

THE DESIGN OF A QUALIFICATION TRAINING GUIDE FOR UNITED STATES

DEPARTMENT OF AGRICULTURE, FOOD SAFETY INSPECTION SERVICE

by

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ABSTRACT

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The Design of a Qualification Training Guide For United States Department of
Agriculture, Food Safety Inspection Service

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The tragic event of September 11th has changed the political environment of the Food Safety Inspection Service (FSIS); consumers want regulatory agencies to increase their roles in food safety system. The September 11th event has created the importance of maintaining and improving the food safety system and the ability of the regulatory agencies to adapt to threats as they emerge. Although, the U.S. food safety system is one of the safest in the world, the Center for Disease Control and Prevention estimates that 76 million illnesses, 325,000 hospitalizations, and 5,000 deaths are caused by foodborne pathogens annually (GAO Weakness, 2002). Without training, our frontline inspectors will not meet the challenges to deal with the possible threats to our nation's food supply and our public could suffer more illness and perhaps even death.

The purpose of this study was to revised the current Fundamentals of Poultry Slaughter and Inspection training module into a Qualification Training Guide (QTG) designed as a distance or self-directed learning course. This training manual will help inspectors meet the possible foodborne threats to our nation's food supply.

Voluntary subject matter experts (SME) will be asked to review the training guides to determine the feasibility and usefulness and then complete an evaluation survey. The SME will not have any prior experience in using the new QTG before participating in this study. Feedback obtained from the completion of the survey will be used to improve, modify, and update the Qualification Training Guide applicability.

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CHAPTER 1

INTRODUCTION

In 1906, Upton Sinclair wrote his famous novel “The Jungle” which depicted a graphic picture of unsanitary conditions in meat-packing establishments (Hulebak and Schlosser, 2001). “The Jungle” outraged the American public, and in response, congress passed the Federal Meat Inspection Act (FMIA), one of the first federal consumer protection measures. This act established sanitary standards for slaughter and processing establishments and mandated ante-mortem inspection of animals (cattle, hogs, sheep, and goats) and postmortem inspection of every carcass. It also required the continuous presence of government inspectors in all establishments that manufactured meat products for commerce (Hulebak and Schlosser, 2001).

FMIA covered all meat and meat products in interstate commerce. It did not cover poultry. At that time, chickens and turkeys were produced mainly on small farms for personal consumption or sale in the immediate area. They were inspected only by the purchaser. The Poultry Products Inspection Act (PPIA) of 1957 made inspection mandatory for all poultry products intended for distribution in interstate commerce. It was modeled after the FMIA.

The growth of the processing sector in both meat and poultry industry presented the inspection program with three major challenges. First, the skills needed by the United States Department of Agriculture (USDA) called increasingly on the disciplines of food technology and microbiology, along with those of veterinary medicine. The USDA began to recruit and develop more people with the specialized skills necessary to design processing inspection systems. Second, more inspectors were needed to meet the industry's growing production and geographic expansion. A system of "patrol" inspection assignments, with one inspector visiting several processing establishments daily, was devised to fulfill the statutory requirement for continuous

inspection in those establishments. Third, new technologies made it difficult for consumers to check levels of fat, water, and other ingredients used as fillers, increasing the risk of economic adulteration. As a result, USDA inspectors were increasingly called on to protect consumers in this technically complex area (Pathogen Reduction, 1995).

The Food Safety and Inspection Service (FSIS) was established by the Secretary of Agriculture in June 1981. The mission of FSIS is to ensure that the nation's commercial supply of meat, poultry, and egg products is safe, wholesome, and correctly labeled and packaged, as required by the FMIA, the PPIA, and the Egg Product Inspection Act (EPIA) (FSIS Revised FY, 2002).

The meat and poultry inspection programs, authorized by FMIA and PPIA, is responsible for uniformly applying inspection and standards for sanitation, humane slaughter, pathogen reduction, food safety, and product labeling at all establishments under federal inspection. These programs also assess the effectiveness of state inspection programs to assure that standards equal to those under federal acts are applied to meat and poultry establishments under state jurisdiction. Further, the programs are responsible for reviewing foreign inspection systems so that imported meat to the United States is equivalent to those under FMIA and PPIA standards (FSIS Revised FY, 2002).

Even though, the U.S. food safety system is one of the safest in the world, the Center for Disease Control and Prevention estimates that 76 million illnesses, 325,000 hospitalizations, and 5,000 deaths are caused by foodborne pathogens annually (GAO Weakness, 2002). To reduce foodborne illnesses effectively, FSIS sets up surveillance, inspection, standards, prevention, and research to control foodborne outbreak to increase food industry compliance with FSIS regulations. The FSIS's regulatory programs contain a science-based quality control approach.

The programs emphasizes is on prevention and control of foodborne hazards. FSIS has a total of five responsibilities: 1) inspecting all raw and processed meat, poultry and egg products, 2) setting standards for plant sanitation, process controls, product contents, labeling, and microbial and chemical contamination, 3) analyzing products for pathogens, 4) conducting science-based risk assessments for risk management and communication, and 5) educating consumers on foodborne illness (Huan, n.d.).

The tragic event of September 11th has changed the political environment of the FSIS; consumers want regulatory agencies to increase their roles in food safety system. The September 11th event has created the importance of maintaining and improving the food safety system and the ability of the regulatory agencies to adapt to threats as they emerge. FSIS places the pathogens prevention system as top priority to deal with biosecurity. Huan stated:

Terrorists might target the national food supply, so FSIS wants to strengthen HACCP and other FSIS's regulatory programs. FSIS also wants to increase involvement with the Food and Drug Administration (FDA), the Centers for Disease Control (CDC), and the Environmental Protection Agency (EPA), as well as state and local health agencies. FSIS wants better flow of information among federal agencies and increases coordination regulation activities, in order to maintain consumer confidence.

Without training, our frontline inspectors will not meet the challenges to deal with the possible threats to our nation's food supply and our public could suffer more illness and perhaps even death.

Statement of Problem

The FSIS or the Agency should work to increase educational levels of entry personnel. "The Agency should shift the focus of its training to provide more science-based training as

appropriate at each level. This should include topics such as meat and poultry microbiology, with emphasis on foodborne pathogens, bio-statistics, food technology, and food safety interventions, cleaning and sanitizing, and basic hygiene (FSIS Education and Training, 2002).”

Training for newly appointed general service (GS) employees assigned to poultry plants training is composed of a training booklet of information from the FMIA, PPIA, and other regulations. In addition, new inspectors receive hands-on training from inspectors who might not be experienced either in poultry inspection or as a trainer. Some of the problems that can arise from this situation are overlooking poultry that contain diseases or fecal matter, which can then be transmitted to the consumer. The consumer then could sustain an illness such as campylobacter jejuni, the most common cause of bacterial enteritis in humans or even death.

The purpose of this study was to identify the potential for revising the current Fundamentals of Poultry Slaughter and Inspection training modules at the Donald L. Houston Center at Texas A&M University in College Station, Texas, into a QTG designed for use as a distance or self-directed learning course to correct this problem.

Statement of the Problem: Redesign the current practice of training into a QTG for use as a distance or self-learning guides for new FSIS personnel assigned to poultry plants.

Research Objective

Redesign QTGs for use as a distance or self-directed learning course for entry level poultry inspectors.

The Importance of the Study

The mission of USDA FSIS is to ensure that the nation’s commercial supply of meat, poultry, and egg products are safe, wholesome, and correctly labeled and packaged, as required by the FMIA, the PPIA, and the EPIA. The purpose of this project is to redesign QTG

as distance or self-learning guides for entry-level poultry inspectors. This project will meet the needs of the Workforce of the Future initiative of establishing training goals and objectives for the future. With meeting the requirement of the Workforce of the Future, training should include an empowerment message for field personnel. The goal is to assure that employees at all levels recognize they are key players in protecting the public health of consumers. To meet the goals of future training, FSIS needs to start training its inspectors in the field to ensure that they are fully qualified for their position.

The Delimitation

The study will not examine training of federal inspectors who have five or more years of service. The study will not examine training for inspectors involved in other aspects of job performance, such as red meat or egg products. The study will not include positions such as consumer safety inspectors (CSI) or veterinarian medical officers (VMO).

Assumptions

The first assumption is the districts training manager or technician is not available or trained to assist the VMO supervisors in the formal training process. This then places more pressure on the VMO to ensure that the new trainee is properly trained with little or no formal guidance. The second assumption is that VMOs are not trained in the principles or techniques of being a trainer. The third and final assumption is that training new inspectors usually falls on the GS-7 poultry inspectors, who are not trained trainers or perhaps not even the best qualified to train newly assigned inspectors. Thus the chances of passing on wrong techniques and information is increased.

The Definitions of Terms

Agency – Denotes the Food Safety Inspection Service.

Antemortem - Means before death. The PPIA requires that antemortem inspection be performed on poultry presented for slaughter.

Campylobacter Jejuni - An illness in human. Symptoms range from general malaise and diarrhea, lasting for a day, to severe abdominal pain and bloody diarrhea, which may last several weeks.

Current Good Manufacturing Practices (CGMPs) - Provides criteria for complying with provisions of the Federal Food, Drug, and Cosmetic Act (FD&C Act) requiring that all human food be free from adulteration.

Foodborne Outbreak - A localized epidemic, generally of a herd or family in foodborne illness, two or more cases from a certain food or meal.

Food Safety Inspection Services (FSIS) - Responsible for ensuring that the nation's commercial supply of meat, poultry, and egg products are safe, wholesome, and correctly labeled and packaged.

Hazard Analysis and Critical Control Points (HACCP) - Is an internationally accepted method of ensuring food safety by monitoring critical control points in the process

Inspector - An employee or official of the USDA authorized to inspect poultry and poultry products.

Microbiology - The study of microorganisms or microbes.

Pathogen - A disease-causing agent such as a certain bacterium, parasite, virus, or fungus.

Postmortem - The inspection of slaughtered poultry that has been properly prepared and made ready for inspection.

Poultry Product Inspection Act (PPIA) - Provides for the compulsory inspection of poultry and poultry products moving in interstate or foreign commerce or in a designated major area. Poultry, under the Act, means any live or slaughtered domesticated bird such as chickens, turkeys, ducks, geese, or guineas.

Public Health - The art and science of dealing with the protection and improvement of the community health by organized community effort, including preventive medicine and social science.

