

The researcher concluded that the foodservice director could have been perceived as being more qualified in providing learning experiences than the teacher. The school personnel may assume that the foodservice director has a better background in nutrition than the teacher. It was suggested by the researcher that the foodservice director could cooperate with the teacher in the classroom on activities related to food and nutrition.

TABLE IV  
SCHOOL PERSONNEL PERCEIVED BY RESPONDENTS IN  
ROLE OF PROVIDING LEARNING EXPERIENCES  
IN NUTRITION<sup>1</sup>

	Administrator		Elementary Teacher		Multi-Unit School Food Service Director		Others		Total <sup>3</sup>	
	N	%	N	%	N	%	N	%	N	%
Administrator	1	3	23	82	2	7	2	7	28	100
Elementary Teachers	0	0	43	87	5	10	1	2	49	100
Multi-Unit School Food Service Director	2	5	29	82	4	11	0	0	35	100
Total <sup>2</sup>	3	2	95	84	11	9	3	2	112	100

1. Role 10. Provide learning experiences in nutrition for the elementary student that begins with basic concepts and progresses towards more complex concepts about nutrition.
2. Number and percentage of school personnel perceived in this role by all respondents.
3. Number and percentage of responses by each professional.

#### Results of All Respondents for Role Eleven

There were 112 respondents, 70 percent (79) of whom perceived the teacher as the school personnel to recognize signs of good nutrition. Eleven percent (13) perceived others, 10 percent (12) perceived the administrators, and six percent (8) perceived the foodservice directors in this role. In the category of others, the 13 responses were



designated as 12 parents and one school nurse.

### Responses of Each Professional

#### Group for Role Eleven

Of the 49 elementary teachers who responded, 67 percent (33) perceived themselves as the school personnel to recognize the signs of good nutrition. The administrators and foodservice directors also perceived the teachers in this role, with 75 percent (21) of the administrators and 74 percent (26) of the foodservice directors perceived in this role. (See Table V).

It could have been assumed by the respondents that the teacher would see her students daily, so the teacher should be the school personnel best able to recognize signs of good nutrition. However, 27 percent (33) of the respondents perceived other school personnel rather than the teacher who should be aware of nutrition fitness of students. It could be suggested by the researcher that nutrition fitness should be recognized by all concerned school personnel.

TABLE V  
SCHOOL PERSONNEL PERCEIVED BY RESPONDENTS IN  
ROLE OF RECOGNIZING THE SIGNS  
OF GOOD NUTRITION<sup>1</sup>

	Administrator		Elementary Teacher		Multi-Unit School Food Service Director		Others		Total <sup>3</sup>	
	N	%	N	%	N	%	N	%	N	%
Administrator	4	14	21	75	1	3	2	7	28	100
Elementary Teacher	5	10	33	67	3	6	9	18	49	100
Multi-Unit School Food Service Director	3	8	26	74	4	11	2	5	35	100
Total <sup>2</sup>	12	10	79	70	8	6	13	11	112	100

1. Role 11. Recognize the signs of good nutrition, such as alertness, proper weights, and physical fitness.
2. Number and percentage of school personnel perceived in this role by all respondents.
3. Number and percentage of responses by each professional.

#### Results of All Respondents for Role Twelve

Of the 112 returned questionnaires, 111 identified data concerning role twelve. Sixty-four percent (72) perceived the teachers as the school personnel to be aware of the students' present food habits and preferences and how these affect his nutritional status. Of the remaining respondents, 17 percent (19) perceived the foodservice director, 14 percent (16) perceived others, and nine percent (4)

perceived the administrators in this role. For role twelve, in the category of others, the 16 responses were designated as 15 parents and one school nurse.

#### Responses of Each Professional

##### Group for Role Twelve

Fifty-seven percent (28) of the teachers who responded designated themselves as the school personnel to be aware of the students' present food habits. (See Table VI). Eighty-five percent (23) of the administrators and 60 percent (21) of the foodservice directors who responded to role twelve also perceived the elementary teacher for this role. However, 17 percent (19) of the 111 respondents perceived the foodservice director as the school personnel for this role.

Since the food habits of the students could be observed in the school lunchroom, the foodservice director might have been perceived as the school personnel to be aware of the students' habits. The researcher believes that teachers may have been perceived in this role because the elementary teacher often eats lunch with her students.

TABLE VI  
SCHOOL PERSONNEL PERCEIVED BY RESPONDENTS IN  
ROLE OF BEING AWARE OF STUDENTS'  
FOOD HABITS<sup>1</sup>

	Administrator		Elementary Teacher		Multi-Unit School Food Service Director		Others		Total <sup>3</sup>	
	N	%	N	%	N	%	N	%	N	%
Administrator	1	5	23	85	2	7	1	5	27	100
Elementary Teacher	2	4	28	57	6	12	13	26	49	100
Multi-Unit School Food Service Director	1	2	21	60	11	31	2	5	35	100
Total <sup>2</sup>	4	9	72	64	19	17	16	14	111	100

1. Role 12. Be aware of the students' present food habits and preferences and how these affect his nutritional status.
2. Number and percentage of school personnel perceived in this role by all respondents.
3. Number and percentage of responses by each professional.

#### Results of All Respondents for Role Fourteen

There were 112 respondents, 85 percent (96) of whom perceived the teachers as the school personnel to utilize innovative nutrition education materials in the classroom. Of the remaining respondents, seven percent (8) perceived the administrator, six percent (7) the foodservice director and one percent (1) designated others in this role. An

outside nutrition education specialist was designated as the response for the category of others.

#### Responses of Each Professional

##### Group for Role Fourteen

Forty-three of the teachers, 87 percent, perceived themselves as the school personnel to utilize innovative nutrition education materials in the classroom. As shown in Table VII, 82 percent (24) of the administrators and 85 percent (96) of the foodservice directors perceived the teachers in this role.

The teachers were perceived as the school personnel to utilize innovative nutrition education materials in the classroom by the school personnel who responded. Since this role was clearly defined as the teachers' role, it could be concluded that when the word, classroom, is in the statement, the teacher is perceived as being responsible for activities in the classroom.

##### Results of All Respondents for Role Seventeen

Of the 112 returned questionnaires, 111 identified data concerning role seventeen. Fifty-four percent (61) perceived the teacher as the personnel to recognize a student's improvement in eating habits. Of the remaining respondents, 47 percent (16) designated others, 25 percent (20) perceived the foodservice director, and five percent (6) the administrators in this role. All of the responses for the category of others were designated as the parents.

TABLE VII  
SCHOOL PERSONNEL PERCEIVED BY RESPONDENTS IN  
ROLE OF UTILIZING INNOVATIVE NUTRITION  
EDUCATION MATERIALS<sup>1</sup>

	Administrator		Elementary Teacher		Multi-Unit School Food Service Director		Others		Total <sup>3</sup>	
	N	%	N	%	N	%	N	%	N	%
Administrator	3	10	23	82	2	7	0	0	28	100
Elementary Teacher	3	6	43	87	2	4	1	2	49	100
Multi-Unit School Food Service Director	2	5	30	85	3	8	0	0	35	100
Total <sup>2</sup>	8	7	96	85	7	6	1	1	112	100

1. Role 14. Utilize innovative nutrition education materials in the classroom.
2. Number and percentage of school personnel perceived in this role by all respondents.
3. Number and percentage of responses by each professional.

#### Responses of Each Professional

##### Group for Role Seventeen

Fifty-one percent (25) of the teachers who responded perceived themselves as the school personnel to recognize a student's improvement in eating habits. Seventy-one percent (20) of the administrators, and 47 percent of the foodservice directors perceived the teachers in this role. (See Table VIII). The foodservice director may notice the

improvement in students' habits by the food purchased in the lunch line, while the teacher might observe the children while they are eating their lunch. This role needs to be more clearly defined to the school personnel by those responsible for nutrition education in the schools. This role could be defined at nutrition education in-service workshops.

TABLE VIII  
SCHOOL PERSONNEL PERCEIVED BY RESPONDENTS IN  
ROLE OF RECOGNIZING A STUDENT'S  
IMPROVEMENT IN FOOD HABITS<sup>1</sup>

	Administrator		Elementary Teacher		Multi-Unit School Food Service Director		Others		Total <sup>3</sup>	
	N	%	N	%	N	%	N	%	N	%
Administrator	1	3	20	71	6	21	1	3	28	100
Elementary Teacher	4	8	25	51	9	18	12	24	49	100
Multi-Unit School Food Service Director	2	6	16	47	13	38	3	8	34	100
Total <sup>2</sup>	6	5	61	54	28	25	16	14	111	100

1. Role 17. Recognize a student's improvement in eating habits as one means of measuring the success of the nutrition education program.
2. Number and percentage of school personnel perceived in this role by all respondents.
3. Number and percentage of responses by each professional.

