A STUDY OF THE DISTRIBUTION RECEIVING AND STORAGE QUALITY SECTION IN-HOUSE TRAINING GUIDE AT TINKER AIR FORCE BASE

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TABLE OF CONTENTS

Chapter Page

LIST OF TABLES

CHAPTER I

INTRODUCTION

The function of the Distribution Receiving and Storage Quality Section (DSQCR) office at Tinker Air Force Base in Midwest City, Oklahoma, was to perform thirty-three distinct quality assurance programs related to the shipment, receipt, and storage of Air Force materials. An elaborate training program was already in use. The purpose of the training program was to provide DSQCR personnel with the knowledge and skills necessary to perform their quality assurance duties. Conspicuously missing from this training program was training that was directly related to the performance of these thirty-three quality assurance programs. The researcher wrote an in-house training guide to fill this training gap. The DSQCR In-House Training Guide had its conceptual beginning in a self-directed learning project undertaken by the researcher to fulfill the requirements of a course taught by Dr. Malcolm Knowles. The course was a seminar in self-directed learning.

Problem

The problem addressed in this study was a lack of information concerning the use of the Distribution Receiving and Storage Quality Section In-House Training Guide at Tinker Air Force Base.

Purpose

The purpose of the study was to perform a descriptive study of the users' perceptions of the DSQCR In-House Training Guide at Tinker Air Force Base.

Research Questions

This study sought to answer the following research questions:

1. Did the training guide assist the users in the performance of their jobs?
2. Which segments were used most often?
3. Which segments were used least often?
4. What were the helpful features of the training guide as perceived by the users?
5. What were the detrimental features of the training guide as perceived by the users?
6. What suggestions for improvement were offered by the users?
7. What were the GS grades of the training guide users?
8. What were the job designations of the training guide users?

Scope

This study was limited to a description of the users' perceptions of the DSQCR In-House Training Guide relative to the research questions stated in the previous paragraph.

Assumptions

The researcher assumed that the users surveyed were accurately

responding as to their true feelings regarding their use of the training guide.

Background of the Problem

Denial Research Programs Self-Directed Learning Project

At the time of enrollment in the Knowles' course, the researcher had just been assigned to three new quality assurance programs in her office at Tinker Air Force Base. She was tasked with learning and undertaking the responsibility for the denial research programs. The term "denial" referred to the following situation: The computer records indicated that there were supply assets available but when the shipment was in process of being made, it was discovered that the assets (or part of the assets) were not available for shipment. In this case, a "denial" occurred.

The denial research program consisted of three distinct but related quality programs designed to check the actual physical warehouse locations and all the applicable computer resources to verify that the supply assets were not available for shipment at the time of denial and to locate the source and reason(s) for any errors during the transactions.

At that time, the denial research programs had only recently been established. Therefore, there were very few printed guidelines and only one knowledgeable in-house specialist.

The researcher undertook a lengthy self-directed learning project aimed at learning all aspects of the denial programs. The result was

the dual fulfillment of both the requirement for the Knowles' course and the new office assignment.

Upon completion of the self-directed learning project, the researcher discussed the project with management at Tinker Air Force Base. Management envisioned this project as a basis for an in-house training guide. The researcher was then given a special assignment to write an in-house training guide consisting of thirty-three segments, one for each quality assurance program in operation at that time in the areas of responsibility of the DSQCR office.

Need for the DSQCR In-House Training Guide

Detailed curricula consisting of both on base and off base courses as well as cross-training with other related offices and different directorates were part of the overall training plan which was a requirement for the usual progression from a GS-05 trainee to a GS-09 journeyman within a two-year period. Missing from this training plan was a relative lack of attention to the in-house aspects of training, which specifically dealt with the thirty-three quality assurance programs that were the day-to-day responsibility of the DSQCR staff. There were no formal guidelines for the performance of these programs. Training in the in-house arena was left to individual initiative and whatever on-the-job training might be available.

It was the consensus of management opinion that in-house training had been neglected and that the in-house training guide would satisfy the training requirements in this area. The in-house training guide was therefore designed to fill the identified training gap.

Each quality assurance specialist (QAS) was assigned to serve as

"primary" and "alternate" on certain of the thirty-three programs. "Primary" meant that it was the responsibility of the designated QAS to perform the programs at the set intervals (daily, monthly, quarterly, semi-annually, annually). The "alternate" QAS was to fill in and perform the program in the absence of the "primary" QAS. Management designated the primary and alternate assignments. Assignments were periodically rotated at intervals of six months to one year, but this varied considerably based on factors such as retirement, promotion, extended sick leave, changes in work load, special projects, etc.

The procedures for the performance of each program were, in most cases, not in written form, although applicable regulations afforded general guidelines. Policy letters were often misplaced or obsolete. Many times any resident expert in a certain quality assurance area had retired, transferred, or received a promotion. There was intense competition for the few available promotions contributing to reticence on the part of one employee to help another with on-the-job training.

Development of the DSQCR In-House Training Guide

The researcher used the self-directed learning project described earlier as a general guideline for the development of the training guide. She studied each of the thirty-three quality assurance programs including their procedures, policies, applicable regulations, charts, and computer products. She also talked with experts in all the subject areas covered by the training guide in order to gather relevant data. The experts contacted included, but were not limited to, in-house experts, knowledgeable quality assurance specialists, and production counterparts.

A standard format was formulated so that each segment would be similar in content and organization for easy reference. There were thirty-three segments. Each segment was placed in a three-ring binder notebook and labelled externally for easy identification. Each segment was also tabbed and labelled internally. Each page was enclosed in a document protector for durability.

Each training segment consisted of the following sections:

general procedures

applicable regulations

sampling

procedure for selecting the sample

inspection

reports

viewgraph charts

charts in inspection areas

program notebook

The information in each section was detailed in narrative form, and actual samples of all the elements described were included. Allowance was also made for inclusion of any additions to the standard format in order to include any unique characteristic or requirement of a program. A copy of one training guide segment (SL1 Locator Accuracy) is included in Appendix H.

The titles of the thirty-three training guide segments were:

Chemical Products

Containerized Engines

Dispatching

Incheck to Receiving by Material Processors

Locator Accuracy

Munitions Annual Survey Inspection

Munitions Receiving Inspection

Munitions Selection for Shipment Inspection

Munitions Storage and AFTO Form 15 Inspection

Processing of Receipts from Contractors

Quality Check of Denied AFLC Form 20 Posting

Quality Check of Denied DD Form 1348-1 Posting

Quality Check of Denial Document Research

Quality Check of TCTO Kit Records

Quality Check of TCTO Kit Storage

Radioactive Material

Receipts from Associates

Receipts from Maintenance

Receiving Inspection

Reports of Damaged Property

Rewarehousing Projects

Shipping Containerized Engines

Storage Methods

Surveillance of Lumber Products

Tailgate Date Accuracy

Trailer-Mounted Engines

U1050-II Location File Maintenance Actions

U1050-II Locator Accuracy

U1050-II Stock List Change Actions

U1050-II Storage Methods

Warehouse Automated Location File Maintenance Actions

Warehouse Manual Location File Maintenance Actions

Warehouse Stock List Change Actions

Use of this in-house training guide was strictly voluntary. The guide was intended to be for reference and training to assist in job performance.