Sanitation Performance Standards - A set of standards that official establishment must operate and maintain to prevent the creation on unsanitary conditions and to ensure that products are not adulterated.

Sanitation Standard Operating Procedures (SSOP) - A set a procedures that official establishments shall develop, implement, and maintain to prevent the direct contamination or adulteration of products.

United States Department of Agriculture (USDA) - Responsible for ensuring the quality of life for the American people by supporting production of agriculture.

Summary

According to Fred Nickols (2000), “Training is safe and useful way to label a problem. It stimulates the locus of the problem with the performers, and it publicly focuses on remedying what are generally excusable knowledge and skill deficiencies. In other words, training problems are understandable and forgivable, other problems are not so forgivable.”

This research paper will look at redesigning training for poultry inspectors. Specifically, Chapter 2 reviews literature pertaining to the USDA and training. Chapter 3 looks at the methodology used to construct this research. Chapter 4 examines the result of the study. In this

case, it will look at the survey results that researcher obtained from subject matter experts (SMEs) and the needs assessment survey conducted by the FSIS in 2001. Finally, conclusions and recommendations are in chapter 5. Before any conclusions can be given, a review of literature is needed to lay the foundation on this research project.

CHAPTER TWO

REVIEW OF LITERATURE

The Office of Policy Development and Evaluation recommended to the FSIS that the Agency should work to increase the educational levels of entry-level personnel. In addition, the Agency should shift the focus of its training to provide more science-based training as appropriate at each level. This should include topics such as meat and poultry microbiology, with emphasis on foodborne pathogens, bio-statistics, food technology and food safety interventions, cleaning and sanitizing, and basic hygiene (FSIS Education and Training, 2002). According to estimates from the CDC, foodborne illnesses cause 76 million illnesses in the United States each year, including 325,000 hospitalizations and 5,000 deaths (GAO Weakness, 2002). To control the spread of foodborne illness through meat and poultry products, approximately 3,400 USDA inspectors at 1,300 slaughter plants are stationed along slaughter lines to provide continuous inspection and conduct organoleptic examination – using sight, touch, and smell – of each and every carcass (GAO Weakness, 2002). Training of inspectors must be a top priority.

To ensure that training is a top priority, a review of literature was conducted. This chapter is divided into two separate areas. The first section explains government related articles, books, and training guides that impact poultry inspectors and federal employees. This information includes—

- FSIS Needs Assessment Questionnaire.
- Basic Poultry Inspection – Employee Development Guide – Trainer and Trainee Guideline 703.
- Formal Training – 703 Basic Poultry Inspection.

- Executive Order 1311 – Using Technology to Improve Training Opportunities for Federal Government Employees.
- FSIS Strategic Plan for Fiscal Year 2000 – 2005.
- Education and Training of the Field Workforce to Achieve a Public Health Vision.
- Transition to the FSIS Workforce of the Future.
- Labor Management Agreement Between the United States Department of Agriculture, Food Safety and Inspection Service and the National Joint Council of Food Inspection Locals, American Federation of Government Employees, and American Federation of Labor and Congress of Industrial Organizations (AFL-CIO).
- Communication to Congress – Statement of Thomas J. Billy, former Administrator of FSIS.

Section two is intended to describe basic training principles. These principles are as follows—

- Performance Improvement.
- Transfer of Training or Training Transfer.
- Return on Investment (ROI) from Training.
- Developing Training Manuals or Guides.

These principles are important for any training program to exist or be conducted. However, understanding literature within FSIS and other government agencies is essential to gain a basic understanding of how training is interpreted.

FSIS Needs Assessment Questionnaire

The Needs Assessment Questionnaire, conducted by the FSIS Training and Education Committee in 2001, was designed to assess the strengths of the current training program, target areas that need improvement, and identify the needs and expectations of the employees regarding training and education programs for the future. One of the keys to redesigning training for FSIS is the expectations of employees (FSIS and Education Committee, 2001). Table 2-1 (see page 12) shows the relationship of predetermined KSAs. This table shows the duties necessary to be successful in the current position. This rating combined the percentages of inspectors who agreed and strongly agreed. The second column is a percentage that indicates that FSIS has provided the necessary training according to the inspectors. Finally, the last column is also a combination of the inspectors who agreed and strongly agreed that they needed additional training in the areas indicated. As this data indicates, it is clear that inspectors not only think that these KSAs are important to be successful (the one exception is chemistry), but that FSIS has not provided the training in these areas except for three topics (HACCP, Meat & Poultry Laws/Regulations, and Conflict Resolution). Furthermore, inspectors feel that they need additional training in all areas.

The bottom line is that inspectors felt that not only is the training important and needed but training for the most part is not being provided. Now that a basic understanding of what needed to be trained has been established, what about when training is conducted. This same technique was also conducted for the statement that inspectors felt that additional training is needed to be more successful in their current jobs.

Table 1

Inspectors' Expectations

Topics	KSA Necessary to Be Successful %	FSIS Provided Training %	Additional Training Required %
Animal Science	79.1	42.9	77.2
Biological Sciences	66.3	19.2	76.0
Chemistry	44.6	14.7	62.1
Written Communication	84.4	40.3	71.3
Oral Communication	88.8	41.3	70.8
Environmental Sciences (Including Sanitation)	85.8	45.8	79.4
Epidemiology	54.0	13.8	68.0
Food Science/Technology	76.7	25.0	83.1
HACCP	82.4	82.9	79.9
Math and Statistics	63.6	25.2	62.6
Meat and Poultry			
Laws/Regulations	89.3	69.8	79.9
Microbiology	64.7	23.3	74.7
Pathology	78.0	37.6	76.9
Public Health	84.3	36.1	78.3
Conflict Resolution	77.2	53.2	68.6

When inspectors were asked about formal training, 38.1% of 2,086 responses (over 794 inspectors) had not received any formal training. These inspectors are responsible for ensuring that meat, poultry, and egg products moving in interstate commerce or export to other countries are safe and wholesome, and packages are correctly labeled (FSIS and Education Committee, 2001).

One of the positive aspects of this study was that 85.2% of 1,694 respondents (1,564 inspectors) had received on-the-job training prior to attending formal school and 61.5% of 1,694 responses (1,041 respondents) had received further on-the-job training after formal training. However, one of the negative aspects was that although the inspectors who responded have received some form of training prior to formal training, there was no standardized on-the-job training that currently exists to assist not only the trainees but also the trainers (FSIS and Education Committee, 2001).

Furthermore, 23.0% (1,576 responses) had no formal training until after the first year of employment, but did within the second year, and 13.5% (1,520 responses) had no training until after the second year, but did before the third year. Also 13.0% (1,504 responses) had no formal training until after the third year of employment. This collectively represents a total of 763 inspectors who did not receive formal training until after their first year of employment. It must be stressed that these inspectors are responsible for ensuring the wholesomeness of the US meat supply, and if they are not properly trained in an adequate amount of time, illness and even death could result (FSIS and Education Committee, 2001).

The needs assessment survey also presented some answers to questions concerning formal training outside the classroom. Of the 2,391 inspectors who responded, 78.1% (1,873

respondents) would participate in a course outside the classroom setting (FSIS and Education Committee, 2001).

Out of 2,391 responses, 82% (1,960 inspectors) would take a computer-based course to meet their training needs. Furthermore, 70.6% of 2,374 inspectors (1,676 responses) would be willing to take computer-based courses on their own time. Finally, 59.3 % of 2,364 inspectors indicated that they would participate in a job-related self-study or distance-learning course (FSIS and Education Committee, 2001).

Basic Poultry Inspection Training – Employee Development Guide – Trainer and Trainee

Guideline 703

New employees hired as poultry inspectors are provided with an Employee Development Guide for Basic Poultry Inspection. This guide, primarily a self-training guide, is designed to thoroughly familiarize the trainee with normal poultry plant operations before entering the classroom segment, approximately from 3 months to 2 years later. According to the FSIS needs assessment survey conduct in 2001, 30% of 1,764 responses had not attended formal training within the first year of employment and 23% of 1,576 responses had no formal training until after the first year, but within the second year of employment. Furthermore, 13.5% of 1,520 responses had no formal training until after the second year but did within the third year of employment, and 13% of 1,504 responses had no formal training until after the third year of employment. Finally, 38.1% of 2,086 responses had not attended formal training (FSIS and Education Committee, 2001).

As stated, much of the guide is self-directed and the trainee is expected to be accomplished in eight days (FSIS Employee Development, 2001). The majority of the training is based on reading directives, the Poultry Products Inspection Act (PPIA), and other vital

information. This is then supplemented with on-the-job training from another inspector, regardless if the inspector is qualified to train another individual or not. The guide contains a pre-classroom plant familiarization evaluation form and a training evaluation and certification report for the trainee and supervisor to initial upon completion of both.

Although the employee development guide is self-directed in nature, it does have some built-in flexibility. For example, the guide is designed in subject matter modules. Some of the modules will require more time to complete than others. The amount of time necessary to complete each module will be determined by the operation of the establishment assigned and the capabilities of the trainee (FSIS Employee Development, 2001).

Fundamentals of Poultry Slaughter and Inspection - Formal Training Course 703 C/X

Formal training is conducted at the Donald L. Houston Center at Texas A&M University in College Station, Texas. The Center teaches a number of courses, to include the 703C Basic Poultry Inspection Course. The harmony with which federal instructors and University faculty have related in sharing delivery time is testimony to the combined commitment and partnership of these instructor groups toward optimally preparing employees of the FSIS for their individual and collective roles in ensuring that USDA-inspected meat, poultry, and meat and poultry products are safe, wholesome, and accurately labeled. Under this program, training also is provided to foreign, national, and state inspection personnel who have responsibilities in the area of meat and poultry inspection. The development and selective implementation of team-teaching delivery systems, pairing an instructor from the University with one from FSIS, has facilitated instructor-trainee interaction and has cultivated a "learning center" atmosphere that carries over from classroom to laboratory settings. The mission statement for the school states, "We believe in the powers of a keen mind and a sterling character, and their potential enhancement through

meaningful challenge. To this end we endeavor to continually develop and deliver cutting edge learning experiences in a nurturing, creative, and interactive environment of discovery (Fundamentals, n.d.).”