Results of All Respondents  
for Role Eighteen

Of the 112 returned questionnaires, 110 identified data concerning role eighteen. Seventy-eight percent (86) of these perceived the teacher as the school personnel to aid the students to recognize changes in their own eating habits. Ten percent (12) perceived others, 9 percent (10) perceived the foodservice director, and one percent (2) perceived the administrator in this role. In the category of others, the 12 responses were designated as parents.

Responses of Each Professional  
Group for Role Eighteen

Seventy-five percent (37) of the teachers perceived themselves in this role. Nearly the same percentage of foodservice directors and administrators perceived the teachers in this role. Seventy-six percent (26) of the foodservice directors and 85 percent (13) of the administrators perceived the teacher as the school personnel to aid the student. (See Table IX).

However, 24 of the respondents, 20 percent, did not perceive the teacher. This number would suggest that this role was not defined for all school personnel and would need to be defined by those responsible for nutrition education in the elementary schools.



TABLE IX  
SCHOOL PERSONNEL PERCEIVED BY RESPONDENTS IN  
ROLE OF AIDING THE STUDENTS TO RECOGNIZE  
CHANGE IN THEIR FOOD HABITS<sup>1</sup>

	Administrator		Elementary Teacher		Multi-Unit School Food Service Director		Others		Total <sup>3</sup>	
	N	%	N	%	N	%	N	%	N	%
Administrator	1	5	23	85	2	7	1	3	27	100
Elementary Teacher	0	0	37	75	3	6	9	18	49	100
Multi-Unit School Food Service Director	1	2	26	76	5	14	2	6	34	100
Total <sup>2</sup>	2	1	86	78	10	9	12	10	110	100

1. Role 18. Aid the students to recognize changes in their own eating habits.
2. Number and percentage of school personnel perceived in this role by all respondents.
3. Number and percentage of responses by each professional.

#### Consistency of Responses to the Perceived

##### Roles of the Elementary Teacher

Some of the responses to the questions identified roles which were clearly defined as the responsibility of the elementary teachers. How the teacher perceived all the roles in the questionnaire is contained in Appendix B. The following indicates the perceived roles of the

elementary teacher and the agreement of all the respondents that the role is of the elementary teacher.

The following roles were perceived by 75 percent or more of the respondents as the responsibility of the elementary teacher:

9. Convey to elementary students the importance of eating nutritious foods by the use of visual aids, animal feeding experiments, demonstrations, and the like.
10. Provide learning experiences in nutrition for the elementary student that begin with basic concepts and progress towards more complex concepts about nutrition.
14. Utilize innovative nutrition education materials in the classroom.
18. Aid the student to recognize changes in their own eating habits.

These roles are ones that 50 to 75 percent of the respondents agreed that the role belongs to the elementary teacher:

2. Implement curriculum to include nutrition, in different areas of study such as: health, math, geography.
11. Recognize the signs of good nutrition, such as alertness, proper weights, and physical fitness.
12. Be aware of the student's present food habits and preferences and how these affect his nutritional status.
17. Recognize a student's improvement in eating habits as one means of measuring the success of the nutrition education program.

In the above roles, the teachers were perceived by 50 percent or more of all the respondents.

#### The Roles Identified by the Foodservice Directors and Other Respondents' Perceptions of the Foodservice Director's Roles

Fifty percent or more of the foodservice directors who responded identified the following as their perceived role:

- Role 4. Work together with other elementary school personnel in planning and carrying out a nutrition education program.
- Role 5. Be accountable to present meals that are appealing as well as nutritious.
- Role 7. Provide opportunities for the elementary student to taste a variety of foods.
- Role 8. Provide opportunities for the elementary student to taste familiar foods prepared in a variety of ways.
- Role 13. Recognize the influence of tv, magazines, and the grocery store on a student's eating habits.
- Role 15. Participate as a nutrition-information consultant for the elementary school personnel.

#### Results of All Respondents for Role Four

Of the 112 returned questionnaires, 110 identified data concerning role four. Fifty-three percent (59) of the respondents perceived the foodservice director as the school personnel to work together with other elementary school personnel in planning and carrying out a nutrition education program. The remaining respondents perceived 23 percent (26) of the administrators, 18 percent (20) of the teachers and 4 percent (5) perceived others in this role. In the category of others, the five responses were three parents, one school nurse, and one elementary education director.

#### Responses of Each Professional

##### Group for Role Four

Fifty-eight percent (20) of the foodservice directors perceived themselves working with other school personnel. Sixty-six percent (18) of the administrators, and 42 percent (21) of the teachers also perceived the foodservice directors in this role. (See Table X).

TABLE X  
SCHOOL PERSONNEL PERCEIVED BY RESPONDENTS IN  
ROLE OF WORKING TOGETHER WITH OTHER  
SCHOOL PERSONNEL<sup>1</sup>

	Administrator		Elementary Teacher		Multi-Unit School Food Service Director		Others		Total <sup>3</sup>	
	N	%	N	%	N	%	N	%	N	%
Administrator	6	22	2	7	18	66	1	3	27	100
Elementary Teacher	13	26	12	24	21	42	3	6	49	100
Multi-Unit School Food Service Director	7	20	6	17	20	58	1	2	34	100
Total <sup>2</sup>	26	23	20	18	59	53	5	4	110	100

1. Role 4. Work together with other elementary school personnel in planning and carrying out a nutrition education program.
2. Number and percentage of school personnel perceived in this role by all respondents.
3. Number and percentage of responses by each professional.

Fifty-nine percent (53) of the total respondents perceived the foodservice personnel, but this is not an overwhelming majority. (See Table X). The respondents who did not perceive the foodservice director may not have been aware of what assistance the foodservice director might be in planning and carrying out a nutrition education program. Perhaps in a nutrition education workshop, the school personnel could become better aware of how they can work together in planning and

carrying out a nutrition education program.

#### Results of All Respondents for Role Five

Of the 112 returned questionnaires, 111 identified data concerning role five. Ninety percent (101) of these perceived the foodservice director as the school personnel to be accountable to present meals that are appealing as well as nutritious. Of the remaining respondents, six percent (7) perceived others, one percent (2) perceived the teachers in this role. All of the responses in the category of others were designated as parents.

#### Responses of Each Professional

##### Group for Role Five

Of the respondents, 92 percent (26) of the administrators, 89 percent (43) of the teachers, and 91 percent (32) of the foodservice directors agreed that the foodservice director should be accountable to present meals that are appealing as well as nutritious. (See Table XI). This role may have been identified as the foodservice directors' by the respondents since the foodservice director is the school personnel in charge of the meals for the school lunchroom.

#### Results of All Respondents for Role Seven

Of the 112 returned questionnaires, 111 identified data concerning role seven. Seventy-two percent (81) of the respondents perceived the foodservice director as the school personnel responsible for providing opportunities for the elementary student to taste a variety of foods. The remaining respondents had 16 percent (18) who perceived the teachers,

eight percent (9) perceived others, and two percent (3) perceived the administrators as the responsible school personnel in this role. All of the responses in the category of others were designated as parents.

TABLE XI  
SCHOOL PERSONNEL PERCEIVED BY RESPONDENTS IN  
ROLE OF BEING ACCOUNTABLE FOR SCHOOL MEALS<sup>1</sup>

	Administrator		Elementary Teacher		Multi-Unit School Food Service Director		Others		Total <sup>3</sup>	
	N	%	N	%	N	%	N	%	N	%
Administrator	1	3	0	0	26	92	1	3	28	100
Elementary Teacher	1	2	1	2	43	89	3	6	48	100
Multi-Unit School Food Service Director	0	0	0	0	32	91	3	8	35	100
Total <sup>2</sup>	2	1	1	1	101	90	7	6	111	100

1. Role 5. Be accountable to present meals that are appealing as well as nutritious.
2. Number and percentage of school personnel perceived in this role by all respondents.
3. Number and percentage of responses by each professional.