The training guide project, undertaken as a special assignment in addition to regular duty assignments, lasted two years from beginning to completion in May, 1983. Updates were made to the training guide in May, 1983. Upon completion of the updates, the DSQCR In-House Training Guide was complete and ready for use.

CHAPTER II

REVIEW OF RELATED LITERATURE

Literature on the characteristics, development, and evaluation of in-house training guides of the type and application covered in this study was scarce; therefore, mostly literature of a broader nature relative to on-the-job training in business and industry was reviewed. The review of related literature was organized into the following sections: (1) Apprenticeship as a Forerunner of On-the-Job Training, (2) On-the-Job Training, (3) A Comparison of On-the-Job Training with Apprenticeship, (4) Determining Training Needs, (5) Learning Theory and Industrial Training, (6) On-the-Job Training Versus Formal Course Training, (7) Factors Affecting the Efficiency of Training Guides, (8) Earlier Research on Training Manuals in Kansas, and (9) Evaluation in Training.

Apprenticeship as a Forerunner of On-the-Job Training

DeCarlo and Robinson (1966, p. 2) described the apprenticeship system as "the oldest form of education in business." The apprenticeship system involved a contract in which one person referred to as a master undertook to teach an apprentice some trade or profession. DeCarlo and Robinson (1966, p. 2) referred to ". . . evidence in the Code of Hammurabi (2285-42 B. C.) that the practice was so firmly

established in ancient Babylonia as to warrant state supervision." They also stated that references to apprenticeship appeared in Egyptian papyri during the Christian era and also in the works of Xenophon, Aristotle, and Plato.

Anderson (1949, p. 2) also discussed apprenticeship as follows:

> A careful study of historical records indicates that since earliest times, and in one form or another, apprenticeship has been the chief method of educating the young. The relationship between father and son is the basis for apprenticeship as an educational institution. As men became more civilized, they tended to specialize in one of the various occupations characteristic of a civilized race, but it continued to be customary for the eldest son to learn the craft his father practiced . . .

Anderson (1949, p. 2) also added that historical evidence revealed apprenticeship as "the chief means for educating craftsmen in ancient Greece, Rome, and Egypt."

DeCarlo and Robinson (1966) further detailed the history of the apprenticeship system:

> But the apprenticeship system achieved its greatest popularity and influence during the Middle Ages, when it formed an integral part of the network of trade guilds and corporations. These guilds and corporations were composed of skilled workers in various fields. No one who was not a member of a particular guild was allowed to practice or teach that craft or profession. A young man who wished to learn a given craft apprenticed himself to a master (a member of the guild governing that particular craft). The term of apprenticeship varied, but seven years were usually considered the minimum time within which an individual might learn his craft or trade and repay his master, by his services, for the training received . . . After an apprentice had given proof of his proficiency in his chosen field, he became himself a master and a member of the guild or corporation, with the right to practice his art and to teach it to others (pp. 2-3).

Apprenticeship began declining with the growth of commerce and the emergence of manufacturing. The Industrial Revolution was responsible for hastening the decline of traditional apprenticeship since the

skills required by factory workers were few, simple, and easily learned. Also, mechanization was already being introduced.

DeCarlo and Robinson (1966, p. 3) stated:

> . . . it was no longer feasible to spend seven years learning a particular skill when an improvement of the machinery involved might render the skill obsolete long before the end of that period.

The public schools later came to assume the responsibility for vocational training. DeCarlo and Robinson (1966) discussed the contributing factors to this occurrence as follows:

> The growing use and increasing complexity of machines in the productive process, the tapering off of the waves of skilled immigrants, and the onset of the decline of agriculture (which brought masses of untrained farm workers to the cities) made it essential that some method be devised to provide skilled workers for the nation's economy (p. 5).

DeCarlo and Robinson (1966, p. 5) continued by saying:

> . . . even after vocational education had become a standard offering of the public school system, the graduates of these programs proved too few to meet the ever increasing demands of industry.

DeCarlo and Robinson (1966) continued their historical narrative by relating the circumstances surrounding the manufacturers' assumption of some responsibilities for training:

> By the end of the nineteenth century, the problem had assumed the dimensions of a crisis. Faced with their own pressing need for skilled labor and with the fact that vocational education programs were still too few and too recently instituted, manufacturers found themselves obliged to take on the task of providing their own education programs for prospective members of the labor force. Their assumption of responsibility gave rise to the corporation schools (p. 5).

These two authors described the corporation schools as having been developed without a rigid pattern but in accordance with the policies and needs of the organization. Some of these corporation schools

provided full-time instruction for workers while others alternated actual work experience with classroom instruction.

DeCarlo and Robinson (1966, p. 9) concluded this portion of their historical perspective by adding that during the past century formal training programs were established due to the increasing size and complexity of business.

On-the-Job Training

McGehee and Thayer (1961, p. 186) described on-the-job training as "perhaps the most frequent method employed in the training of employees." These two authors discussed the variety in types of on-the-job training in different organizations. They also stressed that, in reality, on-the-job training had to take second place to the primary production function.

DeCarlo and Robinson (1966) listed what they considered to be the two basic functions of on-the-job training:

1. To introduce new workers to the work process by allowing them to learn through observation and productive contribution.
2. To upgrade and retrain workers whose old skills cannot meet the requirements of changes in the technical or manufacturing process (p. 53).

A Comparison of On-the-Job Training with Apprenticeship

DeCarlo and Robinson (1966) in comparing apprenticeship with on-the-job training made the following distinctions:

Apprenticeship	On-the-Job Training
1. formal contract	1. no formal contract
2. fixed length of service	2. length of training varies with skill

3. designed for learning a craftlike skill	3. designed for learning a work process
4. acquired skill immediately transferrable	4. skills less immediately transferrable (p. 53)

These authors concluded this comparison by adding that the two approaches to training did have a similarity in the amount of material taught.

Determining Training Needs

Rose (1964) advocated that an analysis of the occupation provided the basic training needs. He added that other on-the-job training needs were apparent when the following conditions existed:

> poor cooperation among employees
> harmful rumors
> excessive complaints
> poor housekeeping
> poor use of safety equipment
> excessive waste in materials
> abuse of equipment
> absenteeism
> orders ignored
> lack of pride in workmanship
> inaccurate records
> time killing (p. 253)

He advocated that while training might not be able to solve all the problems he listed, training was usually at least a part of the solution.

Bienvenu (1969) described retraining as an indication for determining training needs. His comments were:

> The dramatic change in the nature of work - very often necessitating the learning of one or more completely new skills in a lifetime - has brought about considerable interest in retraining. It is not only that change is having an effect on worker status and proficiency; of greater significance is the fact that change can be expected to be a continuing occurrence, increasing in momentum and impact. In this kind of job climate, it is no longer the case, as was the situation until relatively

> recent times, that the learning of a skill implies job security and continuing ability to cope with a job assignment (p. 121).

Fryer, Feinberg, and Zalkind (1956) dealt with the topic of establishing training needs. They described how to determine where training is needed by saying: "The first task in establishing where training is needed in an industrial company is to isolate the areas of ineffective operations" (p. 40). These authors discussed opinion gathering, operations checklist, and checklist for a vocation as methods to be used for obtaining the needed information.

Byers (1974) provided a detailed and lengthy discussion relative to the determination of training needs. He delineated three broad categories of training needs: "(a) organizational needs for training and development; (b) individual employee needs; and (c) training needs of the small work unit" (p. 91).