The Basic Poultry Inspection course is 9 days long designed for recently hired poultry inspectors. This challenging course in basic fundamentals in poultry inspection includes—

- Module 1 – Poultry Act and Regulations.
- Module 2 – Poultry Anatomy.
- Module 3 – Antemortem.
- Module 4 – Poultry Postmortem Inspection.
- Module 6 – Poultry Sanitation.
- Module 8 – Net Weights.
- Module 9 – Retain Water, Packing Room Procedures, and Labeling.
- Module 10 – Poultry GIBLETS AQL.
- Module 19 – Finished Product Standards.
- Module 54 – Rules of Practice.

Formal training, although 1 to 2 years later, is instrumental in preparing poultry inspectors in the fundamentals and correct methods of inspecting poultry. The poultry course, along with other courses such as Hazard Analysis and Critical Control Points self-directed course, helps in preparing the inspectors for fully meeting their job requirements and ensuring that poultry is safe for the consumer.

In addition to formal training, the Donald L. Houston Center also is responsible for the Food Safety Virtual University (FSVU). The FSVU is an effort to utilize a rapidly advancing technology to deliver training and education in the area of food safety to a widely dispersed and

very diverse audience using the Internet. The FSVU will make it possible for almost anyone to access training and educational materials. FSVU has a menu of programs and information available, which will include—

- Formal courses and programs offered in their area along with information on where and how to register.
- Information on satellite teleconferences that are offered nationwide.
- Electronically formatted information and CD-ROMs that can be downloaded at no cost.
- On-line programs that will actually allow interaction with an instructor.
- A library of digital images.
- A variety of self-study programs.

With further advances in using this type of technology, FSIS will meet the objectives of the Work Force of the Future initiatives and those of Executive Order 13111, discussed next.

Executive Order 13111 – Using Technology to Improve Training Opportunities for Federal Government Employees

Former President William Clinton signed into law Executive Order 13111, Using Technology to Improve Training Opportunities for Federal Government Employees, in 1999. This law mandated that all federal agencies, including the Department of Agriculture, take steps to enhance employee training through the use of training technology. President Clinton stated, “We need to ensure that we continue to train Federal employees to take full advantage of these technological advances and to acquire the skills and learning needed to succeed in a changing workplace (Clinton, 1999).” To accomplish this goal, the Presidential Task Force on Federal Training Technology was established. This task force was given the specific responsibility to make training opportunities an integral part of continuing employment in the federal

government. Furthermore, the task force is responsible for creating a policy to improve training. This policy promotes the effective use of training and creates an affordable and convenient training environment to improve federal employee performance (Clinton, 1999).

Executive Law 13111 also specified that each federal agency includes as part of its annual budget process a set of goals to provide the highest quality and most efficient training opportunities and a set of performance measures of quality and availability of training opportunities possible to its employees. Such a measure should be, where appropriate, based on outcomes related to performance rather than time allocation. In addition, each federal agency, to the extent permitted by law, is encouraged to consider how saving achieved through use of training technology can be reinvested in improved training for its employees (Clinton, 1999).

Finally, the law required the formulation of an Advisory Committee on Expanding Training Opportunities. This committee's primary function is to provide information back to the President on the progress made by the federal government in meeting the objectives of this law. This included updates on how each federal agency programs, initiatives, and policies provided more accessible, timelier, and more cost-effective training opportunities for employees (Clinton, 1999).

FSIS has implemented programs, to include FSVU, to help meet the initiatives of this law. Further training programs have been recommended, such as joint training of FSIS and industry personnel.

By implementing programs such as FSVU, FSIS has taken the necessary steps in meeting the objectives of this law. Further advances in technology will enhance the overall mission of FSIS and improve the performance of all employees.

FSIS Strategic Plan for Fiscal Years 2000 - 2005

To this date, the Food Safety Inspection Service, a branch of the Department of Agriculture, has made strides to achieving the goals that were established by Executive Order 13111 within the FSIS Strategic Plan. This plan outlines only one goal, which is to protect the public health by significantly reducing the prevalence of foodborne hazards from meat, poultry, and egg products (FSIS Strategic Plan, 2001). However, to achieve this goal the plan outlines four objectives, but not one objective specifically addresses using technology to improve training opportunities for federal employees. Objective Four does mention, under the heading of “Major Activities,” that the FSIS will identify and recruit the workforce of the future and implement programs to develop, retain, and motivate a highly skilled, professional, and diverse workforce (FSIS Strategic Plan, 2001). This one statement can be interpreted as meeting the objectives of Executive Order 13111.

Education and Training of the Field Workforce to Achieve a Public Health Vision

In November 2002, the Office of Policy, Program Development and Evaluation, Meat and Poultry Advisory Committee Staff, the National Advisory Committee on Meat and Poultry Inspection recommended that FSIS set as its top priorities the education and training of its diverse workforce (FSIS Education and Training, 2002).

This committee stated that FSIS should work to increase educational levels of entry personnel. Also after training, the Agency should test the participants to verify that they acquired the needed knowledge, skills, and abilities (KSAs). This information should be used to evaluate the effectiveness of the training as an element of on going quality improvement. Furthermore, the Agency should address the barriers to the delivery of training, such as the Agency’s requirement that the majority of its workforce be present on production times and,

whenever possible, eliminate or work around these barriers (FSIS Education and Training, 2002).

Finally, the Agency should fence the funds needed to provide the level of training that is required. More specifically, a dedicated percentage of the workforce should continually be in training. This represents a higher level of commitment to education and training on the part of the Agency (FSIS Education and Training, 2002). This recommendation, if adopted, would support the objectives of Executive Order 13111.

Transition to the FSIS Workforce of the Future

FSIS believe that for the Agency to move into the future, it must gradually change to protect the public while responding to industry growth and innovation. The workforce of the future will include a mix of technical, professional, administrative, and clerical employees, as it does today. It will continue to include inspectors who carry out specific responsibilities, including records checks and product sampling (FSIS Transition, 2000). However, FSIS believes that this workforce inevitably must include higher proportion of scientific background that it does today.

To achieve this scientific background, FSIS will have to invest in education and training for employees. Some current employees may already have the needed educational qualifications and experience to compete for complex and better-paying positions in the future. Others may need additional education to compete. Still others may have no desire to move into a different occupation. FSIS respects all of these choices (FSIS Transition, 2000). But whatever choice the employee desires, the key will be to ensure that entry-level personnel receive entry-level training as soon as possible.

FSIS states that in moving towards the workforce of the future, the Agency's goal will be to make full use of its authority to ensure that resources are rationally dedicated to address relative food safety risks and to avoid the disruptive effect of inspector shortages (FSIS Transition, 2000). These shortages need to include education and training not only for personnel already employed but also for newly hired entry level personnel.

Labor-Management Agreement Between The United States Department of Agriculture, Food Safety and Inspection Service and the National Joint Council of Food Inspection Locals, American Federation of Government Employees, AFL-CIO

Article 28 of the Labor Management Agreement specifically deals with training and development for FSIS inspection personnel. In general, this article outlines the primary function of training to assure the optimum use of human resources in attaining organizational needs and when feasible, to provide career development opportunities to employees. The key is to determine when training is feasible based on management requirements (Labor-Management, 2002).

Management and inspectors both recognize that development of employees' KSAs through effective training and education is an important factor in maintaining efficient operations. To accomplish this objective, FSIS is responsible to provide in-service and on-the-job training to improve capabilities to perform their current duties (Labor-Management, 2002). Such training may include programs such as computer-based training, some of which may be completed at the work site.

The labor agreement also states that management will determine employees training and education needed to meet workforce needs. Also they are required to provide training and education subject to availability of funds and determine the methods and means to provide

training (Labor Management, 2002). However, immediate formal training still does not exist until 1 to 2 years after being hired.

Communications to Congress - Statement of Thomas J. Billy, former Administrator of FSIS

In April 2001, FSIS former Administrator Thomas J. Billy submitted, for the record, before the Senate Appropriations Subcommittee on Agriculture, Rural Development, and related Agencies a statement on the current status of FSIS programs and on the fiscal year 2002 budget for food safety within the U.S. Department of Agriculture. The first area addressed by Mr. Billy involved the Agency's infrastructure and resources. Mr. Billy stated:

FSIS' infrastructure needs to be improved to allow its workforce to carry out its regulatory responsibilities more effectively and efficiently. This is a very broad area that encompasses the assignment of work, increasing expertise and training, and enhancing data analysis and decision-making, communication, and workforce environment. To assess the knowledge and training requirements of our future workforce, FSIS formed the Workforce of the Future Steering Committee in July 1999 to oversee our workforce planning activities and to guide this transition of the workforce. We established the FSIS Training and Education Committee for 2001 and Beyond (TEC 2001) to examine our current education and training activities, conduct an assessment of Agency needs, develop an education vision for the Agency, and develop a strategy for education and training our employees for the 21st century. TEC 2001 is focusing education and training on the scientific and legal basis for making regulatory determinations and implementing statutory authorities (Billy, 2001).

Mr. Billy's statement was supported in November 2002 by FSIS's Office of Policy, Program Development and Evaluation, when it said "Training is an important mandate of FSIS's mission.

Commitment to training and the funds to accomplish this mission should not be compromised by budgetary cuts (Billy, 2001).”

Knowledge of governmental literature is not the only important aspect of this literature review. A review of literature pertaining to some training principles was also important.

Before discussing training principles, the term training must be defined. Training has been defined by many individuals in many ways. A classic definition by Leonard Nadler referred to training as “learning, provided by employers to employees, that is related to their present jobs,” (Nadler, L. and Z. 1989 as referenced by Rothwell & Sredl, 2000). Lawrie defined it as a “change in skills (Lawrie J. 1990 as referenced by Rothwell & Sredl, 2000). Training, as defined by the researcher, is a change in KSA that is related to an employee’s present job provided by the employer. To understand the principles of training, identifying why training fails is beneficial.

Phillips and Phillips (2002) have identified 11 reasons why training and development fails within an organization. These are as follows:

- Lack of alignment with business needs. If a training program is not aligned or connected to a business measure, no improvement can be linked to the program.
- Failure to recognize nontraining solutions. Training is perceived as a solution for a variety of performance problems when training may not be the issue at all.
- Lack of objectives to provide direction and focus. Training should be a focused process that concentrates on the desired result. It should be developed at higher Kirpatrick levels than traditional learning objectives.
- The solution is too expensive. ROI might ultimately fail to recoup its high cost.