### Responses of Each Professional

#### Group for Role Seven

Seventy-three percent (25) of the foodservice directors, 75 percent (21) of the administrators, and 79 percent (36) of the teachers perceived the foodservice director as the school personnel to provide opportunities for the elementary student to taste a variety of foods. (See Table XII). The researcher assumed the school foodservice director may have been perceived in this role because this role may have been seen as one that is fulfilled in the school lunchroom.

#### Results of All Respondents for Role Eight

Of the 112 returned questionnaires, 111 identified data concerning role eight. Seventy-nine percent (88) of these perceived the foodservice director in the role of serving foods prepared in a variety of ways. The remaining respondents had nine percent (11) who perceived others, nine percent (10) perceived the teachers, and one percent (2) perceived the administrators in this role. In the category of others, the 11 responses were all designated as parents.

TABLE XII

SCHOOL PERSONNEL PERCEIVED BY RESPONDENTS IN  
ROLE OF PROVIDING OPPORTUNITIES FOR  
TASTING A VARIETY OF FOODS<sup>1</sup>

	Administrator		Elementary Teacher		Multi-Unit School Food Service Director		Others		Total <sup>3</sup>	
	N	%	N	%	N	%	N	%	N	%
Administrator	1	3	5	17	21	75	1	3	28	100
Elementary Teacher	0	0	7	14	36	79	6	12	49	100
Multi-Unit School Food Service Director	1	2	6	17	25	73	2	5	34	100
Total <sup>2</sup>	3	2	18	16	81	72	9	8	111	100

1. Role 7. Provide opportunities for the elementary student to taste a variety of foods.
2. Number and percentage of school personnel perceived in this role by all respondents.
3. Number and percentage of responses by each professional.

Responses for Each Professional

Group for Role Eight

Seventy-four percent (26) of the foodservice directors who responded perceived themselves as the school personnel to serve foods prepared in a variety of ways. Seventy-eight percent (22) of the administrators and 81 percent (40) of the teachers also perceived the



foodservice director as the responsible school personnel. (See Table XIII).

TABLE XIII  
SCHOOL PERSONNEL PERCEIVED BY RESPONDENTS IN  
ROLE OF PROVIDING FAMILIAR FOODS  
PREPARED A VARIETY OF WAYS<sup>1</sup>

	Administrator		Elementary Teacher		Multi-Unit School Food Service Director		Others		Total <sup>3</sup>	
	N	%	N	%	N	%	N	%	N	%
Administrator	1	3	3	10	22	78	2	7	28	100
Elementary Teacher	0	0	2	4	40	81	7	14	49	100
Multi-Unit School Food Service Director	1	2	5	14	26	74	2	5	34	100
Total <sup>2</sup>	2	1	10	9	88	79	11	9	111	100

1. Role 8. Provide opportunities for the elementary student to taste familiar foods prepared in a variety of ways.
2. Number and percentage of school personnel perceived in this role by all respondents.
3. Number and percentage of responses by each professional.

Since all of the other responses were designated as parents, it could be assumed that the school personnel felt that this role should be more than the school foodservice director. The parents could also

introduce foods prepared in a variety of ways, since the students probably eat more meals at home than at school.

#### Results of All Respondents for Role Thirteen

There were 112 respondents, 41 percent (47) of whom perceived the teacher as the school personnel who should recognize the influence of mass media on a child's food habits. The remaining respondents had 39 percent (38) who perceived the foodservice director, 19 percent (15) perceived others, and ten percent (12) perceived the administrators. The responses in the category of others were all designated as parents.

#### Responses of Each Professional

##### Group for Role Thirteen

Fifty-one percent, 18 of the 35 foodservice directors who responded perceived themselves as the ones to recognize the influence of mass media on a child's food habits. However, the teachers and administrators did not perceive the foodservice director in this role. The administrators perceived more teachers than the foodservice directors in this role. Fifty-seven percent (16) of the administrators who responded perceived the teachers, compared to 25 percent (7) administrators who perceived the foodservice directors. Forty percent (20) of the teachers perceived the teachers in this role, while only 26 percent (13) of the teachers perceived the foodservice directors in this role. (See Table XIV).

TABLE XIV  
SCHOOL PERSONNEL PERCEIVED BY RESPONDENTS IN  
ROLE OF RECOGNIZING THE NEWS MEDIA  
UPON EATING HABITS<sup>1</sup>

	Administrator		Elementary Teacher		Multi-Unit School Food Service Director		Others		Total <sup>3</sup>	
	N	%	N	%	N	%	N	%	N	%
Administrator	3	10	16	57	7	25	2	7	28	100
Elementary Teacher	5	10	20	40	13	26	11	22	49	100
Multi-Unit School Food Service Director	4	11	11	31	18	41	2	5	35	100
Total <sup>2</sup>	12	10	47	41	38	39	15	19	112	100

1. Role 13. Recognize the influence of tv, magazines, and the grocery store on a student's eating habits.
2. Number and percentage of school personnel perceived in this role by all respondents.
3. Number and percentage of responses by each professional.

The role of recognizing the influence of mass media was not clearly perceived by the school personnel. This role would need to be more clearly defined for the school personnel in a nutrition education workshop.

#### Results of All Responses for Role Fifteen

There were 112 respondents, 78 percent (88) of whom perceived the

foodservice director as the school personnel to participate as a nutrition-information consultant for the elementary school personnel. The remaining respondents had eight percent (9) who perceived the administrators, eight percent (9) perceived others, and five percent (6) perceived the teachers in this role. In the category of others, the responses were designated as seven home economics teachers and two nutrition specialists who should be nutrition-information counselors.

#### Responses of Each Professional

##### Group for Role Fifteen

Eighty-five percent (30) of the foodservice directors perceived themselves as nutrition-information counselors. Eighty-two percent (23) of the administrators and 71 percent (35) of the teachers also perceived the foodservice director in this role. (See Table XV).

Some of the results of other roles for the foodservice director suggest that the school personnel do not consider the foodservice director for some roles in nutrition education. However, the results of this question suggest that the school personnel consider the foodservice director to have more knowledge about nutrition than the other school personnel.

TABLE XV  
SCHOOL PERSONNEL PERCEIVED BY RESPONDENTS IN  
ROLE OF PARTICIPATION AS A NUTRITION-  
INFORMATION CONSULTANT<sup>1</sup>

	Administrator		Elementary Teacher		Multi-Unit School Food Service Director		Others		Total <sup>3</sup>	
	N	%	N	%	N	%	N	%	N	%
Administrator	2	7	1	3	23	82	2	7	28	100
Elementary Teacher	6	12	4	8	35	71	4	8	49	100
Multi-Unit School Food Service Director	1	2	1	2	30	85	3	8	35	100
Total <sup>2</sup>	9	8	6	5	88	78	9	8	112	100

1. Role 15. Participate as a nutrition-information consultant for the elementary school personnel.
2. Number and percentage of school personnel perceived in this role by all respondents.
3. Number and percentage of responses by each professional.

#### Consistency of Response to the Perceived Roles of the School Foodservice Director

Some of the responses to the questions identified roles which were clearly defined as the responsibility of the school foodservice director. The following indicates the perceived roles of the foodservice director and the agreement of all the respondents that the role is the

foodservice directors'. The following 75 percent or more of the respondents agreed the foodservice director has role:

- 5. Be accountable to present meals that are appealing as well as nutritious.
- 8. To provide opportunities for the students to taste familiar foods prepared in a variety of ways.
- 15. Participate as a nutrition-information consultant for the elementary school personnel.

The following roles had 50 to 75 percent of the respondents agreed that the role is the foodservice director:

- 4. Work together with other elementary school personnel in planning and carrying out a nutrition education program.
- 7. Provide opportunities for the elementary student to taste a variety of foods.

The following roles had less than 50 percent of the respondents agreed that the role is the foodservice director:

- 13. Recognize the influence of tv, magazines, and the grocery store on a student's eating habits.

The foodservice director does not have as many clearly defined roles in an integrated nutrition education program as the teacher.

#### Those Roles Not Perceived by Fifty Percent of the School Personnel Who Responded

The following roles were not perceived by the school personnel as a role for any one professional. Less than 50 percent of any school personnel responded with themselves in the following roles:

- Role 1. Discuss with elementary teachers the importance of teaching nutrition to elementary students.
- Role 3. Encourage the use of school foodservice as a means of teaching good nutrition to elementary students.