One method Byers (1974) advocated for analysis of organizational training needs included the following:

1. Clear definition of the organization's mission, including immediate and long-range goals.
2. Profiling of the subunits of the organization to define the objectives and to identify the functions which have been established to carry out the objectives.
3. Define factors which inhibit accomplishment of goals and objectives. This is accomplished through analysis of all sources of data which indicate problem areas and/or production shortcomings.
4. Summarizing organizational needs which can be met through training (pp. 93-94).

Byers (1974) expanded this topic further by listing the sources of information available with regard to analysis of organizational needs:

1. Statements of organizational objectives, missions, and goals
2. Direct observation of work
3. Management records of work

4. Surveys of attitudes
5. Research studies
6. Job-task analysis (p. 94).

Byers (1974) espoused the importance of individual training needs in the determination of overall training needs:

> All determination of training needs eventually focuses on dealing with specific needs of employees involved in performing specific job tasks or duties. Without such specific focus, it is probable that a great deal of over-training and non-relevant training will be conducted. Without such focus, selection for training courses often evolves to a 'quota' system . . . Training should be responsive to requirements for improved performance and to producing terminal behaviors needed by the system. Training needs, then, must be derived from known work requirements and from the adequacy of the performance of specific tasks required to get the job done (pp. 95-96).

McGehee and Thayer (1961) presented a discussion relative to the determination of training needs that was similar in some respects to the ideas presented by Byers. They advocated that determination of training needs be made using organization analysis, operations analysis, and man analysis. They described organization analysis as focusing on the whole business enterprise and as consisting of the following elements:

1. a statement of the organization's objectives
2. analysis of human resources
3. analysis of efficiency
4. analysis of organizational climate through
   (a) indirect indices
   (b) direct indices (p. 60).

McGehee and Thayer (1961) continued by describing operations analysis:

> . . . the procedure for determining (1) what tasks constitute a job, (2) how these tasks are to be performed, and (3) what behavior is required of an employee in order to perform the tasks as specified. It is the blueprint for organizing and conducting training for a specific job (p. 86).

McGehee and Thayer (1961) concluded their discussion of training needs with a description of individual training needs:

> Because it is ultimately the behavior of the individual employee which is modified by training, we must focus upon his training needs. This determination of individual training needs we call man analysis and consists of two major steps: summary man analysis and diagnostic man analysis . . . (p. 124).

They detailed the following as the major man analysis information sources: "1. objective records, 2. devised situational measures, 3. observational measures" (p. 125).

The Research Committee of the American Society of Training Directors (Proctor and Thornton, 1961) listed eleven techniques for determining training needs:

1. Observations
2. Management requests
3. Interviews
4. Group conferences
5. Job or activity analysis
6. Questionnaire surveys
7. Tests or examinations
8. Merit or performance ratings
9. Personnel records
10. Business and production reports
11. Long-range organizational planning (p. 34).

Broadwell (1975) approached the topic of determination of training needs in broader terms. He stated:

> One of the obvious reasons for training is that the employees can't do something that the job requires should be done. There is some skill they have yet to perfect or acquire, or some knowledge they are lacking that keeps them from doing a completely satisfactory job . . . Such a condition does more than merely justify the training. It makes training a necessity (p. 7).

Broadwell (1975) added that there very often existed a training need when an employee was doing something incorrectly and when a job was being phased out. He summarized his comments on the determination of training needs by saying: "When it comes right down to it, all of this could be condensed to the simple fact that we train because there is a deficiency or an expected deficiency" (p. 11).

Learning Theory and Industrial Training

McGehee and Thayer (1961) discussed learning theory and industrial training. They emphasized that the purpose of industrial training was learning. They related learning to industrial training as follows:

> The central process in industrial training is learning. When we establish and implement a training program for employees, we do so with the expectation that the experience in the training situation will modify the behavior of the employees who have participated . . . this modification of behavior is the result of the process known as learning. Whether our training program is for a production employee, a secretary, an engineer, a supervisor, or a vice president, the program is directed to change the behavior of the individual so that he can meet demands of his job more adequately (p. 126).

McGehee and Thayer (1961) outlined the following factors and principles of learning theory to be particularly relevant to industrial training:

1. the nature of the learning process
2. motivation and learning
3. factors affecting learning efficiency
   a. practice and conditions of practice
   b. individual differences
   c. nature of material to be learned
4. transfer of training and maintenance of behavior (p. 130).

On-the-Job Training Versus Formal Course Training

Evans, Holter, and Stern (1976) wrote an in-depth research article outlining five major criteria categories for determining whether or not a competency should be taught on-the-job or in a formal training course. The criteria were:

1. Institution - related criteria
   a. Costs - Are there significant cost differences between on-the-job and classroom-based training?

b. Capacity - Does the organization have sufficient trained personnel to conduct on-the-job training? Are formal training courses unavailable, obsolete, or otherwise inapplicable?
c. Philosophy and policy - Are there institutional biases due to labor-management contractual agreements, employer traditions, or employee imposed restrictions that limit the range of acceptable training techniques?
d. Availability/suitability of physical resources - Will use of production equipment for training significantly affect the production effort?
e. Reality of atmosphere - Can work conditions be simulated sufficiently in a nonproduction setting?

2. Quantity and speed-related criteria
   a. Numbers of personnel to be trained - What will be the average flow of trainees per training period?
   b. Persistence of demand for trained personnel - Is demand for this training likely to continue?
   c. Need to minimize training time - Are trained personnel needed quickly?
   d. State of the business cycle - What does the supply of trainable individuals look like at the particular point in time?
3. Competency-related criteria
   a. Frequency - How often is the skill to be taught used on-the-job?
   b. Criticality - How critical is correct performance of the skill to completion of the job task?
   c. Uniformity - Is it necessary that all trained personnel have the same skills and follow identical procedures?
   d. Complexity - How difficult is the task to learn?
   e. Quality control - Are there severe quality requirements on the good or service being produced?
   f. Instrumentality - Is the skill instrumental to acquiring other required skills?
4. Trainee-related criteria
   a. Prior experience - Do the trainees generally have job relevant behaviors?
   b. Abilities/aptitudes - Are the trainees homogeneous in their basic aptitudes?
   c. Disabilities - Do the trainees have special needs due to mental, physical, or emotional handicaps?
   d. Preferred learning modes - Do those to be trained respond better to one training approach than to another?
   e. Judgments of performance of graduates - Do the postgraduates from one type of training perform better on-the-job than the graduates from other types of training?
5. Other criteria
   a. Port of entry - Is the job located within the

structure of an internal labor market?

b. Screening device - Is the training program to serve an applicant screening role as well as a training role?
c. Passage of time - How long between completion of the training and use of the skills?
d. History and pragmatism - Does the decision seem right (pp. 21-38).

Mangum (1984) conducted an extensive review of literature in this same area. He found no additional research that had been published since the publication of the article by Evans, Holter, and Stern (1976). Mangum also conducted case studies relative to this same topic in a wide variety of organizations:

> a computer manufacturing firm, a public power utility, the Internal Revenue Service, a nonteaching hospital, a gas company, a uranium mine, a construction firm, a national self-service drug store chain, a basic steel plant, a nonunion building contractor, a natural gas transmission company, etc. (p. 49).