- Regarding training as an event. When training is considered a single event, the odds of changing behavior are slim. Without behavior change, training fails to generate business results.
- Participants are not held accountable for results. Participants don't see changing their behavior as their responsibility. Participants can succeed if they are properly motivated and held accountable for their results.
- Failure to prepare the job environment for transfer. Regardless of what participants learn from a training program, without transferring it to the job, performance will not change and the training program will fail.
- Lack of management reinforcement and support. Without management support, rarely will new skills and knowledge be implemented.
- Failure to isolate the effects of training. The challenge is to isolate the improvement directly to training. Failure to do so might cause some training programs to be discarded as irrelevant.
- Lack of commitment and involvement from executive. Without top executive support, training will be ineffective and major programs will fall short of expectation.
- Failure to provide feedback and use information about results. All stakeholders need feedback. Employee feedback on their progress, developer designers need feedback on program design, facilitators need feedback to see if adjustments should be made, and management/clients need feedback on the program's success. Without feedback, a program may not reach expectations

By identifying the failure and barriers to training, organizations can increase their capabilities in their training programs. But how is training transferred to the employee?

Broad and Newstrom (1992 as referenced in Kontoghiorhes, 2001) defines the transfer of training to the workplace as “The effective and continuing application, by trainees to their jobs, of knowledge and skills gained in training – both on and off the job (Kraiger, 2002).” Broad and Newstrom further stated, “For organizations to remain competitive in the global marketplace, and to develop the highly skilled workforce that can contribute to solutions for the world’s pressing problems, improving transfer of training must become HRD’s top priority (Haskell, 1998).” FSIS must also place transfer of training at the top of its priority list.

FSIS must implement a theory that involves training or learning transfer so that present and future job performance is not only maintained but also improved. Transfer of training must be fundamental to all training that FSIS is engaged in.

Transfer of Training

In 1997, organizations with more than 100 employees were estimated to have spent \$58.6 billion in direct cost on formal training and roughly \$200 billion or more annually on indirect cost (Yamhill and McLean, 2001). However, according to Baldwin and Ford, only 10% of these expenditures actually resulted in transfer of newly learned skills and knowledge to the job (Kontoghiorghes, 2001). Thus, more emphasis is required to ensure that transfer of training or learning has taken place.

Understanding transfer of training is the key. Baldwin and Ford classified the factors affecting transfer of training into three categories: (1) training inputs, including trainee characteristics, training design, and work environment; (2) training outputs, consisting of learning and retention; and (3) conditions of transfer, which focus on the generalization and maintenance of training (Yamhill and Mclean, 2001). All three are required to retain learning

and retention. Two more factors that can increase transfer of training are goal-setting training and self-management training.

However, when transfer of training is low, the most common reason is limited opportunities to apply learning skills directly to the job (Lim and Johnson, 2002). In addition, Phillips and Phillips (2002) conducted over 400 impact studies and have identified the following barriers of transfer of training to the job:

- Immediate manager does not support training.
- The culture in the work group does not support training.
- No opportunity exists to use the skills.
- Skills could not be applied to the job.
- The systems and processes did not support the skills.
- The resources are not available to use the skills.
- Skills no longer apply because of changed job responsibilities.
- Skills are not appropriate in the work unit.
- Did not see need to apply what was learned.
- Old habits could not be changed.
- Reward systems don't support new skills.

Barriers must be understood at the beginning of the process as part of needs assessment and analysis. Efforts to minimize the barriers before the learning solution is implemented will pay off significantly (Phillips and Phillips, 2002). Thus, there is a general notion that higher learning results in better transfer. Many studies show a positive relationship between learning and transfer (Holton, 1996; Tennennbaum, et al., 1991 as referenced in Lim and Johnson 2002).

Spitzer (1984 as referenced in Lim and Johnson, 2002) claims that there are two types of transfer, referred to as near transfer and far transfer. Near transfer focuses on knowledge and short-term skills, and far transfer primarily applies to theories, principles, and concepts. If the primary focus of training is on far transfer, then it is recommended that teaching strategies should focus on general theories and principles and motivate the trainee to practice applying learning in different contexts to situations on the job (Lim and Johnson, 2002). Transfer of training must then become a core business process, and performance is the key. Training is useless if it cannot be translated into performance.

Performance Improvement

Performance improvement encompasses skills training but also considers other issues as well, such as, does the organization structure (decision-making, supervision, feedback) support workflow and are the environmental working conditions appropriate (Wallace 1999).

Today's organizations are going through profound changes. The need to innovate faster and the requirement for mass customization in products and all aspects of customer care have placed a great deal of tension and strain on people. Couple this with job restructuring and downsizing creates a huge problem: How to improve worker performance in a more complex and ever-changing environment and this is complicated with reducing manpower and cost (Rosenberg, 1995). The answer is a performance improvement model or theory.

Allison Rossett, professor of education technology at San Diego State University, while addressing the work environment through the lens of learning and the fundamentals of performance improvement stated: "When we do an analysis we, don't say, 'What's the body of knowledge they need?' We say, 'What do they have to be able to do.' It's a purpose approach." Rossett further stated "The question we ask and the prescription we write all revolve around

what someone is going to have to learn to do. You need scaffoldings or frameworks to make sure you look at all the important things about performance the learners are going to be required to master (Zemke, 2002).” For that framework to be successful, you need a performance improvement model. One of the best known is the Human Performance Technology model developed by Darlene van Tiem, James Moseley, and Joan Dressing in *Fundamentals of Performance Technology: A Guide to Improving People, Process, and Performance* (HR Focus, 2002).

Training and education are critical to increasing competitiveness, but meeting the educational challenge is just part of the answer. An effective human resources system needs an outstanding learning system. But it requires more; it requires a focus on performance. To improve human performance, we must manage the performance improvement system. That system must be at the core of an organization’s human resource efforts if it is to maintain its competitiveness, long term (Van Horn, 1995).

Human Performance Technology (HPT) is a set of methods and procedures and a strategy for solving problems, or realizing opportunities, related to the performance of people. It can be applied to individuals, small groups, and large organizations. It is, in reality, a systematic combination of three fundamental processes: performance analysis, cause analysis and intervention selection, and design.

HPT has roots in training and instructional systems, in the Human Resources field in Environmental/Human Factors Engineering, and in Organizational Development. The human performance, which HPT is concerned about, is that which accomplishes the business goals of the organization. The training world began systematic instructional design with military training in World War 2. By the 1950s, taxonomies of learning objectives were developed; and

programmed instruction and cognitive psychology became significant influences in the 1960s. By the late 60s, performance based training using instructional technology was in practice. In 1970, Joe Harless coined the term front-end analysis, suggesting that many of the analysis projects he worked on would be better off if the analyses were done up front versus at the end. As the case was so often, training had been developed but was not always solving the performance problem. By the late 1970s, Thomas Gilbert suggested methods for engineering the right kind of performance, or worthy performance. Through the 1980s, the focus on performance flourished, and in the 1990s, business began to recognize the value of performance technology because of its link to business goals – interventions suggested in the analysis were tied back to measures that mattered. Costs of interventions (even training cost) were tied back to the value of solving the problem (“Human Performance Primer,” 2000). The approaches that we are facing today are related to those of yesterday, and we are beginning the revolutionary changes all over again.

In his paper titled “Moving from Instruction Technology to Human Performance Technology in the Nuclear Power Industry”, William H Lowthert, Ph. D (1996), AIP Associates, states:

The training profession is at the beginning of a period of rapid change. It is moving from instructional technology with its emphasis upon systematic approach to training into human performance technology. The systematic approach to training is only one of many tools that performance technologists apply to correct performance problems and into organizational performance.

In 1994, Filipczak presented (as cited in Lowthert, 1996) an article, in “Training Magazine”, that cautioned, “An effective trainer has to evolve into performance consultant, no

longer as concerned about training per se as about performance of the company and its individual contributors.”

The world of business and technology is facing challenges unlike any it has encountered before. Economic success in the international marketplace is no longer ensured. Creativity must be tapped, and every available resource must be used to increase competitiveness and maintain a high level of success in the world. In this new economic era, the greatest strides in increasing economic competitiveness will not result from more machines or computers, reliance on cost cutting; or dependence on legislative relief; it will result from our most critical resource, people (“Human Performance Technology,” 2002). To ensure that high performance is maintained, training must be evaluated.

Evaluation

The primary purpose of evaluation is to defend training expenditures. Evaluation may be done for either formative or summative purposes (Worthen & Sanders, 1987 as referenced in Kraiger, 2002). Formative evaluation is conducted to modify a program or redesign presentations or training content. Summative evaluation results are used to make judgments about a program’s effectiveness (Kraiger 2002).

J.P. Huller (as cited in Kirkpatrick, 1994) of Hobart Corporation presented a paper on evaluation. In the introduction he says,

All managers not just those of in training are concerned over their own and their department’s credibility. I want to be accepted by my company. I want to be trusted by my company. I want to be respected by my company. I want my company and fellow managers to say, “We need you.” When you are accepted, trusted, respected, and needed lots and lots of wonderful things happen:

- Your budget requests are granted.
- You keep your job. (You might even be promoted.)
- Your staff keeps their jobs.
- The quality of your work improves.
- Senior management listens to your advice.
- You're given more control.

But just how do you become accepted, trusted, respected, and needed. We do so by proving that we deserve to be accepted, trusted, respected, and needed. We do so by evaluating and reporting upon the worth of our training.

Evaluating training helps all managers and trainers make wiser decisions. Kirkpatrick (1994) list three specific reasons on why training should be evaluated:

- To justify the existence of training department by showing how it contributes to the organization's objectives and goals.
- To decide whether to continue or discontinue training programs.
- To gain information on how to improve future training programs.

When top management decides to cut back to keep within budgetary restraints, their impression or idea of the worth of the training department will be determine whether to keep or cut the training budget. With the high cost of training going up annually and because of budgetary restraints, determining an organization's ROI is essential.

Return on Investment

ROI has become one of the most challenging and intriguing issues facing human resources development and performance improvement field (Phillips, 1997). ROI is simply the ratio of total training benefits (expressed in dollar terms) divided by total training (also expressed in dollar terms) (Kraiger, 2002).

ROI can be categorized into macro and micro studies. The macro level is the relationship between training and national economic performance. In other words, training improves labor quality, which in turn counts as one of the most important factors contributing to economic growth (Sturm, 1993 as referenced in Wang, Dou, and Li, 2002). At the micro level, studies on training ROI roots can be traced to the 1950s. The micro level contains two sublevels. The first, relates to identifying training cost; the second is the ROI measurement that interests HRD professionals (Wang, Dou, and Li, 2002).