Role 6. Maintain the school dining room in an orderly yet relaxed atmosphere.

Role 19. Attend in-service nutrition education programs when the opportunity arises.

#### Results of All Respondents for Role One

Of the 112 returned questionnaires, 110 identified data concerning role one. Fifty-two percent (58) of these perceived the foodservice director in the role of discussing with elementary teachers the importance of teaching nutrition. The remaining respondents, 32 percent (36), perceived the administrators, ten percent (12) perceived others and two percent (3) perceived the teachers in this role. The 12 responses in the category of others were designated as ten state nutrition employees and two school nurses.

#### Responses of Each Professional

##### Group for Role One

Administrators were perceived by 55 percent (19) of the foodservice directors who responded to the role. However, 48 percent (13) of the administrators perceived the foodservice director in this role. Sixty-five percent (32) of the teachers also perceived the foodservice directors as the school personnel to discuss with teachers the importance of teaching nutrition. (See Table XVI).

The administrators and teachers perceived the foodservice director in this role, but the foodservice director perceived the administrator. The results would show that this role is not clearly defined for all school personnel and perhaps could be defined by nutrition education specialists in a nutrition education workshop.

TABLE XVI

SCHOOL PERSONNEL PERCEIVED BY RESPONDENTS IN  
ROLE OF DISCUSSING WITH ELEMENTARY TEACHERS  
THE IMPORTANCE OF NUTRITION EDUCATION<sup>1</sup>

	Administrator		Elementary Teacher		Multi-Unit School Food Service Director		Others		Total <sup>3</sup>	
	N	%	N	%	N	%	N	%	N	%
Administrator	9	33	1	3	13	48	3	11	27	100
Elementary Teacher	8	16	2	6	32	65	7	14	49	100
Multi-Unit School Food Service Director	19	55	0	0	13	38	2	5	34	100
Total <sup>2</sup>	36	32	3	2	58	52	12	10	110	100

1. Role 1. Discuss with elementary teachers the importance of teaching nutrition to elementary students.
2. Number and percentage of school personnel perceived in this role by all respondents.
3. Number and percentage of responses by each professional.

Results of All Respondents for Role Three

There were 112 respondents, 38 percent (43) of whom perceived the teachers as the school personnel to encourage the use of the school foodservice as a means of teaching good nutrition. Of the remaining respondents, 52 percent (58) perceived the foodservice director, 32 percent (36) perceived the administrators, and two percent (3)



perceived others in this role. In the category of others, the responses were designated as two school nurses and one parent.

### Responses of Each Professional

#### Group for Role Three

Forty-two percent (21) of the teachers perceived themselves in this role. The administrators also perceived 50 percent (14) of the teachers and 25 percent (7) of the foodservice directors as the school personnel responsible in this role. (See Table XVII).

More teachers were perceived than foodservice directors as the school personnel to encourage the use of the school foodservice as a means of teaching good nutrition. The school personnel who responded may have interpreted this role as one that takes place in the classroom --therefore, the teacher would have this role. The foodservice directors might have perceived promoting the school foodservice as their responsibility since they are in charge of the school foodservice. This role could be more clearly defined by those responsible for nutrition education in the schools in a nutrition education in-service workshop.

### Results of All Respondents for Role Six

There were 112 respondents, 34 percent (39) of whom perceived the administrator as the school personnel to maintain the school dining room in an orderly yet relaxed atmosphere. Of the remaining respondents, 28 percent (32) perceived the elementary teachers, 25 percent (28) perceived the foodservice directors and 11 percent (13) perceived others in this role. The category of others had 13 responses that were

designated as one school lunchroom hostess and 12 teacher's aides.

TABLE XVII  
SCHOOL PERSONNEL PERCEIVED BY RESPONDENTS IN  
ROLE OF ENCOURAGING THE USE OF SCHOOL  
FOOD SERVICE<sup>1</sup>

	Administrator		Elementary Teacher		Multi-Unit School Food Service Personnel		Others		Total <sup>3</sup>	
	N	%	N	%	N	%	N	%	N	%
Administrator	7	25	14	50	5	17	2	7	28	100
Elementary Teacher	13	26	21	42	14	28	1	2	49	100
Multi-Unit School Food Service Director	11	31	8	22	16	45	0	0	35	100
Total <sup>2</sup>	31	27	43	38	35	31	3	2	112	100

1. Role 3. Encourage the use of school foodservice as a means of teaching good nutrition to elementary students.
2. Number and percentage of school personnel perceived in this role by all respondents.
3. Number and percentage of responses by each professional.

#### Responses of Each Professional

##### Group for Role Six

No one category of school personnel designated over 50 percent of

their responses for any one professional group. (See Table XVIII). The distribution of the responses was almost evenly divided among the administrator, teacher and foodservice director. This distribution of answers could suggest that maintaining the school dining room is not a role for any one school personnel, but could be the role of any one or all three of the school personnel. This role would need to be defined in a nutrition education workshop by nutrition education specialists for the school personnel.

TABLE XVIII  
SCHOOL PERSONNEL PERCEIVED BY RESPONDENTS IN  
ROLE OF MAINTENANCE OF SCHOOL DINING ROOM<sup>1</sup>

	Administrator		Elementary Teacher		Multi-Unit School Food Service Director		Others		Total <sup>3</sup>	
	N	%	N	%	N	%	N	%	N	%
Administrator	13	46	10	35	3	10	3	10	28	100
Elementary Teacher	14	28	13	26	14	28	8	16	49	100
Multi-Unit School Food Service Director	12	35	9	26	11	32	2	5	34	100
Total <sup>2</sup>	39	34	32	28	28	25	13	11	112	100

1. Role 6. Maintain the school dining room in an orderly yet relaxed atmosphere.
2. Number and percentage of school personnel perceived in this role by all respondents.
3. Number and percentage of responses by each professional.

### Results of All Respondents for Role Nineteen

There were 112 respondents, 41 percent (47) of whom perceived the foodservice director as the school personnel to attend in-service nutrition education programs when the opportunity arises. Of the remaining respondents, 32 percent (36) perceived the teachers, 16 percent (19) perceived the administrators and eight percent (9) perceived others in this role. The responses for the category of others, all designated parents who should be responsible to attend the nutrition education program.

### Responses of Each Professional

#### Group for Role Nineteen

The foodservice directors had 42 percent (15) respondents who perceived themselves in this role, but the administrators and teachers did not perceive as large a percent of school foodservice directors in this role (See Table XIX). The teachers also perceived themselves in this role more so than the administrators or school foodservice directors. Thirty-eight percent (19) of the teachers who responded designated themselves as the school personnel to attend in-service nutrition education programs. Fifty-three percent (15) of the administrators perceived the foodservice director in this role, but only 21 percent (6) of the administrators felt that the administrators should attend in-service nutrition education programs.

The researcher could assume that each school personnel should have perceived themselves in this role--if the personnel perceived themselves as the school personnel to attend in-service education programs, then

they would be more willing to attend when the opportunity arises. The researcher could assume that the teachers and foodservice directors saw their need to attend nutrition education workshops. The administrators do not feel that they should attend; perhaps the administrators do not feel they need to attend since they only perceived themselves in the role of informing parents of nutrition education programs at their school.

TABLE XIX  
SCHOOL PERSONNEL PERCEIVED BY RESPONDENTS IN  
ROLE OF ATTENDING IN-SERVICE NUTRITION  
EDUCATION PROGRAMS<sup>1</sup>

	Administrator		Elementary Teacher		Multi-Unit School Food Service Director		Others		Total <sup>3</sup>	
	N	%	N	%	N	%	N	%	N	%
Administrator	6	21	5	17	15	53	2	7	28	100
Elementary Teacher	7	14	19	38	17	34	5	10	49	100
Multi-Unit School Food Service Director	6	17	12	34	15	42	2	5	35	100
Total <sup>2</sup>	19	16	36	32	47	41	9	8	112	100

1. Role 19. Attend in-service nutrition education programs when the opportunity arises.
2. Number and percentage of school personnel perceived in this role by all respondents.
3. Number and percentage of responses by each professional.

### Consistency of Responses of the Perceived Roles That Were Unidentified

The following roles were not perceived by any one school personnel as their role in a nutrition education program. However, some of the roles had more respondents for one school personnel than another. While the roles were not perceived by any one profession as their own, 50 percent to 75 percent of the respondents agreed that the role belongs to one profession:

1. Discuss with elementary teachers the importance of teaching nutrition to elementary students.

The following roles have less than 50 percent of the respondents agreed that the role belongs to one profession:

3. Encourage the use of school foodservice as a means of teaching good nutrition to elementary students.
6. Maintain the dining room in an orderly yet relaxed atmosphere.
19. Attend in-service nutrition education programs when the opportunity arises.