Interviews dealt with the same topics contained in the Evans, Holter, and Stern article. The results of the case studies substantiated the findings in the referenced article. Mangum (1984) concluded with the following comment: "Most notable is the cost consciousness of the organizations in decisions concerning choice among alternative training techniques" (p. 57).

Factors Affecting the Efficiency of Training Guides

One article dealt with the efficiency of training guides. The article, written by L. J. Gordon Associates Creative Training Guides, Inc. (1981) was based on the premise that

> Experience has shown that well-designed training guides can be extremely efficient and can perform important training/development functions with far less fuss and muss,

and at far less cost, than other media (p. 6).

The following were outlined as key factors considered in the development of Creative Training Guides:

Factor 1: Optimum Learning Module
Factor 2: More Content in Less Space
Factor 3: Effectiveness of Content
1. Does it deal with key and relevant on-the-job matters?
2. Can the reader relate the content to the concrete circumstances and needs on the job?
3. Does it get to the heart of the matter?
4. Does it deal with the right aspect of the matter?
5. Does it provide practical answers to real problems?
6. Are the 'why' and the 'how' as well as the 'what' covered?
7. Is it expressed as clearly and succinctly as possible?
8. Are all redundancies, irrelevancies and low practicality matters kept out?
9. Does it evoke, clarify, and amplify knowledge the (adult) reader already has?
10. Does it reawaken insight the reader once had but has forgotten, overlooked, or allowed to slip away?
11. Does it widen the reader's perspective?
12. Does it flex and stretch the reader's mind as well as structure it?
13. Does it motivate and inspire as well as inform?
14. Does it prompt the reader to sense the connotations of the words as well as their denotations?
15. Does it relate to and integrate with the other ideas in the guide?
16. Does it reflect a better way of life on the job?
17. Will it hold up one, five, or ten years from today?

Factor 4: Focused for Line Supervisors and Managers
Factor 5: Compatibility with Organizational Policies, Procedures and Circumstances
Factor 6: Reliability/Validity of Content
Factor 7: Usefulness for Meetings
Factor 8: Permanence and Continuity
Factor 9: Advantages of Reading Materials
Factor 10: Integration/Coordination of Ideas
Factor 11: 'State of the Art'
Factor 12: Overall Productivity (pp. 6-8).

L. J. Gordon Associates Creative Training Guides, Inc. (1981) identified Factor 3, effectiveness of content, as "the most important single factor in the efficiency of training guides" (p. 8).

Earlier Research On Training Manuals in Kansas

Stockton conducted a survey of employee training in Kansas department stores in 1925. Questionnaires were sent to all department stores located in cities with over five thousand inhabitants. Thirty-seven stores returned questionnaires. These stores were located in eighteen different cities. Regarding his findings relative to training manuals, Stockton (1925) commented:

> Only one establishment was found to have published a manual for the guidance and information of employees. It is interesting to note that this firm issued its first manual as early as 1880. Other editions appeared in 1905 and 1917 (p. 18).

Stockton (1925) emphasized the need for update and revision of training manuals:

> In view of the various changes in store policy and rules that must necessarily be made from time to time, a manual, if printed, probably should be issued in new editions every two or three years (p. 18).

Stockton conducted another study in 1954 concerning job training. In this study he sent questionnaires to Kansas manufacturers with one hundred or more employees. Completed questionnaires were returned by sixty-three companies. Seventeen of the sixty-three used training manuals.

Evaluation in Training

Otto and Glaser (1970) stated that training evaluation was an important but very often neglected area:

> No right thinking training director doubts the need to know whether his programs are actually accomplishing their goals. Evaluation is like mother and country - everyone wholeheartedly subscribes to the dogma. Nevertheless, few are willing to take the time to allocate the money to find out if the dress really fits the way the pattern said it would (p. 153).

Bass and Vaughan (1966) agreed that evaluation in training programs was often neglected:

> Generally training programs are designed with little or no thought as to how they will be evaluated. The prescribed techniques are assumed capable of moving the trainee toward the stated objectives. Some do; some do not. Most of the time we never know what a particular program accomplished. Usually, the criterion of accomplishment is a statement by the trainees indicating whether they think they learned something; less often, the criterion is based on whether the trainees' supervisors think they learned something and seldom on how much trainees actually learned. In industry we employ many unevaluated techniques . . . (pp. 139-140).

Tracey (1968) also described training evaluation as a neglected area:

> Until recently, evaluation as such has not been a serious concern of training personnel. To a very great extent, training and development programs have been permitted to stand on assumed merits, and there has been little demand, either internally within training activities or externally from top management, for elaborate schemes of evaluation (p. 11).

Tracey (1968) attributed this lack of interest in evaluation to two factors:

1. the nature of training and development programs themselves
2. the absence of a suitable conceptual framework and adequate instruments for meaningful evaluation (p. 11).

He continued by saying that the evaluation situation was changing

rapidly:

> In recent years, in-company training and development programs have grown rapidly, and there has been a phenomenal increase in the resources committed to them in most enterprises. Top management is beginning to demand that these programs show a measurable return on investment for the facilities, personnel, time, and money expended. Executives are now asking: Does training pay off? Is it producing the behavioral changes it claims to? How does it show in the profit and loss column (p. 12)?

Buccino (1983) commented that the modern era of educational evaluation commenced during the mid to late 1930's with the doctrine of Ralph Tyler: "Clearly state the objectives of the program; then assess the progress toward meeting them" (p. vii).

Numerous definitions for training evaluation were given. Barber (1969, p. 51) described evaluation as "the analysis of the value of training." Davis and Humphreys (1983) described evaluating a program as a means for gathering information to determine the worth or merit of a training program.

The importance of evaluation in training was stressed by many authors. Heyel (1953) emphasized the importance of evaluation:

> Until our cybernetic scientists have succeeded in making electronically operated robots perform all of the work of the world, the problem of training will always be one of management's primary concerns . . . there is either poor training or good training, and since in practically every enterprise labor is still the biggest controllable cost, it behooves management to see that it employs good training rather than poor (p. vii).

Davis and Humphreys (1983) addressed the importance of evaluation by answering the question 'Why does evaluation matter?':

> Evaluation gives you knowledge . . .
> helps you plan . . .
> results help shape policy . . .
> helps you document achievement . . .
> helps you attract funds . . .
> helps you identify successful innovations . . .

> identifies the best and propagates it . . .
> educates the public . . . (pp. 3-4)

Wentling and Lawson (1975) answered the question 'Why evaluate?' as follows:

> to aid in planning . . .
> to aid in decision making . . .
> to upgrade program personnel . . .
> to improve programs for students . . .
> to insure the accountability of expenditures . . .
> (pp. 18-20)

Tracey (1968) discussed the importance of evaluation in training by saying:

> Evaluation is important to training and development activities, just as it is to any other organizational element, as a means of determining where the activity is at any given moment and of providing a baseline for measuring progress. Evaluation is critical in determining the value of training and development programs and activities to the enterprise and of appraising the efficiency and effectiveness of the function's performance of the tasks set for it. In unadorned terms, evaluation can determine whether the time, energy, and money expended in planning and operating programs of training and development are producing results sufficient to justify the investment - in other words, whether such programs are meeting the needs of the enterpise and its employees and whether they are doing these things efficiently (pp. 12-13).