However, ROI does present organizations some problems. When an organization embraces the concept and implements the process of ROI, the management team is usually anxiously waiting for results, only to be disappointed when they are not quantifiable. For ROI to work, it must be feasible, simple, credible, and based on sound judgment. More specifically, ROI must meet the demands of three major groups within the organization: HRD Practitioners; Senior Managers, to include sponsors and clients; and finally researchers (Phillips, 1997).

The bottom line is that if properly implemented and used, ROI has four distinct and important benefits (Phillips, 1997):

- Measures contribution from a selected program. The ROI will determine if the benefit of the program outweighed the cost.
- Sets priorities to high impact training.

- Focuses on the results of what all the programs are attempting to accomplish. This process has the added benefit of improving the effectiveness of all training programs.
- Alters management's perception of training. Perhaps the most important benefit, it can convince management that training is an investment and not an expense. This is an important step in building a sound relationship and partnership with management.

These four key benefits, inherent with most any type of impact evaluation process, make ROI process an important function and challenge for human resource development managers (Phillip, 1997).

Training Manual Design

How the training manual for this research project is to be formatted is another important aspect. Whatever method used in developing training materials and manuals, the following principles should be addressed (Rothwell and Benkowski, 2002):

- Adults learn in digestible pieces. According to Rothwell and Benkowski (2002), information should be clustered together into no more than seven facts at a time. Regardless of how much information is grouped together, it must be manageable for the learner.
- Adults learn when information is consistent. A consistent format should be followed in presenting procedures so that adults do not need to learn a new format before learning a procedure.
- Adults learn visually. The old adage that a picture is worth a thousand words truly is correct when it comes to the adult learner. Pictures help stimulate the memory sensors.

- Adults learn when detailed information is easy to understand. Complex, detailed information can confuse learners and making this information easier can strengthen the learning process.

According to Nilson (1998), “the trainee’s training manual must be easy to use and relevant to the customer’s need, and it must ‘feel right’ as the user uses it. It will more than likely be used as a reference document for at least some time after training has been completed; therefore, it must pass the tests of good writing.” Nilson (1998) also provides a very useful checklist to write a good training manual, which follows:

- Focus on doing. (Understanding will follow.)
- Organize into clearly defined lessons. Present information in small chunks.
- Define new terms; be concrete.
- Use short sentences.
- Write in active, direct style.
- Be consistent in heading and subheading conventions.
- Label diagrams and charts clearly and consistently.
- Describe succinctly; avoid wordiness.
- Teach step-by-step procedures.
- Give the "big picture" first.
- Use examples and case studies. Include many opportunities for trainees to relate their experiences to the course material. Allow time for demonstrations, discussion, trial and error, and simulations.
- Use nonexamples, or explanations, of "what it isn't."
- Build in time for feedback.

- Use friendly language.

Once the basic formatting has been completed, the next step is to determine if the training manual or guide is self-directed training or distance training.

Distance and Self-Directed Learning

Distance learning is training material that allows a trainee to learn away from the source of the expertise (Harrison, 1999). Basically, distance learning takes place when a teacher (trainer) and student(s) are separated by physical distance and technology is used to bridge the instructional gap (Willis, 1993). Self-directed learning incorporates the idea of distance learning with the idea of 'on-demand' training. Learners choose the time and location of their training but can often tailor broadly developed programs to meet their needs (Harrison, 1999).

According to Harrison (1999), self-directed learning is frequently a mix of the following:

- Books
- Computer-based training
- Multimedia CD-ROM
- Intranet or Internet-based delivery
- Workbooks
- Video, audio, etc.

Furthermore, Harrison (1999) states, "Poor training and self-directed training is often due to a focus on the needs of the trainer rather than the learner. Many self-directed learning materials are nothing more than teaching via another medium. To produce effective self-directed learning, we need to get into the shoes of the learner and design relevant, interactive materials that he or she (learners) can use."

No distance learning tool has received greater use and less attention than print. Print is the foundation of distance education and self-directed learning and is the basis from which all other delivery systems have evolved. The first ever distance learning was a course offered by correspondence study, with print material sent and returned to students by mail (Willis, 1993). Willis (1993) provides both advantages and limitations of print. The advantages are that it is—

- Spontaneous.
- Instructionally transparent.
- Nonthreatening.
- Easy to use.
- Easily reviewed and referenced.
- Cost-effective.
- Easily edited and revised.
- Time-effective.

The limitations are that it is—

- Passive and self-directed.
- Lack of feedback and interaction.
- Dependent on reading skill.

The research project selected for this study was print in a workbook format. In distance learning, workbooks are often used to provide course content in an interactive manner. A typical format might include an overview, the content to be covered, one or more exercises or case studies to emphasize important points, and a quiz or test to evaluate comprehension. To be effective, some form of feedback is provided to improve trainees' knowledge of weak areas of study (Willis, 1993).

Summary

The primary purpose of the literature review was to explore documentation pertaining to training program or policies within FSIS and to address some training principles. The first part of this literature review looked at programs or policies that affect FSIS or the USDA. Some of the documentation looked at included—

- Basic Poultry Inspection – Employee Development Guide – Trainer and trainee Guideline 703.
- Formal Training – 703 Basic Poultry Inspection.
- Executive Order 1311 – Using Technology to Improve Training Opportunities for Federal Government Employees.
- FSIS Strategic Plan for Fiscal Year 2000 – 2005.
- Education and training of the field workforce to achieve a public health vision.
- Transition to the FSIS workforce of the future.
- Labor Management Agreement Between the United States Department of Agriculture, Food Safety and Inspection Service and the National Joint Council of Food Inspection Locals, American Federation of Government Employees, and AFL-CIO.
- Communication to Congress – statement of Thomas J. Billy, former administrator of FSIS.

Although there is sufficient information mandating training for federal employees, FSIS still has steps to take to upgrade the current program. One of the more positive aspects that FSIS has implemented is the Food Safety Virtual University. This relatively unknown Internet site will eventually increase employees' KSAs. The Office of Policy, Program Development and Evaluation recommended that FSIS should define the knowledge, skills, and abilities required to

perform various job functions that its field workforce undertakes. Then it should do needs assessment to determine what training the workforce needs to acquire those KSA's (FSIS Education and Training, 2002). This needs assessment has been completed and analysis is still on going. In addition, FSIS should provide formal training immediately to entry level inspectors. When FSIS accomplishes these recommendation, employees at all levels will recognize that they are key players in protecting the public health of consumers. One of the ways that FSIS can accomplish this is to follow some basis training principles.

The second half of this literature review discussed some training principles that should be used in redesigning any current training program. These principles are essential to any training program and each should be followed. These principles include—

- Transfer of training.
- Performance improvement.
- Evaluation.
- Return on investment or ROI.
- Training manual design.
- Distance and self-directed learning.

The primary reason for training new employees is to bring their KSAs up to the level required for satisfactory performance. As employees continue on the job, additional training provides opportunities for them to acquire new knowledge and skills. As a result of training, employees may be even more effective on the job and may qualify for jobs at a higher level (Sherman and Bohlander, 1992).

By looking at both FSIS programs, policies, and some basic training principles, the foundation of this research project has been established. Next, Chapter Three – Methodology - will provide information on how this research project was performed.

CHAPTER THREE

METHODOLOGY

Introduction

The purpose of this study was to identify the potential for revising the current Fundamentals of Poultry Slaughter and Inspection training modules at the Donald L. Houston Center at Texas A&M University in College Station, Texas, into a QTG designed for as a distance or self-directed learning course for entry level poultry inspectors assigned to FSIS. The Agency should shift the focus of its training to provide more science based training, as appropriate at each level. This should include topics such as meat and poultry microbiology, with emphasis on foodborne pathogens, biostatistics, food technology and food safety interventions, cleaning and sanitizing, and basic hygiene (FSIS Education and Training, 2002). Newly appointed poultry inspectors' training is composed of a training booklet that instructs the trainee on areas to read from the FMIA, PPIA, and other regulations. In addition, the new inspectors receive hands-on training from so-called subject matter experts or experience inspectors. The problem of this study was to identify the potential for restructuring formal training and developing a QTG in the form of a distance or self-directed training course as an example to correct this problem.

The research objective of this study was to redesign a Qualification Training Guides for use as a distance or self-directed learning course. This chapter describes the methods the researcher used to gather the information necessary to achieve this objective.

Research Procedures

The first step of the research was to conduct a review of literature available concerning the subject of training for federal inspectors, more specifically poultry inspectors. The review of

literature was in two parts. The first part was to conduct a review of literature of government documentation or policies that affected poultry inspectors' training. Although the research discovered very little on entry level training for poultry inspectors, there was sufficient data on training in general. The second half was a review of some basic training principles. Reviewing both parts of this literature was necessary to provide a basic foundation of training within FSIS.

The next step was to obtain the results of the Needs Assessment Survey (Appendix B) conducted by the FSIS Training and Education Committee in 2001. This survey was designed to assess the strengths of the current training program, target areas that need improvement, and identify the needs and expectations of the employees regarding training and education programs for the future. The project director was contacted in Washington D.C. to obtain the results. Once the results were obtained it was broken down further into job categories to distinguish food inspectors from other job categories.

The researcher now had an understanding of the state of the training within FSIS and was ready to conduct the research necessary to determine the best method to meet the objectives. Literature was reviewed again to provide an explanation of the current training program and lay the foundation for the research data.

The research data was analyzed to get a greater understanding on how inspection personnel viewed training. This included how inspection personnel viewed formal classroom training and on-the-job training received when they first joined FSIS.

All the information obtained was used to develop a draft QTG. This QTG was developed as a distance learning or self-directed learning guide to be administered by the Donald L. Houston Center at Texas A&M University in College Station, Texas. It will also help the trainee

gain proficiency in the task of Poultry Inspector within Food Service Inspection Service. The QTG is composed of five (5) volumes:

- Volume 1 – Administration
- Volume 2 – Poultry Anatomy and Antemortem Inspection
- Volume 3 – Postmortem Inspection
- Volume 4 – Introduction to HACCP
- Volume 5 – Poultry Sanitation

The next step was to develop and send a Qualification Training Guide Evaluation Form (Appendix A) to subject matter experts within FSIS. This survey was designed to determine the feasibility and usefulness of the QTGs. It was sent to selected SMEs based on their years of experience and willingness to participate in this project. The QTGs were sent to four veterinarians with over 50 years experience to include one assigned as an instructor at FSIS Training Center at Texas A&M University; three Consumer Safety Inspectors with over 40 years experience and who had previously worked as poultry inspectors; and five food safety inspectors with over 50 years experience, currently working as poultry inspectors. All surveys were returned with the exception of one. The data and suggested changes were analyzed and changes made as deemed necessary.