### Significance of Variables

Background information was obtained from the respondents to determine if selected variables affected the responses. The variables in the survey were age, type and level of college degree, length of time employed in present profession, other jobs held, experience in organizing an in-service nutrition education workshop and participation in an in-service nutrition education workshop.

Of the respondents completing the background information questionnaire, six of the respondents were 21-25 years; 14 were 26-30 years; 12 were 31-35 years; and the majority of 75 were over 35 years old. For

the variable of type and level of college degree, nearly the same number of respondents had bachelor's and master's degrees. Forty-six had a bachelor's degree; 47 had a master's degree, nine had high school education; and one had a Ed.D. For the variable of length of time employed at present job, nearly the same number had been employed 0-5 years and over 15 years. Forty-one have been employed 0-5 years; 37 have been employed over 15 years; 21 have been employed 6-10 years; and 12 have been employed 11-15 years. Forty-six of the respondents designated other jobs they have held besides the one in which they are now employed. Eighteen of the respondents had organized an in-service nutrition education workshop and 36 have participated in a nutrition education workshop. (See Table XX).

Significant effect of the variables was determined if the chi-square of the different variables was over 1.0. No chi-square value for any variable was over 1.0.

The age of the respondents and helping to organize an in-service nutrition education workshop had a chi-square value of .01. The variable, other positions held, had a chi-square value of .03. The variable, type and level of college degree, had a chi-square value of .04. The variable, length of time employed, had a chi-square value of .08.

Because nutrition education workshops are seen as a means of improving nutrition education by instructing the school personnel, the results of the variable, participation in in-service nutrition education workshops, was of most interest to the researcher. Of the 112 respondents, seven of the 27 administrators, 13 of the 49 teachers, and 18 of the 35 foodservice directors had attended in-service nutrition

education workshops. However, with a chi-square value of .26, this variable also had no significant effect on the responses. It can be concluded that none of the variables had a significant influence upon the responses of the school personnel.

TABLE XX  
CHI-SQUARE VALUES FOR SURVEY VARIABLES  
OF ALL RESPONDENTS

Variables	Chi-Square	Significance of Variable
Age	.01	n.s.
Help organize in-service nutrition education workshops	.01	n.s.
Other jobs held	.03	n.s.
Type and level of college degree	.04	n.s.
Length of time employed in present job	.08	n.s.
Participation in in-service nutrition education workshops	.26	n.s.

Chi-square value of significance = 1.00.



## CHAPTER V

### SUMMARY AND IMPLICATIONS FOR IN-SERVICE EDUCATION

This study was undertaken to determine the perceived roles of the school administrator, teacher, and multi-unit school foodservice director in an integrated nutrition education program in selected elementary schools in Oklahoma. The 50 multi-unit school foodservice directors in Oklahoma were used as a basis for choosing the 200 respondents for the questionnaire. There are 50 multi-unit school foodservice area directors in Oklahoma. From each of the fifty areas, an elementary school was chosen for selection of subjects. Two teachers were also randomly chosen from each of the elementary schools. The administrators in the sample were the principals of each elementary school.

Two hundred questionnaires were mailed in the spring of 1974; 50 questionnaires were mailed to administrators, 100 to teachers, and 50 to foodservice directors. Of the 112 responses, 28 administrators, 49 teachers, and 35 foodservice directors returned the questionnaire.

Computer computation of frequency of responses revealed that each school personnel had perceived roles for themselves in an integrated nutrition education program. A perceived role was one in which one-half or more of the school personnel perceived themselves in that role. Of the 19 roles identified in the questionnaire, the administrator perceived role one for themselves. This role was enlisting parental

interest in nutrition education.

The elementary teachers perceived eight roles for themselves. These roles were (1) implementing curriculum to include nutrition in different areas of study, (2) conveying to elementary students the importance of eating nutritious foods by use of visual aids, (3) providing learning experiences in nutrition that begins with basic concepts and progress towards more complex, (4) recognizing the signs of good nutrition, (5) awareness of student's present food habits, (6) utilizing innovative nutrition education materials in the classroom, (7) recognizing a student's improvement in eating habits and (8) aiding the student to recognize changes in their own eating habits.

The foodservice directors perceived themselves in six roles. These roles were: (1) working together with other school personnel in planning and carrying out a nutrition education program, (2) being accountable to present meals that are appealing as well as nutritious, (3) providing opportunities for the elementary student to taste a variety of foods, (4) providing opportunities for the elementary student to taste familiar foods prepared in a variety of ways, (5) recognizing the influence of tv, magazines, and the grocery store on a student's food habits, and (6) participating as a nutrition-information consultant for the elementary school personnel.

Four roles were not identified by any one school personnel as their role. These roles were: (1) discussing with elementary teachers the importance of teaching nutrition to elementary students, (2) encourage the use of school foodservice as a means of teaching good nutrition to elementary students, (3) maintain the school dining room in an orderly yet relaxed atmosphere, and (4) attend in-service nutrition

education programs when the opportunity arises.

Therefore, not all of the roles that the school personnel might have in an integrated nutrition education program have been defined for the school personnel. Because these roles are not defined, the nutrition education programs at the elementary school may not be as effective as they could be.

The variables of the respondents, such as age, type and level of college degree, length of time employed in present job, other jobs held, helping to organize in-service education workshops and participation in an in-service nutrition education workshop, were not significant to the results of the survey as determined by chi-square value. The school personnel were in agreement to the type of roles for each school personnel; the administrators were perceived in one role of informing parents. The teachers were perceived by all school personnel in roles related to classroom activities. The foodservice directors were perceived in roles related to the lunchroom. Four of the roles were not perceived by any one school personnel. The roles of the school personnel could be more clearly defined to the personnel at in-service nutrition education workshops.

An in-service nutrition education workshop could be presented to the school personnel by a person with background in nutrition and nutrition education. If the school personnel can understand their role in a nutrition education program, it is hoped that they can become interested and enthusiastic in a nutrition education program for their students.

## Suggestions and Recommendations for In-Service Nutrition Education

Knowledge of the perceived roles of the school personnel can aid in developing nutrition education in-service programs. Planners for in-service programs can use the perceived roles of school personnel as a basis for teaching the school personnel an in-service program. By knowing what the school personnel perceive as their role, the planners in nutrition education in-service can more clearly define these roles for the school personnel. The following are recommendations for in-service nutrition education programs:

1. That school personnel become aware of the advantages of attending in-service nutrition education programs. If the school personnel could better understand his/her role and the role of the other school personnel through nutrition education in-service programs, then the efforts of the school personnel could be better co-ordinated in a nutrition education program. The roles of the school personnel can be defined by using the perceived roles of the school personnel from this study.
2. That a pre-test be given to determine the school personnel's needs in a nutrition education program if the needs of the school personnel in a nutrition education in-service program have not been determined.
3. That the objectives, approaches and activities of the in-service nutrition education program be based upon the determined needs of the participants of the program.

4. That in-service nutrition education programs be taught by college or university personnel. The in-service workshops could give college credit for the attending administrators, teachers, and foodservice directors.
5. That teaching aids, current books and pamphlets be made available to the school personnel during and after the in-service nutrition education program.

#### Recommendations for Further Study

From the results of this survey, the researcher proposes the following recommendations for further study:

1. That the survey be given to a larger number of school personnel. By having a survey that is broader in scope, a more accurate measure of the school personnel's perceived role can be obtained.
2. That the survey be modified by specifying more of the responses. Under the category of others, parents could be designated so as to determine what roles school personnel perceive parents to have in a nutrition education program.
3. That a survey be conducted to determine the extent integrated nutrition education programs are being enacted in the elementary school. The elementary school would need to be visited and observed by the researcher.
4. That this research be used in planning extension activities dealing with nutrition education.
5. That a nutrition education specialist be appointed by

the school system to coordinate the efforts of the school personnel in an integrated nutrition education program.