Tracey (1968) continued his description of the importance of evaluation in training by saying that an adequate evaluation program was critically important in three functional ways:

> First, the steady growth of training and development activities in most enterprises, which in total involve millions of people and many more millions of dollars, makes it essential that those responsible for the management of these activities be able to defend their programs by knowing the accomplishments and contributions of the activities to enterprise goals . . . Second, evaluation provides trainees with a means of determining the efficiency, effectiveness, and utility of both management and operation . . . Third, evaluation provides a starting point for the design of an improvement program (p. 13).

Engel (1974) stressed the importance of an appropriate evaluative

attitude:

> Maintaining the proper attitude towards evaluation is a prerequisite to understanding concepts and evaluation methods . . . the evaluative attitude searches for evidence of usefulness and proof of accomplishments in terms of causal relationships . . . the questionning and probing attitude which is so vital to successful evaluation (p. 253).

Tracey (1968) listed several fundamental assumptions underlying the need for training evaluation:

1. Any training or development program must be validated; that is, the efficiency and effectiveness of programs must be objectively determined. They must be subjected to critical evaluation and must demonstrate their value to the organization if they are to be retained.
2. Any training or development program can be improved - no program is perfect. Although the effectiveness of a program may have been demonstrated, further refinements are possible.
3. Improvement of any training or development program can be effected by:
   (a) Objective and coordinated evaluation of every aspect of the operation.
   (b) The application of imagination and creative thinking by all personnel.
   (c) Deliberate collection of the observations, ideas, and thinking by all personnel.
   (d) Critical analysis and synthesis of findings, ideas, and alternatives.
   (e) Systematic, time-phased development and tryout of policies and procedures as well as identification of resources (people, equipment, materials, time, space, and money) needed to carry out plans (pp. 13-14).

Tracey (1968) proceeded with his discussion of evaluation by listing all the principles which he felt should guide all evaluation efforts:

1. Evaluation must be conducted in terms of purposes . . .
2. Evaluation must be cooperative . . .
3. Evaluation must be continuous . . .
4. Evaluation must be specific . . .
5. Evaluation must provide the means and focus for trainers to be able to appraise themselves, their practices, and their products . . .
6. Evaluation must be based on uniform and objective methods and standards . . . (pp. 14-15).

Kirkpatrick (1970) divided evaluation of training programs into four categories:

> . . . reaction, learning, behavior, and results. Reaction evaluation refers to how well the trainees liked the program. Learning evaluation refers to how they learned facts, principles, and techniques. Behavior evaluation asks the question, 'What changes in on-the-job behavior have occurred as a result of the training?' Results evaluation requires concrete evidence that the training actually reduced costs or produced other improvements for the organization (p. 154).

Kirkpatrick's "concept of total evaluation" required the use of all four categories (p. 154).

Engel (1974) divided training evaluation into broad categories of formal and informal evaluation:

> The written test . . . the report on trainee progress, the requirement that the trainee serve as the leader in a course in conference leadership, are illustrations of formal checking on how well (or poorly) the trainee is doing. The informal instruments are harder to isolate, and are usually completely co-mingled within the teaching process itself (p. 260).

Tracey (1968) discussed approaches to evaluation in terms of external and internal evaluation. He believed that training and development programs should be evaluated from these two complementary approaches:

> External criteria are used to measure the results of programs when the employee gets back on the job. By applying external criteria - reports, observations, interviews, questionnaires, work samples, and statistics - the evaluator can determine the value of a training program to the organization. Value is usually stated in terms of organizational benefits and, in some cases, can be translated into dollars and other numerical indexes of gain or loss (p. 19).

He described internal evaluation as follows:

> Internal evaluation may take several different forms.
> 1. Participation measures. The most common form of evaluation is the measurement of participation in terms of the number or percentage of successful

completions for any given program. This type of evaluation equates attendance with quality or success . . .

2. Comparison with the norm. Another common form of evaluation is the comparison of enterprise programs with those offered by other enterprises of similar size and objectives . . .
3. Comparison with a hypothetical concept of a 'quality' program. In this instance, appraisal is based on someone's notion of what a good program should be . . .
4. Measuring behavioral change. Measuring the amount and direction of behavioral change within the training setting is still another method of internal evaluation . . .
5. Participant reactions. Very often end-of-meeting trainee reaction sheets or questionnaires are used to evaluate short-term training activities such as meetings and conferences . . .
6. Measurement against specific standards. Although there are no general standards against which to measure the quality of training programs, there have evolved through experience and experimentation certain specific standards . . . which are indicators of a 'quality' program . . .
7. Experimental research. After a training program has been evaluated against external and internal criteria and it has been concluded that some specific aspect of the program was faulty, it then makes sense to try out alternative remedies under controlled conditions (pp. 20-22).

Otto and Glaser (1970) addressed the uses of evaluation:

> Evaluation is used in its broadest sense to include the full range of value judgments about training, from what trainees think of your program to what dollars and cents difference the whole effort has made to your organization (p. 152).

They continued by describing the purpose of evaluation:

> . . . to find out whether the goals and content of the training program are compatible with the mission and current needs of the organization, and to find out whether the goals are being reached in the most effective and efficient manner so that any necessary adjustments may be made (pp. 152-153).

Bass and Vaughan (1966) listed the following principles of

evaluation:

1. Evaluation should be planned at the same time as the training program and should constitute an integral part of the total program from beginning to end . . .
2. Evaluation should follow the most rigorous experimental design possible . . .
3. Evaluation should be carried out at several levels and at several times . . . (pp. 144-147).

Warren (1969, p. 113) categorized evaluation of training into three types: "evaluation during the training action, evaluation at the end of the training action, and evaluation on the job."

Tracey (1968) discussed the overall steps in evaluation by comparing them to the steps in problem-solving techniques:

> In evaluation, essentially the same problem-solving steps are followed. First, the need for evaluation is recognized, the areas to be evaluated or measured are identified, and the procedures and instruments to be used in the evaluation are selected or developed. Then evaluators are chosen and trained in the procedures and in the use of the instruments. Once the data are collected and analyzed, conclusions are drawn and alternative courses of action are identified. Finally, the decision or course of action is subjected to trial, and the results are checked (p. 16).

Barber (1969) discussed methods of evaluation. He described these methods as "continuous assessment" and "terminal assessment":

> In continuous assessment, tests are applied throughout the whole training process and are designed to measure developing performance, over the whole period of training. Traditional terminal assessments have the disadvantage of testing the trainee at only one point in time when the 'mood of moment' or 'state of health' might be significant (p. 52).

Engel (1974) listed the following evaluation methods:

> before-after quantitative count
> before-after qualitative determination
> post-training trainee questionnaire
> post-training trainee interview
> post-training group trainee conference
> before-after training/supervisor questionnaires and interviews (pp. 263-269).

Fredericksen (1965) provided his list of data-gathering techniques or types of training evaluation measures:

1. solicit opinions
2. administer attitude scales
3. measure knowledge
4. elicit related behavior
5. elicit 'what I would do' behavior
6. elicit lifelike behavior
7. observe real-life behavior (p. 326)

Davis and Humphreys (1983, pp. 23-24) presented a discussion of five major data gathering techniques: "questionnaires, interviews, observation, tests, and documents, records, materials."