Finally, the completed QTG program will be submitted to the United States Department of Agriculture, Food Safety Inspection Service for consideration as a distance learning vehicle for entry level poultry inspectors. To successfully gain approval of such a project, results of the Needs Assessment Survey conducted by the FSIS Training and Education Committee in 2001 and the Qualification Training Guide Evaluation Form must be analyzed.

CHAPTER FOUR

RESULTS

Introduction

The purpose of this study was to identify the potential for revising the current Fundamentals of Poultry Slaughter and Inspection training modules at the Donald L. Houston Center at Texas A&M University in College Station, Texas into a QTG designed as a distance or self-directed learning course for entry level poultry inspectors assigned to FSIS. Even though, the U.S. food safety system is one of the safest in the world, the CDC estimates that 76 million illnesses, 325,000 hospitalizations, and 5,000 deaths are caused by foodborne pathogens annually (GAO Weakness, 2002). In order to reduce foodborne illnesses effectively, an adequate training program is essential. Ensuring that entry level inspectors are fully qualified to perform their duties should remain a top priority for FSIS

This chapter will present the findings of the research objective. This objective is addressed.

Analysis of Findings

Objective –Redesign a Qualification Training Guides for use as a distance or self-directed learning course for entry-level poultry inspectors.

The researcher used information obtained from an independent survey with subject matter experts (SME) on the applicability and effectiveness of a QTG. This was based on the following Likert scale with their respective point value:

- Excellent – 5 points
- Good – 4 points
- Average – 3 points
- Below Average – 2 points
- Poor – 1 point

In addition, the researcher used the results of a Needs Assessment Questionnaire conducted by the FSIS Training and Education Committee in 2001. The data used from this survey are a combination of agreed and strongly agreed to represent one percentage. The results of the surveys are organized by each volume and overall course evaluation.

Volume One, Administration. This volume contained four chapters and had an overall average mean score of 4.46, a standard deviation of 0.80 and a standard error of 0.24. Table 4-1 is a breakout of the data per chapter for volume one. This volume was rated the lowest among the SMEs.

Table 4-1

Volume One Breakout

Questions Topics	<u>Chapter One</u>			<u>Chapter Two</u>			<u>Chapter Three</u>			<u>Chapter Four</u>		
	Means	StDev	SE	Means	StDev	SE	Means	StDev	SE	Means	StDev	SE
Sequence	4.36	0.92	0.28	4.46	0.82	0.25	4.36	0.81	0.24	4.82	0.41	0.12
Chap Material	4.00	1.27	0.38	4.27	1.01	0.30	4.46	0.82	0.25	4.82	0.41	0.12
Progression	4.18	1.17	0.35	4.36	1.27	0.31	4.46	0.82	0.25	4.82	0.41	0.12
Objectives	4.27	1.01	0.30	4.46	0.69	0.21	4.46	0.82	0.25	4.73	0.47	0.14
Overall Rating	4.18	1.17	0.35	4.46	0.82	0.25	4.46	0.82	0.25	4.82	0.41	0.12
Average	4.20	1.11	0.33	4.40	0.87	0.26	4.44	0.82	0.25	4.80	0.42	0.13

Volume One, Chapter One, History. This chapter was rated excellent by 63.64% of the SMEs while 27.27% rated it average. One SME gave it below average and stated, “This information is not useful for beginning poultry inspectors. It is good info, but not appropriate for new inspectors.” However, history helps us understand people and societies and helps us understand change and how the society we live in came to be. History contributes to moral understanding and provides for an organization's identity (Stearns, n.d.). The history of the USDA can show where we have been and where we are going. A new inspector needs to know the directions of the organization and to appreciate this direction one must know where the FSIS came from.

Volume One, Chapter Two, Organizational Structure. This chapter was rated excellent by 63.64% of the SMEs respondents felt that this chapter was excellent, while 18.18% stated that it was good. However, 18.18% felt that it was just average, and one even stated that it might not be necessary. An organizational structure is used to visualize for the employee on how the organization is structured. Even more to the point, it shows either “where the buck stops” (at the top) or where the stuff lands when it “rolls downhill” (at the bottom). An effective organizational structure helps everyone in the organization to know where they fit in, identifies the jobs, and helps establish strategies for the organization.

Volume One, Chapter Three, Mission, Goals, and Objectives. This chapter was rated excellent by 63.64% of the SMEs, while 18.18% stated that it was good, and 18.18% felt that it was just average. A mission statement communicates the essence of the organization to the stakeholders and to the public. More specifically, it says more about who the organization is, what it is doing, and why it is doing what it does. The mission statement is the one guiding set

of ideas that is articulated, understood, and supported by the organization's stakeholders, board, staff, volunteers, donors, clients, and collaborators. The established goals and objectives support the mission statement.

Volume One, Chapter Four, Poultry Acts and Regulations. This chapter was rated excellent by 81.82% of the SMEs, while 18.18% stated that it was good. Chapter four was the highest rated chapter in Volume One. One SME felt that this chapter should have been placed in Chapter One, History. After review, the wording in the introduction of Chapter Four has been changed so not to mislead the entry-level trainee. Furthermore, the FSIS Needs Assessment Questionnaire (2001) showed that 89.3% (2375 response) either agreed or strongly agreed that meat and poultry laws and regulations were necessary for inspectors to be successful in their position. Also, 69.8% stated that they had received training in meat and poultry laws and regulations leaving 30.2% or approximately 712 inspectors (based on the 2,375 response rate) who had not received this vital training. Finally, 79.9% of those who responded indicated that they needed additional training in this area (FSIS and Education Committee, 2001).

Volume 2, Poultry Anatomy and Antemortem Inspection. This volume contained two chapters and had an overall average mean score of 4.68, a standard deviation of 0.61 and a standard error of 0.18. Table 4-2 (see page 47) is a breakout of the data per chapter for volume two. The chapters in volume two are poultry anatomy and antemortem inspection.

Table 4-2

Volume Two Breakout

Questions Topics	<u>Chapter One</u>			<u>Chapter Two</u>		
	Means	StDev	SE	Means	StDev	SE
Sequence	4.82	0.41	0.12	4.55	0.82	0.25
Chapter Material	4.73	0.47	0.14	4.55	0.69	0.21
Progression	4.73	0.65	0.20	4.55	0.82	0.25
Objectives	4.82	0.41	0.12	4.73	0.65	0.20
Overall Rating	4.82	0.41	0.12	4.55	0.82	0.25
Average	4.78	0.47	0.14	4.68	0.76	0.23

Volume Two, Chapter One, Poultry Anatomy. This chapter was rated excellent by 81.82% of the SMEs, while 18.18% stated that it was good. The FSIS Needs Assessment Questionnaire (2001) identified that 79.1% (2,386 respondents) inspectors felt that animal science (knowledge of food animals), in other words anatomy, was necessary for them to be successful in their current position. About 42.9% stated that FSIS had provided them with the necessary training, leaving 57.1%, or 1,412 of the 2,473 respondents, who had not received formal training. Further, 77.2% of 2,246 respondents stated that they required additional training to be more successful (FSIS and Education Committee, 2001). Inspectors must receive this type of training to familiarize them with both the technical and common terms for different anatomical features of poultry.

Volume Two, Chapter Two, Antemortem Inspection. This chapter was rated excellent by 72.73% of the SMEs, while 9.09% stated that it was good. Furthermore, 18.18% or 2 SMEs

gave this chapter an average rating. These SMEs felt that this was a veterinarian's job and should not be included in this training. Antemortem inspection is performed based on the requirements of the Poultry Product Inspection Act, Poultry Regulations, and FSIS Manuals. Principally this is the responsibility of the veterinarian; however, inspectors must be familiar with these duties in the veterinarian absents.

Volume Three, Postmortem Inspection. This volume contained no chapters and was solely dedicated to postmortem inspection. All or 100% of the SME gave this volume an excellent rating. Table 4-3 is a break out of this volume. According to the FSIS Needs Assessment Questionnaire, 76.7% of the 2,337 responses said that training in postmortem inspection was necessary to be successful. Of the 2,473 respondents, only 25% stated that they had received this training, leaving 1,874 inspectors who were responsible for ensuring a safe food supply, not formally trained. Furthermore, 83.1% of 2,240 respondents stated that more training in postmortem inspection was needed (FSIS and Education Committee, 2001).

Table 4-3

Volume Three Breakout

Questions			
Topics	Means	StDev	SE
Sequence	4.91	0.30	0.09
Chapter Material	4.91	0.30	0.09
Progression	4.91	0.30	0.09
Objectives	5.0	0.00	0.00
Overall Rating	5.0	0.00	0.00
Average	4.95	0.18	0.06

Volume Four, Introduction to HACCP. This volume contained two chapters and had an overall average mean score of 4.57, a standard deviation of 0.62 and a standard error of 0.19.

Table 4-4 is a breakout of the data, per chapter, for Volume Four. Hazard Analysis and Critical Control Points (HAACP) is a system that enables the production of safe meat and poultry products through the production process, identification of all hazards that are likely to occur in the production establishment, and the identification of critical points in the process at which these hazards may be introduced into products. Furthermore, the establishment of critical limits for control at those points, the verification of these prescribed steps, and the methods by which the processing establishment and the regulatory authority can monitor how well process control through the HACCP plans are working(Fundamentals, n.d.).