## BIBLIOGRAPHY

- (1) Activation of a Nutrition Education Program in Pennsylvania Schools. Harrisburg: Dept. of Public Instruction, 1965.
- (2) Adelson, Sadye F. "Changes in Diets of Households 1955-1965-- Implications for Nutrition Today." Journal of Home Economics, 60 (June, 1968), 448.
- (3) "Advisory Council Reports on Child Nutrition Programs." Food & Nutrition, 2 (June, 1972), 11-13.
- (4) "A Food Teacher for School Lunch." What's New In Home Economics, 34 (Nov./Dec., 1970), 7.
- (5) Arone, Frank T. "Toward Greater Success in Team Teaching." Clearing House, 45 (April, 1971), 501-502.
- (6) A Source Book on Food Practices. Chicago: National Dairy Council, 1968.
- (7) Babcock, Charlotte G., M.D. "Attitudes and the Use of Food." J. Am. Dietet. A., 38 (June, 1962), 546-561.
- (8) Baker, Mary Jean. "Influence of Nutrition Education on Fourth and Fifth Graders." J. of Nutrition Education, 4 (Spring, 1972), 55-59.
- (9) Barrett, Morris, M.P.H. Health Education Guide. Wynnewood: Health Education Associates, Ltd., 1971.
- (10) Bayton, James A. "Role Perceptions of Young Homemakers and Nutrition Education Programs." J. of Home Economics, 57 (May, 1965), 347-350.
- (11) Bettelheim, Bruno Dr. "Why School Lunch Programs Fail." School Foodservice Journal, 27 (March, 1972), 36-39.
- (12) Blackburn, Mary L. "Who Turns the Child 'Off' to Nutrition?" J. of Nutrition Education, 2 (Fall, 1970), 45-47.
- (13) Bosley, Bertlyn, Ph.D. "A Practical Approach to Nutrition Education for Children." J. Am. Dietet. A., 23 (April, 1947), 304-309.

- (14) Boysen, Susan C., and Richard A. Ahrens. "Nutrition Instruction and Lunch Surveys With Second Graders." J. of Nutrition Education, 4 (Fall, 1972), 72-75.
- (15) Breckenridge, Marian E. "Food Attitudes of Five to Twelve Year Old Children." J. Am. Dietet. A., 35 (July, 1959), 704-709.
- (16) Callahan, Dorothy L. "Focus on Nutrition: You Can't Teach a Hungry Child." School Foodservice Journal, 26 (September, 1971), 25-40.
- (17) Callahan, Dorothy L. "Inservice Teacher Workshops." J. of Nutrition Education, 5 (Oct.-Dec., 1973), 233-236.
- (18) "Children, Well-taught, Reach for Milk!" Hoard's Dairyman, 115 (Sept. 25, 1970), 973.
- (19) Cooper, John O., James S. Payne, and Charleszing Edwards. "Food for Thought: An Objective Approach to Changing Children's Food Preferences." Teaching Exceptional Children, 3 (Winter, 1971), 73-76.
- (20) Cortes, Manuella Pl., and Bluebell R. Standal. "Nutrition Education Practices in Elementary Schools in Hawaii." J. of Nutrition, 5 (Jan./March, 1973), 18-21.
- (21) Dierks, E. Carol, and Lura M. Morse, Ph.D. "Food Habits and Nutrient Intakes of Preschool Children." J. Am. Dietet. A., 47 (October, 1965), 292-296.
- (22) Dukes, Reese E., Dr. "Increase the Educational Value of the Lunchroom." School Lunch Journal, 21 (October, 1967), 43.
- (23) Durkee, Frank M. "Organizing for Growth In-Service." Educational Leadership, 17 (March, 1960), 336-339.
- (24) Gunderson, Gorden W. The National School Lunch Program. Food and Nutrition Service, Washington, D.C.: USDA, 1971.
- (25) Gussow, Joan. "Nutrition Education--Is There any Other Choice?" Paper at 64th American Home Economics Association Meeting, Atlantic City, New Jersey, June 27, 1973. (Mimeographed.)
- (26) Hanslovskey, Glenda, Sue Moyer, and Helen Wagner. Why Team Teaching. Columbus: Charles E. Merrill, 1969.
- (27) Harris, Ben M. "In-Service Growth--The Essential Requirement." Educational Leadership, 23 (Dec., 1966), 257-260.
- (28) Head, Mary K. "A Nutrition Education Program at Three Grade Levels." J. of Nutrition Education, 6 (April/June, 1974), 56-59.



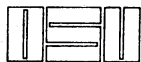
- (29) Health and Safety Education in the Public Schools of Hawaii.  
Hawaii: Dept. of Public Instruction, 1960.
- (30) Hill, Mary M. "A Conceptual Approach to Nutrition Education."  
J. Am. Dietet. A., 47 (July, 1966), 20-23.
- (31) Hill, Mary M. "Planning for Nutrition Education in Elementary  
Schools." J. of Home Economics, 52 (April, 1960), 259-261.
- (32) Hinton, Maxine A., Dr. "School Lunch: A Laboratory for Develop-  
ing Good Food Habits." School Lunch Journal (March, 1967),  
37-38.
- (33) Huges, Lois H., Beverly Crabtree, and Marilyn Osborn. "The  
Expressed Educational Needs of Missouri Home Economics  
Teachers in Relation to Inservice Education." Columbia, Mo:  
Mo. Dept. of Education, 1970.
- (34) "Inservice." Pennsylvania School Journal, 121 (Nov., 1972), 69-  
71.
- (35) Kelsay, June L. "Nutritional Status and Dietary Evaluation."  
J. of Nutrition, 99 (Sept., 1969), 131-134.
- (36) Landers, Thomas J. "Professional Growth--A continuing Project."  
Texas Outlook, 53 (Jan., 1969), 34-35.
- (37) Lantis, Margaret. "The Child Consumer." J. of Home Economics,  
54 (May, 1962), 370-375.
- (38) Leverton, Ruth M., Ph.D. "How Nutrition Relates to Learning."  
Food and Nutrition, 1 (Dec., 1971), 12-14.
- (39) Lyng, Richard. "Challenges of Feeding Children." Food and  
Nutrition, 2 (Oct., 1972), 2-3.
- (40) Martin, Ethel Austin. Nutrition Education in Action, a Guide for  
Teachers. New York: Holt, Rinehart and Winston, 1963.
- (41) Mayer, Jean. U. S. Nutrition Policies in the Seventies. San  
Francisco: W. H. Freeman and Co., 1973.
- (42) National Advisory Council on Child Nutrition Annual Report, 1972.  
Washington, D.C.: Government Printing Office, 1973.
- (43) "National Nutrition." Science, 183 (March 15, 1974), 1962.
- (44) "National Nutrition Policy: SNE Board's Statement." SNE Communi-  
cator, 5 (June, 1974), 4-5.
- (45) "Nutrition Teams Swing Into Action." School Foodservice Journal,  
8 (June, 1964), 16-18.

- (46) O'Farrell, Michael J., and Jean L. Kendrick. "Educators' Attitudes Toward Nutrition Education in Florida." J. of Nutrition Education, 4 (Winter, 1972), 15-16.
- (47) Ogletree, James R., and Fred Edmonds. "Programing for In-Service Growth." Educational Leadership, 21 (Feb., 1964), 288-291.
- (48) Perryman, John N. "The School Administrator and the Food Service Program." Washington, D.C.: National Association of Elementary School Principals, 1972.
- (49) Peterson, Mary E., and Constance Kies. "Nutrition Knowledge and Attitudes of Early Elementary Teachers." J. of Nutrition Education, 4 (Winter, 1972), 11-15.
- (50) Potgieter, Martha, Ph.D., and Ellen H. Morse. "Food Habits of Children." J. Am. Dietet. A., 31 (August, 1955), 794-796.
- (51) Rainey, Leenell. "An Approach to the Educational Aspects of the School Lunch in Selected Arkansas Schools." (Unpub. M.S. thesis, Oklahoma State University, 1949.)
- (52) Ritchie, Jean. "Learning Better Nutrition." Rome: Food and Agriculture Organization of United Nations, 1967.
- (53) Ryan, Anna Laura. "The Teacher's Role in a Co-operative Educational Project to Improve Eating Habits." (Unpub. M.S. thesis, Oklahoma State University, 1957.)
- (54) Semrow, Ellen H. "The Forward Look in Nutrition Education." J. of Home Economics, 48 (Nov., 1956), 685-688.
- (55) Shinn, Neva, Marybelle Selters, and Beverly Bohn. "Team Teaching." School and Community, 58 (March, 1972), 29-31.
- (56) Sipple, Horace L., Ph.D. "Problems and Progress in Nutrition Education." J. Am. Dietet. A., 59 (July, 1971), 18-20.
- (57) Sneed, Joseph T. "Continuing Education in the Professions." The J. of Higher Education, 43 (March, 1972), 232-238.
- (58) Sodowsky, Juanita Deffner. "A Workshop Conducted by the Vocational Home Economics Teacher to Promote Nutrition Education in the Elementary School." (Unpub. M.S. thesis, Oklahoma State University, 1969.)
- (59) Spitze, Hazel Taylor. "Innovative Techniques for Teaching Nutrition." J. of Nutrition Education, 25 (Spring, 1971), 156-159.
- (60) Steinburg, Sheldon S. "Schools Are Teaching Nutrition--But They're Teaching it the Wrong Way." Nation's Schools, 77 (May 5, 1966), 84-85.