Bass and Vaughan (1966) pointed out the importance of clearly defined training objectives and management support to the success of evaluation:

> In general, good training conditions produce good conditions for making an evaluation. That is, when training objectives have been clearly defined and related to company goals and when management is actively committed to the program, then training may be carried out under favorable conditions. And likewise, the evaluation of training can proceed in a clear and unclouded atmosphere, free of secret strategy; and the information needed for evaluation can be collected much more freely. The opposite is true when training objectives are unclear or when management does not support the training program (p. 144).

Rutman (1977, p. 18) described an "evaluable program" as one which meets these conditions: "(1) a clearly defined program; (2) clearly specified goals and/or effects; and (3) a rationale linking the program to the goals and/or effects."

Tracey (1968) addressed the topic of successful evaluation:

> The success of training evaluation hinges on several critical items. Top level support . . . Skilled leadership . . . Total involvement . . . Effective communication and coordination . . . Use of the formal structure . . . Realistic target dates . . . Face-to-face contacts . . . Complete and objective reports . . . Feedback . . . (pp. 18-19).

Bass and Vaughan (1966) addressed some problems in evaluation:

> Many of the outcomes of training are difficult to measure accurately, and difficult to relate to the training objectives or broader organizational goals. The chief sources of these difficulties are the often ambiguous nature of the training itself in terms of procedures and objectives, the complex nature of the sociopsychological setting in which training occurs, and the lack of specific and reliable tools for evaluation (p. 140).

Tracey (1968, p. 165) also discussed some problems in evaluation: "staffing the project . . . diversity of training and development programs . . . and staff and faculty resistance . . . "

Cushman (1940) discussed one pitfall in evaluation:

> . . . most of the best non-statistical evidence will probably be based on what amounts to a sampling basis. Such evidence is valuable, but the dangers of generalizing on the basis of limited or incomplete data should be fully appreciated (p. 165).

Wentling and Lawson (1975) listed some pitfalls or shortcomings in what they called: "traditional evaluation":

> Evaluation has been informal . . .
> Evaluation has been fragmented . . .
> Evaluation results have seldom been used for improvements . . .
> Evaluation has been unrelated to planning . . .
> Evaluation has lacked commitment . . .
> Evaluation has been narrowly focused . . . (pp. 21-23).

Tracey (1984) summarized pitfalls in evaluation in the following manner:

> These failures can for the most part be attributed to inadequate planning, lack of objectivity, evaluation errors of one sort or another, improper interpretation of findings, and inappropriate use of results (p. 445).

Engels (1974) discussed evaluation as inextricably involved with feedback:

> Evaluation contains and involves feedback - feedback to administrators, training managers, instructors, and

trainees. Evaluation is a judgmental process in which an assessment is made about how successful we are in getting from point A to point B within a learning activity (p. 254).

CHAPTER III

METHODOLOGY AND DESIGN

The procedures discussed in this chapter were organized into the following sections: (1) Population, (2) Instrumentation, (3) Data Collection Process, (4) Questionnaire Content, and (5) Summary.

Population

All the users of the DSQCR In-House Training Guide at Tinker Air Force Base were identified by John Wilkey, Chief of the Distribution Receiving and Storage Quality Section at Tinker Air Force Base. He not only identified the users but also endorsed this research project. The DSQCR office was composed of thirteen employees. Of those thirteen, eleven were identified as training guide users. All eleven agreed to participate in the project. Due to the small numbers involved, the entire population was used.

Instrumentation

A researcher-made questionnaire was developed to answer the research questions listed in Chapter I. A cover letter detailing the purpose of the study was written to accompany each questionnaire. The questionnaire was reviewed by fifteen people for clarity and completeness prior to actual use. A similar questionnaire (dealing with magazines instead of training guide segments) was given to a sample

of people in order to simulate the conditions under which the actual questionnaire would be administered. The sample of people were asked to respond as to whether or not they had read the magazines. Also they were requested to comment on their good/bad features and any changes or improvements they would make to the magazines. The people who reviewed the instrument for clarity and completeness and the people who answered the magazine questionnaire were not part of the population of users of the DSQCR In-House Training Guide. Based on information gathered from both sources, the questionnaire was modified and refined.

Data Collection Process

Each questionnaire was hand delivered since due to the unique nature of the study, all the training guide users were located in one office. The researcher hand delivered each questionnaire, at different times on an individual basis, to each user. The researcher then briefly explained the purpose of the study and the instructions for completing the questionnaire. Each user was then left alone to complete the questionnaire with all the training guide segments placed on a table in front of him to make them available for easy reference. Also, at this time, each user was given a cup of coffee or a soft drink of his choice. Each participant was encouraged to take whatever amount of time needed to complete the questionnaire. The researcher then stated that she would be available in the next room in case there were any questions. This process was repeated until each of the eleven users had completed the questionnaire.

Questionnaire Content

The questionnaire contained questions to elicit the users' perceptions concerning: the value of the guide as a tool for assisting in job performance, which segments were used most/least frequently, useful/detrimental characteristics of the guide, and suggestions for improvement. The questionnaire also contained some questions designed to gather limited demographic data about the users.

Summary

The users of the DSQCR In-House Training Guide were identified by the DSQCR Chief John Wilkey. The researcher hand delivered a questionnaire to each of the eleven identified users. She introduced the questionnaire with a brief overview of the project. She also made all the training guide segments available for easy reference. The questionnaire dealt primarily with the users' perceptions of the training guide. Information obtained from this data-gathering instrument was tallied and printed in Chapter IV of this paper.

CHAPTER IV

PRESENTATION OF FINDINGS

The purpose of this study was to perform a descriptive study of the users' perceptions of the DSQCR In-House Training Guide at Tinker Air Force Base. In order to accomplish this purpose, a questionnaire was individually administered to each of the training guide users. Chapter IV presents the data obtained from the questionnaires.

The findings were organized according to survey questions and presented in table format using number and percentage.

Question 1: Usefulness of Training Guide in Job Performance

Responses to Question 1 are shown in Table I. In general, a majority of the training guide users responded to Question 1, "Did the DSQCR In-House Training Guide assist you in the performance of your job?," by saying that the training guide did assist them in the performance of their jobs.

Question 2, Part 1: Which Training Guide Segments Were/Were Not Used

Responses to Part 1 of Question 2 are given in Table II. Table II shows the number and percentage of training guide users who utilized/did not utilize each training guide segment. The training guide segments

TABLE I

USEFULNESS OF TRAINING GUIDE IN JOB PERFORMANCE

	Number	Percent
1. Did assist in job performance	9	81.8%
2. Did not assist in job performance	2	18.2%