Table 4-4

Volume Four Breakout

Questions Topics	<u>Chapter One</u>			<u>Chapter Two</u>		
	Means	StDev	SE	Means	StDev	SE
Sequence	4.82	0.41	0.12	4.36	0.81	0.24
Chapter Material	4.73	0.47	0.14	4.27	0.91	0.27
Progression	4.82	0.41	0.12	4.36	0.81	0.24
Objectives	4.73	0.47	0.14	4.55	0.69	0.21
Overall Rating	4.73	0.47	0.14	4.36	0.81	0.24
Average	4.76	0.44	0.13	4.38	0.80	0.24

Volume Four, Chapter One, Introduction to HACCP. This chapter was rated excellent by 72.73% SMEs, while 27.27% stated that it was good. Although, two SMEs stated that HACCP is still evolving and may be different in the future. A major focus of the HACCP system is the “Farm to Table” concept. This concept ensures that the public consumes safe meat and poultry

products. This concept must be flexible, and FSIS must be flexible also to meet future changes. The FSIS Needs Assessment Questionnaire identified 82.4% of 2,347 inspectors that HACCP was necessary to be successful in their current position, and 82.9% stated that they had received training in this area while 17.1%, or 423, (2,473 respondents) that did not receive training. Furthermore, 79.9% of 2,241 inspectors stated that they required additional training in this area (FSIS and Education Committee, 2001).

Volume Four, Chapter Two, The Relationship of HACCP to CGMPs and Sanitation.

This chapter was rated excellent by 54.55% of the, while 27.27% stated it was good, and 18.18% rated it average. No comments were provided by the SMEs. This topic is new at the Donald L. Houston Training Center and was not addressed in the FSIS Needs Assessment Questionnaire.

Volume Five, Poultry Sanitation. This volume contains three chapters and had an overall average mean score of 4.72, a standard deviation of 0.54 and a standard error of 0.16. Each chapter will not be discussed individually; and Table 4-5 (see page 51) is a breakout of these chapters. According to the FSIS Needs Assessment Questionnaire, 85.8% of 2,356 respondents stated that sanitation or environmental science was necessary to be successful for the position of food safety inspector. Furthermore, 45.8% of 2,473 respondents stated that FSIS had provided them training in this area which left 54.2%, or 1,133 inspectors, who said they had not receive this training. Finally, 79.4% of 2,203 respondents stated that they required additional training in sanitation (FSIS and Education Committee, 2001).

Table 4-5

Volume Five Breakout

Questions Topics	<u>Chapter One</u>			<u>Chapter Two</u>			<u>Chapter Three</u>		
	Means	StDev	SE	Means	StDev	SE	Means	StDev	SE
Sequence	4.73	0.47	0.14	4.82	.405	0.12	4.55	0.82	0.25
Chapter Material	4.82	0.41	0.12	4.82	.405	0.12	4.55	0.82	0.25
Progression	4.73	0.47	0.14	4.91	.302	0.09	4.55	0.82	0.25
Objectives	4.73	0.47	0.14	4.91	.302	0.09	4.55	0.82	0.25
Overall Rating	4.73	0.47	0.14	4.91	.302	0.09	4.55	0.82	0.25
Average	4.75	0.46	0.14	4.87	.343	0.10	4.55	0.82	0.25

Summary

Based on the data, it was apparent that all the inspectors felt that formal training is not only important, but also essential. All of the SMEs rated the QTGs as excellent (54.55%) or good (45.45%). Furthermore, the data indicated that inspectors were not receiving training that had been deemed important. In addition, the data showed that inspectors were willing to participate in computer-based training and self-study or distance learning courses. Besides the training identified in this QTGs, there were a number of other subjects in the FSIS Needs Assessment Questionnaire that were not mentioned. These are identified in Table 4-6 (see page 52), which identifies three areas: The percentage of the inspectors whose skills are needed to be successful in their current position; the percentage of the topics that FSIS has provided; and the percentage of the inspectors who stated that they required additional training (FSIS and Education Committee, 2001).

Table 4-6

Training Topics Not Previously Mentioned Data

Topics	Need for Success %	Training Provided %	Additional Training Needed %
Biological Science	66.3	19.2	76.0
Chemistry	44.6	14.7	62.1
Communication (Written)	84.4	40.3	71.3
Communication (Oral)	88.8	41.3	70.8
Epidemiology	54.0	13.8	68.0
Math and Science	63.6	25.2	62.8
Microbiology	64.7	23.3	74.7
Pathology	78.0	37.6	76.9
Public Health	84.3	36.1	78.3
Conflict Resolution	77.2	53.2	68.6

CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

On March 19, 2003, Agriculture Secretary Ann Veneman challenged the FSIS to reach the next level of food safety. Secretary Veneman's challenge called for creative and effective ways to modernize the FSIS's ability to continue to improve the safety of U.S. meat, poultry, and egg products to protect public health. Although no longer a specified goal, FSIS is implementing several new initiatives to continue towards its vision for food safety. One of the top priorities for the FSIS is to aggressively address training and education of its workforce. The Agency must ensure it is training to fulfill its vision. To ensure consistent and accurate inspection, FSIS has made a strong commitment to recruiting scientifically educated employees and retooling its entire training and education program for all employees (FSIS Enhancing Public Health, 2003). This commitment must start with entry-level training regardless of the scientific background of the employee.

This study was intended to identify the potential for revising the current Fundamentals of Poultry Slaughter and Inspection training modules at the Donald L. Houston Center at Texas A&M University in College Station, Texas, into a QTG designed for use as a distance or self-directed learning course to correct this problem.

Chapter Five of this research paper will summarize the study procedures and present conclusions and recommendations. It will also provide suggestions for future research.

Summary of Study Procedures

The researcher used a variety of methods to gather the necessary data and information to accomplish the objective of redesigning, developing, and recommending implementation of a QTGs for use as a distance or self-directed learning course.

A review of literature was conducted to obtain information concerning the subject of training for federal inspectors, more specifically poultry inspectors. The review of literature was in two parts. The first part conducted was a review of literature of government documentation or policies that affected poultry. The second half conducted was a review of some basic training principles. Both parts of this literature review were necessary to provide a foundation of training within FSIS.

After the literature review, the FSIS Training and Education Needs Assessment Questionnaire was obtained from Washington D.C. This questionnaire was designed to assess the strengths of the current training program, target areas that need improvement, and identify the needs and expectations of the employees regarding training and education programs for the future.

Based on the data from the needs assessment survey, the next step was to develop a QTG as a distance learning or self-directed learning guide. The completed guide was then sent to SMEs for evaluation. This data from the SMEs was then analyzed to determine the effectiveness and feasibility as a training tool.

Conclusions and Recommendations

The training of the FSIS workforce is essential to maintaining the public health of the nation. FSIS is actively building strategies to build a more knowledgeable and empowered workforce. The training program incorporates both technical and managerial aspects so that FSIS has employees who can function well in a science-based environment. In addition, some of the training, particularly training involving new technologies and methodologies, must be carried out in conjunction with the regulated industry. Both processors and inspectors share in the knowledge gained about the science behind the FSIS regulations, and how they must be applied to improve public health. This fundamental idea must start with new entry-level training. Furthermore, any training established has to increase the KSAs of poultry inspectors. There needs to be “common ground” for inspectors prior to making them responsible for ensuring the public health of the nation.

To accomplish the required training, FSIS needs to initiate an entry-level program designed to meet the requirements of the vision and strategies of FSIS. One such recommendation is the development of QTGs as a distance learning or self-directed learning guide to be administered by the Donald L. Houston Center at Texas A&M University in College Station, Texas. It will also help the trainee gain proficiency in the task of Poultry Inspector within Food Service Inspection Service.

Based on the SMEs recommendations and the results of the Qualification Training Guide Evaluation Form, changes to the QTGs were made. These changes were done taking into consideration the requirements for designing a training manual. Whatever method used in developing training materials and manuals the following principles should be address (Rothwell and Benkowski, 2002):

- Adults learn in digestible pieces. These QTGs were logically setup into five volumes or modules. The researcher furthered examined each chapter in each volume to verify it relevance not only to the volume but also to the course overall.
- Adults learn information is consistent. Each volume of the QTGs were set up to present information in the same manner so inspectors do not need to learn a new format before learning the new material in each volume.
- Adults learn visually. Where appropriate, photos were included to help learners grasp new ideas or concepts. This was more apparent in volumes two and three.

Besides the design of the QTGs, the researcher recommends that four fundamental areas be addressed for training to be successful. These four areas, closely linked, are transfer of training, performance improvement, evaluations, and return on investment.

The researcher has concluded there are two factors that can increase transfer of training; goal setting and self-management training. However, transfer of training is lowest when limited opportunities to apply the skills directly to the job (Lim and Johnson, 2002). To increase the transfer of training, the immediate supervisor must be actively involved in the administration of the QTGs. This then must become a core business process and performance is key! Another consideration is performance improvement, which encompasses skills training, but also other issues as well, such as the organizational structure.

The researcher has included this in the QTG, specifically volume one. But to ensure that high performance is maintained, training must be evaluated. Evaluations must determine if training is meeting the performance objectives of the tasks of poultry inspection.

Furthermore, evaluation must decide whether to continue or discontinue training programs and to gain information on how to improve future training programs. Finally, return on

investment (ROI) is essential. ROI improves labor quality, which in turn counts as one of the most important factors contributing to economic growth (Strum, 1993 as referenced in Wang, Dou, and Li, 2002). The bottom line: is FSIS a good steward of the taxpayers' dollars? ROI will determine this and other essential areas.

Recommendations for Future Research

Self-directed learning or distance learning is key in meeting the future needs of FSIS. This research projected suggested one vehicle of distance learning for entry-level inspectors in the form of a workbook. No distance-learning tool has received greater use and less attention than print. Print is the foundation of distance education and self-directed learning and is the basis from which all other delivery systems have evolved (Willis, 1993).

Future research should include, but not be limited to using CD ROM or Web-based instruction. FSIS has established a virtual university web based site. This site is an effort to utilize a rapidly advancing technology to deliver training and education in the area of food safety to a widely dispersed and very diverse audience. The FSIS virtual university site would make it possible for almost anyone including entry-level poultry inspectors to access training and educational materials from either work or home. The FSIS Needs Assessment Survey (2001) identified that out of 2,391 responses, 78.1% (1,893 inspectors) stated that they would participate in a course outside the classroom. In addition, out of 2,391 responses, 82% (1,960 inspectors) would take a computer-based course to meet their training needs. Furthermore, out of 2,374 responses, 70.6% (1,676 responses) would be willing to take computer-based courses on their own time. Finally, 59.3 % of the inspectors indicated that they would participate in a job-related self-study or distance-learning course (FSIS and Education Committee, 2001). This researcher

recommends that the QTGs be a foundation in the development of web-based courses for entry-level poultry inspectors.