- (61) Steinert, Dr. Ray. "School Lunch--More Than a Filling Station." School Foodservice Journal, 28 (Jan., 1974), 62-64.
- (62) Schubert, Earl P. "Nutrition Education: How Much Can or Should Our Schools Do?" J. of N. Ed., 2 (Summer, 1970), 9-13.
- (63) "Teaching Teachers to Teach Nutrition." School Foodservice Journal (May, 1972), 50.
- (64) "The Relationship Between Knowledge & Practice." The J. of Educational Research, 62 (Jan., 1969), 201-205.
- (65) Taylor, Betty. "History & Geography Served at Lunch." School Foodservice Journal, 24 (Nov./ Dec., 1970), 80-84.
- (66) "Three Units in Nutrition for Use in Elementary Schools." School Lunch Journal, 20 (March, 1966), 15-24.
- (67) Trulson, Martha, D. Hegsted and Fredrick J. Stare. "New York Nutrition Survey." J. Am. Dietet. A., 25 (July, 1949), 595-605.
- (68) Tyler, Ralph W. Basic Principles of Curriculum and Instruction. Chicago: University of Chicago Press, 1950.
- (69) Wharton, Marion A. "Nutritive Intake of Adolescents." J. Am. Dietet. A., 42 (April, 1963), 306-309.
- (70) Whitehead, Floy Eugenia. "Studies in Nutrition Education." J. Am. Dietet. A., 28 (July, 1952), 622-627.
- (71) White House Conference on Food, Nutrition, and Health: Final Report. December 2-4, 1969. Washington, D.C.: Government Printing Office, 1970.
- (72) "Who Says a Manager Can't Teach Nutrition?" School Foodservice Journal, 28 (Feb., 1974), 37-40.

## APPENDIX A

### PERCEIVED ROLE QUESTIONNAIRE AND COVER LETTER



# *Oklahoma State University*

Department of Food, Nutrition and Institution Administration

STILLWATER, OKLAHOMA 74074  
(405) 372-6211, Exts. 6007, 6091

March 28, 1974

Dear School Personnel,

You have been selected from the Oklahoma elementary schools to answer this questionnaire. I am writing to ask your assistance in completing this questionnaire.

I am pursuing my MS Degree in Food and Nutrition at Oklahoma State University. The purpose of my study is to determine the perceived role of elementary school personnel in an integrated nutrition education program in selected schools in Oklahoma. Your response will help determine the perceived roles of the elementary school personnel. From this questionnaire, more appropriate programs for in-service nutrition education might be planned for the school foodservice personnel, elementary teachers and administrators.

To aid in answering the questionnaire, the following definitions of the school personnel are given:

1. Multi-unit school foodservice director--foodservice directors responsible for the co-ordinating of feeding of elementary students in several schools in an area. Many are college graduates.
2. Elementary school teachers--teachers in the first through sixth grades.
3. Administrators--elementary school principals.

Since the worth of the findings of this study is dependent upon the maximum number of questionnaires returned, please complete and return it in the enclosed self-addressed stamped envelope by April 11, 1974. Thank you for your cooperation.

Sincerely,

/s/ Merrie Reeder

Merrie Reeder

/s/ Bernice Kopel

Bernice Kopel, Ed.D.  
Advisor

### Directions

- A. Identify all those statements which you perceive as your role in nutrition education.
- B. If you do not perceive any one or more statements as your role, please indicate in the appropriate column whose role you perceive for that statement.
- C. You may find some statements which you perceive as the responsibility of several persons. If so, please check each of the columns which are applicable.
- D. If you check 'others,' please specify who 'others' are in the same column.

Check your profession:

☐ multi-unit school foodservice director

☐ elementary teacher

☐ administrator

### NUTRITION EDUCATION QUESTIONNAIRE

WHO SHOULD	multi-unit school foodservice directors	elementary teachers	administrators	others specify who
discuss with elementary teachers the importance of teaching nutrition to elementary students?				
implement curriculum to include nutrition in different areas of study such as: health, math, geography?				
encourage the use of school foodservice as a means of teaching good nutrition to elementary students?				
work together with other elementary school personnel in planning and carrying out a nutrition education program?				

(cont'd)

WHO SHOULD	multi-unit school foodservice directors	elementary teachers	administrators	others specify <u>who</u>
be accountable to present meals that are appealing as well as nutritious?				
maintain the school dining room in an orderly yet relaxed atmosphere?				
provide opportunities for the elementary student to taste a variety of foods?				
provide opportunities for the elementary student to taste familiar foods prepared in a variety of ways?				
convey to elementary students the importance of eating nutritious foods by the use of visual aids, animal feeding experiments, demonstrations, and the like?				
provide learning experiences in nutrition for the elementary student that begins with basic concepts and progress towards more complex concepts about nutrition?				
recognize the signs of good nutrition, such as alertness, proper weights, and physical fitness?				
be aware of the students' present food habits and preferences and how these affect his nutritional status?				
recognize the influence of tv, magazines, and the grocery store can have on a student's eating habits?				
utilize innovative nutrition education materials in the classroom?				
participate as a nutrition-information consultant for the elementary school personnel?				

(cont'd)

WHO SHOULD	multi-unit school foodservice directors	elementary teachers	administrators	others specify <u>who</u>
enlist parental interest in nutrition education by informing them of the program and seeking their advice?				
recognize a student's improvement in eating habits as one means of measuring the success of the nutrition education program?				
aid the student to recognize changes in their own eating habits?				
attend in-service nutrition education programs when the opportunity arises?				

(cont'd)



List any other perceived role(s) in nutrition education programs not listed above.

What have you done in nutrition education in the last 5 years?  
(short, specific answer)

## BACKGROUND INFORMATION

Directions: Please answer the short background questionnaire by filling in the appropriate blanks. All information on this page will be kept confidential.

Name \_\_\_\_\_ Age \_\_\_\_\_ 21-25  
 \_\_\_\_\_ 26-30  
 Town \_\_\_\_\_  
 \_\_\_\_\_ 31-35  
 \_\_\_\_\_ Over 35  
 Type and level of college degree \_\_\_\_\_  
 Occupation Title \_\_\_\_\_  
 Length of time employed \_\_\_\_\_ 0-5 years  
 \_\_\_\_\_ 6-10 years  
 Other jobs held, if any: \_\_\_\_\_ 11-15 years  
 \_\_\_\_\_ Over 15 years

Have you organized an in-service nutrition education workshop?

           Yes            No

Have you participated in an in-service nutrition education workshop?

Yes No

APPENDIX B

THE RESPONSES OF THE ADMINISTRATOR  
FOR ALL OF THE SURVEY STATEMENTS

THE RESPONSES OF THE ELEMENTARY TEACHER  
FOR ALL OF THE SURVEY STATEMENTS

THE RESPONSES OF THE SCHOOL FOODSERVICE DIRECTOR  
FOR ALL OF THE SURVEY STATEMENTS

THE RESPONSES OF THE ADMINISTRATOR  
FOR ALL OF THE SURVEY STATEMENTS

WHO SHOULD	Multi-Unit School Food Service Director		Elementary Teacher		Administrator		Others	
	N	%	N	%	N	%	N	%
discuss with elementary teachers the importance of teaching nutrition to elementary students?	13	48	1	3	9	33	3	11
implement curriculum to include nutrition in different areas of study such as: health, math, geography?	2	7	13	46	10	36	2	7
encourage the use of school foodservice as a means of teaching good nutrition to elementary students?	5	17	14	50	7	25	2	7
work together with other elementary school personnel in planning and carrying out a nutrition education program?	18	66	2	7	6	22	1	39
be accountable to present meals that are appealing as well as nutritious?	26	92	0	0	1	3	1	3
maintain the school dining room in an orderly yet relaxed atmosphere?	3	10	10	35	13	46	3	10
provide opportunities for the elementary student to taste a variety of foods?	21	75	5	17	1	3	1	3
provide opportunities for the elementary student to taste familiar foods prepared in a variety of ways?								