TABLE II

WHICH TRAINING GUIDE SEGMENTS WERE/WERE NOT USED

Training Guide Segment Program Code	Number Used Segment	Percent Used Segment	Number Did Not Use Segment	Percent Did Not Use Segment
RL1	5	45.5%	6	54.5%
RL2	5	45.5%	6	54.5%
RL3	3	27.3%	8	72.7%
RL4	3	27.3%	8	72.7%
RL5	5	45.5%	6	54.5%
EB3Z	3	27.3%	8	72.7%
EB4Z	2	18.2%	9	81.8%
Reports of* Damaged Property	2	18.2%	9	81.8%
SL1	6	54.5%	5	45.5%
SL2	5	45.5%	6	54.5%
SL5	5	45.5%	6	54.5%
SL6 Manual	7	63.6%	4	36.4%
SL6 Automated	6	54.5%	5	45.5%
SL7	4	36.4%	7	63.6%
XX1	4	36.4%	7	63.6%
XX5	4	36.4%	7	63.6%
XX6	4	36.4%	7	63.6%
XX7	5	45.5%	6	54.5%
SX6A	4	36.4%	7	63.6%
SX6C	3	27.3%	8	72.7%
WX2A	4	36.4%	7	63.6%
WX2B	4	36.4%	7	63.6%
WX2C	3	27.3%	8	72.7%
Surveillance of* Lumber Products	3	27.3%	8	72.7%
SXK1	3	27.3%	8	72.7%
SXK2	3	27.3%	8	72.7%
KS1	2	18.2%	9	81.8%
KS2	3	27.3%	8	72.7%
KS31	3	27.3%	8	72.7%
KS32	2	18.2%	9	81.8%
SX9	5	45.5%	6	54.5%
TX6	5	45.5%	6	54.5%
SX3	5	45.5%	6	54.5%

*These two quality assurance programs do not have program codes assigned.

are identified by program code. For a complete listing of all DSQCR quality assurance programs and their corresponding program codes, refer to Appendix F.

Table III is presented as a summary of Table II. It shows that the most used training guide segment was SL6 Manual with 63.3 percent of the users indicating that they used this segment. The least used segments were Reports of Damaged Property, KS1, KS32, and EB4Z with 18.2 percent of the users reporting that they used these segments.

Question 2, Part a: Helpful Training Guide Features

Responses to Question 2, Part a, "If yes, please list any helpful features you are aware of," are contained in Table IV. There were four helpful features noted as applicable to all thirty-three training guide segments: "samples of pertinent documents/forms," "chart locations is a good feature," "technical order numbers," and "step-by-step procedures."

Question 2, Part b: Detrimental Training Guide Features

Question 2, Part b, requested the training guide users to list any detrimental features of the training guide. No detrimental features were listed by any of the eleven users surveyed.

Question 2, Part c: Changes/Suggestions for Training Guide Improvement

Question 2, Part c, asked the users to recommend changes and

TABLE III

PERCENT OF USERS WHO USED THE TRAINING GUIDE SEGMENTS
BY PROGRAM CODE

Percent of Users Who Used the Training Guide Segment	63.6%	54.5%	45.5%	36.4%	27.3%	18.2%
	SL6 Manual	SL1 SL6 Automated	RL1 RL2 RL5 SL2 SL5 XX7 SX9 TX6 SX3	SL7 XX1 XX5 XX6 SX6A WX2A WX2B	RL3 RL4 EB3Z SX6C WX2C Surveillance of Lumber Products SXK1 SXK2 KS2 KS31	Reports of Damaged Property KS1 KS32 EB4Z

TABLE IV

HELPFUL TRAINING GUIDE FEATURES BY PROGRAM CODE

Helpful Features	Program Code(s)
1. "samples of pertinent documents/ forms"	all 33
2. "good guideline"	SL5, SL6 Manual, SL6 Automated, XX1, XX5, XX6,XX7
3. "good overall orientation to program"	RL1, RL3, RL4, SL1, XX1, XX5, XX6. XX7, SX9, TX6, SX3
4. "helps me brush up on other programs I don't work"	RL2
5. "helpful in learning how to work the program"	Surveillance of Lumber Products
6. "helpful in performance of work"	RL1, RL2, RL3, RL5
7. "very self-explanatory and thorough"	RL5, EB3Z
8. "info easily understood, complete, and easily followed"	Reports of Damaged Property, SL1, SL2
9. "excellent layout diagrams helped expedite inspections"	SL6 Manual
10. "instructions are complete"	SL7
11. "chart locations is a good feature"	all 33
12. "nice reference"	Surveillance of Lumber Products
13. "general procedures is a good section"	Surveillance of Lumber Products
14. "beneficial info"	RL1, RL2, SXK1, SXK2
15. "good information on inspection points"	RL5, SX3, XX1, XX5, XX6, XX7, WX2A, WX2B, WX2C, SX9, TX6
16. "good information on how to perform inspections"	all 33
17. "good info on checking systems compatibility"	SL6 Manual
18. "good rejected lots information"	SL6 Manual, SL6 Automated
19. "good information on writing reports and filling out forms"	SX3, XX1, XX5, XX6, XX7, WX2A, WX2B, WX2C, SX9, TX6
20. "technical order numbers"	all 33
21. "step-by-step procedures"	all 33

suggestions for improvement of the training guide. Only one user recommended that regulation DOD 4145.19-R-1 be included as an applicable regulation in the Surveillance of Lumber Products training guide segment.

Question 3: Quality Assurance Programs Worked by Users Since May, 1983

Responses to Question 3, "Place an 'X' by the quality assurance programs to which you have been assigned as primary or alternate since May 31, 1983," are detailed in Table V. The quality assurance programs reported as the ones most frequently worked by the training guide users were SL6 Automated (63.6 percent), SL6 Manual (54.5 percent), and RL1 (45.5 percent).

A significant relationship was found to exist at the .05 level of significance between the training guide segments used (Tables II, III) and the quality assurance programs worked (Table V) by the training guide users when the Pearson Product Moment Correlation was calculated. Thirty-three pairs of numbers were used, and there were thirty-one degrees of freedom. The Pearson Product Moment Correlation r value was 0.7611464 (reference Appendix G).

Question 4: GS Grades of Training Guide Users

Responses to Question 4 concerning the GS grade of each training guide user are presented in Table VI. A majority of the training guide users were GS-09 grades. There was only one GS-05 and one GS-12.

TABLE V

QUALITY ASSURANCE PROGRAMS WORKED BY TRAINING GUIDE USERS
BY PROGRAM CODE

Program Codes	Number Training Guide Users	Percent Training Guide Users
RL1	5	45.5%
RL2	4	36.4%
RL3	3	27.3%
RL4	4	36.4%
RL5	3	27.3%
EB3Z	1	9.1%
EB4Z	0	0
Reports of Damaged Property	1	9.1%
SL1	4	36.4%
SL2	3	27.3%
SL5	4	36.4%
SL6 Manual	6	54.5%
SL6 Automated	7	63.6%
SL7	4	36.4%
XX1	3	27.3%
XX5	3	27.3%
XX6	3	27.3%
XX7	3	27.3%
SX6A	1	9.1%
SX6C	1	9.1%
WX2A	2	18.2%
WX2B	2	18.2%
WX2C	2	18.2%
Surveillance of Lumber Products	1	9.1%
SXK1	2	18.2%
SXK2	2	18.2%
KS1	1	9.1%
KS2	1	9.1%
KS31	1	9.1%
KS32	1	9.1%
SX9	2	18.2%
TX6	2	18.2%
SX3	2	18.2%

TABLE VI

GS GRADES OF TRAINING GUIDE USERS

GS Grade	Number Training Guide Users	Percent Training Guide Users
GS-05	1	9.1%
GS-07	0	0
GS-09	7	63.6%
GS-11	2	18.2%
GS-12	1	9.1%

Question 5: Job Designations of Training Guide Users

Responses to Question 5 relative to the job designations of the training guide users are shown in Table VII. A majority of the training guide users were designated as journeymen. There was only one trainee and one supervisor represented.