Poultry inspectors were targeted in this research project; however, red-meat inspectors and consumer-safety inspectors would benefit from similar opportunities. FSIS should continue to develop training programs for these and all other positions. Furthermore, other future research projects could include the following:

- A curriculum of study for each occupation in FSIS that would provide a blueprint for employees to advance in their careers.
- An assessment of every employee's current skills to identify gaps in knowledge, skills and abilities.
- Training and education partnerships with potential stakeholder groups established.
- An accreditation and certification program for all food safety workers developed and implemented.

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Appendix A

Qualification Training Guide Evaluation Form

Volume 1: Administration – Qualification Training Guide Evaluation Form

Chapter 1 –FSIS History					
How would you rate the following?	Excellent	Good	Average	Below Average	Poor
Sequence of the topics					
Chapter material					
The progression of the material					
Objectives					
Overall Rating					
Remarks:					

Chapter 2 –Organization Structure

How would you rate the following?	Excellent	Good	Average	Below Average	Poor
Sequence of the topics					
Chapter material					
The progression of the material					
Objectives					
Overall Rating					
Remarks					

Volume 1: Administration – Qualification Training Guide Evaluation Form
Chapter 3 –Mission, Goals, and Objectives

How would you rate the following?	Excellent	Good	Average	Below Average	Poor
Sequence of the topics					
Chapter material					
The progression of the material					
Objectives					
Overall Rating					
Remarks:					

Chapter 4 – Poultry Acts and Regulations

How would you rate the following?	Excellent	Good	Average	Below Average	Poor
Sequence of the topics					
Chapter material					
The progression of the material					
Objectives					
Overall Rating					
Remarks					

**Volume 2: Poultry Anatomy and Antemortem Inspection
Qualification Training Guide Evaluation Form**

Chapter 1 –Poultry Anatomy					
How would you rate the following?	Excellent	Good	Average	Below Average	Poor
Sequence of the topics					
Chapter material					
The progression of the material					
Objectives					
Overall Rating					
Remarks:					

Chapter 2 –Antemortem Inspection

How would you rate the following?	Excellent	Good	Average	Below Average	Poor
Sequence of the topics					
Chapter material					
The progression of the material					
Objectives					
Overall Rating					
Remarks					

Volume 4: Introduction to HACCP – Qualification Training Guide Evaluation Form**Chapter 1 – Introduction to HACCP**

How would you rate the following?	Excellent	Good	Average	Below Average	Poor
Sequence of the topics					
Chapter material					
The progression of the material					
Objectives					
Overall Rating					
Remarks:					

Chapter 2 – The Relationship of HACCP to CGMP's and Sanitation

How would you rate the following?	Excellent	Good	Average	Below Average	Poor
Sequence of the topics					
Chapter material					
The progression of the material					
Objectives					
Overall Rating					
Remarks					

Volume 5: Poultry Sanitation – Qualification Training Guide Evaluation Form
Chapter 1 –Sanitation Performance Standards

How would you rate the following?	Excellent	Good	Average	Below Average	Poor
Sequence of the topics					
Chapter material					
The progression of the material					
Objectives					
Overall Rating					
Remarks:					

Chapter 2 – Sanitation Standard Operating Procedures

How would you rate the following?	Excellent	Good	Average	Below Average	Poor
Sequence of the topics					
Chapter material					
The progression of the material					
Objectives					
Overall Rating					
Remarks					

Volume 5: Poultry Sanitation – Qualification Training Guide Evaluation Form
Chapter 3 –Rules of Practice

How would you rate the following?	Excellent	Good	Average	Below Average	Poor
Sequence of the topics					
Chapter material					
The progression of the material					
Objectives					
Overall Rating					
Remarks:					

OVERALL COURSE EVALUATION

How would you rate the following?	Excellent	Good	Average	Below Average	Poor
Course Introduction					
Course Supplemental Material					
Course Overall Rating					
Remarks					

1. Are there topics that should be deleted from the Qualification Training Guides? YES NO

If Yes, what topics should be deleted?

2. Are there topics that should be added to the Qualification Training Guide? YES NO

If Yes, what topics should be added?

3. Do you have any suggestions for improving the Qualification Training Guides?

Appendix B

FSIS Needs Assessment Survey



**The FSIS Training and Education Committee
TEC-2001**

Needs Assessment Survey

Dear FSIS Employee:

As you have heard on the preceding video, the TEC-2001 committee is collecting information in order to assess the strengths of our current training program, target areas that need improvement, and identify the needs and expectations of employees regarding a training and education program for the future.

Today, you will have an opportunity to provide input to the TEC-2001 committee by completing this Needs Assessment Questionnaire. Asking you to complete this questionnaire is the best way we know to gather information from the field workforce. Although completion of the questionnaire is totally voluntary, we hope that you will take the remaining time to fill it out and return it to your meeting facilitator. We value your opinion and hope you will take this opportunity to provide information to us that will help us design a training and education program that will benefit all Agency employees.

Your input is important and we hope you will answer each question completely and frankly. Your answers will be kept strictly confidential, and there is no way any individual can be identified. We are interested only in your honest opinion, not in your identity.

Thank you for your participation. It is only through the efforts of people like you who believe in the mission of FSIS and who want to play a positive role in helping the Agency achieve its goals that we will continue to enjoy our reputation as an organization that not only has dedicated employees committed to excellence, but also an organization that serves this country well.

Sincerely,

Peggy Nunnery

Director, TEC-2001



Training and Education Committee (TEC 2001) Needs Assessment Questionnaire

Please answer all the questions as completely and accurately as possible. As training courses and materials are developed, your responses will help us determine how to best serve your needs. The information from this survey will only be used to prepare aggregate statistical reports of all responses received. Completion of this survey is totally voluntary. While we need your input and urge your cooperation, declining to respond will have no effect on you.

Information about You

1. What is your current job series?

- 1863 1862
- 0696 1382
- 0701 1801

2. What is your current grade?

- GS-5 GS-7
- GS-8 GS-9
- GS-10 GS-11
- GS-12 GS-13

3. What is your current job title?

- Food Inspector
- Consumer Safety Officer
- Veterinary Medical Officer
- Circuit Supervisor
- Consumer Safety Inspector
- Food Technologist
- Supervisory Veterinary Medical Officer
- Compliance Officer

4. What is your job specialization?

- Poultry slaughter inspection
- Red meat slaughter inspection
- Processed products inspection
- Combination (slaughter and processed products)
- Supervision
- District Office staff

5. How long have you been employed by FSIS?

- Less than 1 year
- 1-5 years
- 6-10 years
- 11-20 years
- 21-30 years
- More than 30 years

Please think about your current job and the knowledge and skills you possess.

6. Indicate the level of your agreement or disagreement that knowledge, skill, and ability in the following areas are necessary for you to be successful in your current position.

Strongly agree

Agree

Neither agree nor disagree

Disagree

Strongly disagree

- a. Animal Science (knowledge of food animals).....
- b. Biological Sciences
- c. Chemistry
- d. Communication (Written)
- e. Communication (Oral)
- f. Environmental Science (including sanitation)
- g. Epidemiology
- h. Food Science/Technology
- i. HACCP
- j. Math and Statistics
- k. Meat & Poultry Laws/Regulations...
- l. Microbiology
- m. Pathology
- n. Public Health
- o. Conflict Resolution

7. FSIS has provided me with the training I need to be successful in my current position

8. The training I have received is applicable to my job and makes my work easier

9. FSIS has provided me with training in the following areas (Mark all that apply):

- a. Animal Science (knowledge of food animals)
- b. Biological Sciences
- c. Chemistry
- d. Communication (Written)
- e. Communication (Oral)
- f. Environmental Science (including sanitation)
- g. Epidemiology
- h. Food Science/Technology
- i. HACCP
- j. Math and Statistics
- k. Meat & Poultry Laws/Regulations
- l. Microbiology
- m. Pathology
- n. Public Health
- o. Conflict Resolution

10. Please indicate your level of agreement or disagreement that you need additional training in the following areas in order to be more successful in your current job:

Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

- a. Animal Science
- b. Biological Sciences
- c. Chemistry
- d. Communication (Written)
- e. Communication (Oral)
- f. Environmental Science (including sanitation)
- g. Epidemiology
- h. Food Science/Technology
- i. HACCP
- j. Math and Statistics
- k. Meat & Poultry Laws/Regulations...
- l. Microbiology
- m. Pathology
- n. Public Health
- o. Conflict Resolution

Please think about the way your career development needs are handled in FSIS and indicate how much you agree or disagree with each of the following statements.

Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

- 11. My supervisor and I discuss my training needs at least annually
- 12. My supervisor encourages me to enhance my level of knowledge, skill, and ability
- 13. I am aware of training opportunities in FSIS
- 14. I have an understanding of the training I need in order to move forward in my career in FSIS

No
Yes

- 15. I have a current Career Development Plan (FSIS Form 4410-1, also known as IDP or EDP) on file
- 16. I have taken Continuing Education courses:
paid for by FSIS
paid for personally

Now think about the formal classroom and on-the-job training you received when you first joined FSIS:

After joining FSIS, I received:

No
Yes

- 17. No formal training at all. (If you received no formal training mark 'Yes' and skip to Question 24.)
- 18. On-the-job training before I attended formal training
- 19. On-the-job training after I attended formal training
- 20. Formal training within the first year of employment
- 21. No formal training until after the first year but within the second year of employment
- 22. No formal training until after the second year but within the third year of employment
- 23. No formal training until after the third year of employment

Now think about training outside the classroom such as using a CD or videotape, or on a computer accessing the Internet (also known as "distance learning" or computer-based training). (Mark all that apply.)

- 24. A computer is available to me at my duty station.
- 25. I currently use a computer at my duty station.
- 26. I have completed FAIM training.
- 27. I use a computer at home.
- 28. I use the internet.
- 29. I have taken a training class on videotape.

Strongly agree
Agree
Neither agree nor disagree
Disagree
Strongly disagree

Finally, indicate your level of agreement or disagreement with each of the following statements about your needs and preferences for computer-based training.

- 30. I feel I am proficient in using a computer . .
- 31. I would feel comfortable participating in a course outside the classroom setting
- 32. I would need additional computer training prior to participating in any computer-based or distance learning . .
- 33. I would like to take computer-based courses to meet my training needs
- 34. I would be willing to take computer-based courses on my own time
- 35. I have participated in a job-related self-study or distance learning course.
 Yes No

Thank you for participating in this survey.