WHO SHOULD	Multi-Unit School Food Service Director		Elementary Teacher		Administrator		Others	
	N	%	N	%	N	%	N	%
convey to elementary students the importance of eating nutritious foods by the use of visual aids, animal feeding experiments, demonstrations and the like?	3	10	23	82	1	3	1	3
provide learning experiences in nutrition for the elementary student that begins with basic concepts and progress towards more complex concepts about nutrition?	2	7	23	82	1	3	2	7
recognize the signs of good nutrition, such as alertness, proper weights, and physical fitness?	1	3	21	75	4	14	2	7
be aware of the students' present food habits and preferences and how these affect his nutritional status?	2	7	23	85	1	5	1	5
recognize the influence of tv, magazines, and the grocery store can have on a student's eating habits?	7	25	16	57	3	10	2	7
utilize innovative nutrition education materials in the classroom?	2	7	23	82	3	10	0	0
participate as a nutrition-information consultant for the elementary school personnel?	23	82	1	3	2	7	2	7

WHO SHOULD	Multi-Unit School Food Service Director		Elementary Teacher		Administrator		Others	
	N	%	N	%	N	%	N	%
enlist parental interest in nutrition education by informing them of the program and seeking their advice?	5	18	7	25	14	51	1	3
recognize a student's improve- ment in eating habits as one means of measuring the success of the nutrition education program?	6	21	20	71	1	3	1	3
aid the student to recognize changes in their own eating habits?	2	7	23	85	1	5	1	3
attend in-service nutrition education programs when the opportunity arises?	15	53	5	17	6	21	2	7

THE RESPONSES OF THE ELEMENTARY TEACHER  
FOR ALL OF THE SURVEY STATEMENTS

WHO SHOULD	Multi-Unit School Food Service Director		Elementary Teacher		Administrator		Others	
	N	%	N	%	N	%	N	%
discuss with elementary teachers the importance of teaching nutrition to elementary students?	32	65	2	6	8	16	7	14
implement curriculum to include nutrition in different areas of study such as: health, math, geography?	3	67	31	63	11	22	4	8
encourage the use of school foodservice as a means of teaching good nutrition to elementary students?	14	28	21	42	13	26	1	2
work together with other elementary school personnel in planning and carrying out a nutrition education program?	21	42	12	24	13	26	3	6
be accountable to present meals that are appealing as well as nutritious?	43	89	1	2	1	2	3	6
maintain the school dining room in an orderly yet relaxed atmosphere?	14	28	13	26	14	28	8	16
provide opportunities for the elementary student to taste a variety of foods?	36	79	7	14	0	0	6	12
provide opportunities for the elementary student to taste familiar foods prepared in a variety of ways?	40	81	2	4	0	0	7	14

WHO SHOULD	Multi-Unit School Food Service Director		Elementary Teacher		Administrator		Others	
	N	%	N	%	N	%	N	%
convey to elementary students the importance of eating nutritious foods by the use of visual aids, animal feeding experiments, demonstrations and the like?	3	6	44	89	0	0	2	4
provide learning experiences in nutrition for the elementary student that begins with basic concepts and progress towards more complex concepts about nutrition?	5	10	43	87	0	0	1	2
recognize the signs of good nutrition, such as alertness, proper weights, and physical fitness?	3	6	33	67	5	10	9	18
be aware of the students' present food habits and preferences and how these affect his nutritional status?	6	12	28	57	2	4	13	26
recognize the influence of tv, magazines, and the grocery store can have on a student's eating habits?	13	26	20	40	5	10	11	22
utilize innovative nutrition education materials in the classroom?	2	4	43	87	3	6	1	2
participate as a nutrition-information consultant for the elementary school personnel?	35	71	4	8	6	12	4	8

WHO SHOULD	Multi-Unit School Food Service Director		Elementary Teacher		Administrator		Others	
	N	%	N	%	N	%	N	%
enlist parental interest in nutrition education by informing them of the program and seeking their advice?	23	46	11	22	14	36	2	4
recognize a student's improve- ment in eating habits as one means of measuring the success of the nutrition education program?	9	18	25	51	4	8	12	24
aid the student to recognize changes in their own eating habits?	3	6	37	75	0	0	9	18
attend in-service nutrition education programs when the opportunity arises?	17	34	19	38	7	14	5	10



THE RESPONSES OF THE FOODSERVICE DIRECTOR  
FOR ALL OF THE SURVEY STATEMENTS

WHO SHOULD	Multi-Unit School Food Service Director		Elementary Teacher		Administrator		Others	
	N	%	N	%	N	%	N	%
discuss with elementary teachers the importance of teaching nutrition to elementary students?	13	38	0	0	19	55	2	5
implement curriculum to include nutrition in different areas of study such as: health, math, geography?	1	2	12	34	20	57	2	5
encourage the use of school foodservice as a means of teaching good nutrition to elementary students?	16	45	8	22	11	31	0	0
work together with other elementary school personnel in planning and carrying out a nutrition education program?	20	58	6	17	7	20	1	2
be accountable to present meals that are appealing as well as nutritious?	32	91	0	0	0	0	3	8
maintain the school dining room in an orderly yet relaxed atmosphere?	11	32	9	26	12	35	2	5
provide opportunities for the elementary student to taste a variety of foods?	25	73	6	17	1	29	2	5
provide opportunities for the elementary student to taste familiar foods prepared in a variety of ways?	26	74	5	14	1	2	2	5

WHO SHOULD	Multi-Unit School Food Service Director		Elementary Teacher		Administrator		Others	
	N	%	N	%	N	%	N	%
convey to elementary students the importance of eating nutritious foods by the use of visual aids, animal feeding experiments, demonstrations and the like?	6	17	26	76	0	0	2	5
provide learning experiences in nutrition for the elementary student that begins with basic concepts and progress towards more complex concepts about nutrition?	4	11	29	82	2	5	0	0
recognize the signs of good nutrition, such as alertness, proper weights, and physical fitness?	4	11	26	74	3	8	2	5
be aware of the students' present food habits and preferences and how these affect his nutritional status?	11	31	21	60	1	2	2	5
recognize the influence of tv, magazines, and the grocery store can have on a student's eating habits?	18	41	11	31	4	11	2	5
utilize innovative nutrition education materials in the classroom?	3	8	30	85	2	5	0	0
participate as a nutrition-information consultant for the elementary school personnel?	30	85	1	2	1	2	3	8

WHO SHOULD	Multi-Unit School Food Service Director		Elementary Teacher		Administrator		Others	
	N	%	N	%	N	%	N	%
enlist parental interest in nutrition education by informing them of the program and seeking their advice?	15	44	11	22	7	20	0	0
recognize a student's improve- ment in eating habits as one means of measuring the success of the nutrition education program?	13	38	16	47	2	6	3	8
aid the student to recognize changes in their own eating habits?	5	14	26	76	1	2	2	6
attend in-service nutrition education programs when the opportunity arises?	15	42	12	34	6	17	2	5

VITA<sup>2</sup>

Merrie B. Reeder

Candidate for the Degree of

Master of Science

Thesis: PERCEIVED ROLES OF ELEMENTARY SCHOOL PERSONNEL IN AN  
INTEGRATED NUTRITION EDUCATION PROGRAM--IMPLICATIONS FOR  
IN-SERVICE EDUCATION

Major Field: Food, Nutrition and Institution Administration

Biographical:

Personal Data: Born in Kansas City, Kansas, December 1, 1949, the  
daughter of Mr. and Mrs. J. P. Blackwell.

Education: Graduated from College High School, Bartlesville,  
Oklahoma, in 1967; graduated from Oklahoma State University  
in 1971, with a Bachelor of Science degree, with a major in  
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ments for the Master of Science degree at Oklahoma State  
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Cafeteria, Oklahoma State University, Stillwater, Oklahoma,  
1971-1972; Graduate Assistant, Hotel and Restaurant Adminis-  
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