Question 6: Additional Comments Concerning Training Guide

A complete listing of all the responses to Question 6, "List any additional comments you have concerning the DSQCR In-House Training Guide as a whole on any of its segments," follows. These open-ended responses were not suitable for inclusion in a table.

"The training guide gave me a visual aid in helping the learning process to become extremely easy."

"I have used almost all the in-house training guides to obtain details on the inspection programs."

"These guides have been very beneficial to me."

"The in-house training guides are beneficial in performing the programs for the first time and also to refer to when there is doubt as to how a particular segment of the program should be handled."

"This (training guide) was most needed."

"It's (training guide) current, complete, easily followed, and understood."

"I use the training guide to learn the programs I have not worked as well as a refresher guide to programs I have worked in the past."

TABLE VII

JOB DESIGNATIONS OF TRAINING GUIDE USERS

Job Designation	Number Training Guide Users	Percent Training Guide Users
trainee	1	9.1%
journeyman	7	63.6%
supervisor	1	9.1%
technician	2	18.2%

"These guides were slightly useful to determine exactly what the journeymen did to perform their inspections."

"By the time these guides were written, I was already proficient on them."

"Good overall."

"The training guides were too cumbersome to be carried out in the work areas for handy reference; however, they could be referred to back in the office."

"For new hires they (training guides) can be quite informative and helpful."

Summary

A majority of the training guide users (81.8 percent) felt that the training guide did assist them in the performance of their jobs. Most of the users surveyed were GS-09 journeymen.

The most used training guide segment was SL6 Manual with 63.6 percent of the users indicating that they made use of this segment. The segments reported as being used least (18.2 percent) were Reports of Damaged Property, KS1, KS32, and EB4Z.

The most frequently mentioned helpful features of the training guide were "samples of pertinent documents/forms," "chart locations is a good feature," "technical order numbers," and "step-by-step procedures." These four comments were noted as helpful features of all thirty-three training guide segments.

The quality assurance programs most frequently worked by training guide users since May, 1983, were SL6 Automated (63.6 percent), SL6 Manual (54.5 percent), and RL1 (45.5 percent).

A moderate positive correlation was found to exist at the .05 significance level between the training guide segments used and the quality assurance programs worked by the training guide users.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this study was to assess the users' perceptions of the DSQCR In-House Training Guide at Tinker Air Force Base. To achieve this stated purpose, a questionnaire was individually administered to each of the identified training guide users.

This chapter concludes the study by providing a summary of findings, recommendations, and conclusions.

Findings

The following were findings derived from the questionnaire results in relation to the study's research questions.

1. Nine of the eleven (81.8 percent) training guide users stated that the training guide did assist them in the performance of their jobs. The remaining two (18.2 percent) felt that the training guide did not assist them in performing their jobs.

2. The training segment used most often was SL6 Manual (63.6 percent). SL1 and SL6 Automated training guide segments were used by 54.5 percent of the training guide users.

3. The training guide segments used least (18.2 percent) often were Reports of Damaged Property, KS1, KS32, and EB4Z.

4. The helpful features of the training guide identified most often by the training guide users were: "samples of pertinent

documents/forms," "chart locations is a good feature," "technical order numbers," and "step-by-step procedures."

5. The users surveyed did not list any detrimental features of the training guide.

6. One suggestion for improvement of the training guide was noted - inclusion of DOD 4145.19-R-1 as an applicable regulation in the Surveillance of Lumber Products training guide segment.

7. The GS grades of the training guide users were: one GS-05, seven GS-09, two GS-11, and one GS-12.

8. The job designations of the training guide users were: one trainee, seven journeymen, one supervisor, and two technicians.

Conclusions

The following conclusions are based on the author's interpretation of the data gathered during this study.

1. Based on the findings of this study, a majority of the training guide users considered the guide as an aid to their job performance. It would appear that the time invested in the development of the training guides was justified.

2. The SL6 manual training guide segment used most often corresponded to the introductory quality assurance program assigned to all incoming trainees.

3. It would appear that the most helpful training guide features were the inclusion of detailed procedures, samples, and references.

4. Personnel used the guides most frequently that corresponded to the quality assurance programs to which they were assigned.

5. The typical training guide user was a GS-09 journeyman.

Recommendations

Recommendations for possible further related research include:

1. A study of the feasibility of developing a similar training guide for the other office sections in the DSQCR branch at Tinker Air Force Base.

2. A follow-up study of the users' perceptions of the usefulness of the training guide.

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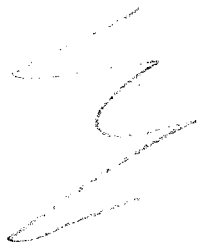
APPENDIXES



APPENDIX A

REQUEST TO CONDUCT GRADUATE STUDY

Elfleda Weigant
P. O. Box 1086
Choctaw, OK
73020

John C. Wilkey
Chief, Receiving and Storage
Quality Section
OC-ALC/DSQCR
Tinker Air Force Base
Oklahoma City, OK 73145

Dear Mr. Wilkey,

1. The Distribution Receiving and Storage Quality Section In-House Training Guide at Tinker Air Force Base was completed and ready for use in May, 1983.

2. Request authorization to conduct a study for the purpose of obtaining information relative to the users' perceptions of the usefulness of the referenced training guide. Also, I further request permission to use the results of this study as a basis for my thesis at Oklahoma State University in partial fulfillment of the requirements for the Degree of Master of Science.

3. Instrumentation for the study will consist of my personnally introducing and administering a questionnaire to each of the eleven identified training guide users. Total estimated time to complete the questionnaire is 15-25 minutes per individual. Anonymity is absolutely guaranteed. Individual survey results will be controlled in order to insure the privacy of all participants. No names will appear in the thesis.

Sincerely,

Elfleda Weigant

Elfleda Weigant

APPENDIX B

APPROVAL FOR DSQCR PERSONNEL PARTICIPATION

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS OKLAHOMA CITY AIR LOGISTICS CENTER (AFLC)
TINKER AIR FORCE BASE, OKLAHOMA 73145-

REPLY TO
ATTN OF: DSQCR

15 November 1985

SUBJECT: Request to Conduct Graduate Study

TO: Ms. Elfleda Weigant

Request to conduct graduate study has been approved.

John C. Wilkey

JOHN C. WILKEY
Chief, Receiving and Storage
Quality Section

AFLC - Lifeline of the Aerospace Team

APPENDIX C

DSQCR IN-HOUSE TRAINING GUIDE QUESTIONNAIRE

NAME (optional)_____

QUESTIONNAIRE

1. Did the DSQCR In-House Training Guide assist you in the performance of your job?
   _____YES
   _____NO
2. For each training guide segment listed below, place an "X" by YES if you have used the segment. Place an "X" by NO if you have not used the segment. For each one marked YES, please answer the additional questions listed to the right.

RL1 - Incheck to Receiving by Material Processors
_____YES
_____NO
If YES, please list any
a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

RL2 - Receiving Inspection
_____YES
_____NO
If YES, please list any
a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

RL3 - Dispatching
_____YES
_____NO
If YES, please list any
a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

RL4 - Processing of Receipts from Contractors
_____YES
_____NO
If YES, please list any
a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

RL5 - Tailgate Date Accuracy
_____YES
_____NO
If YES, please list any
a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

EB3Z - Receipts from Maintenance
_____YES
_____NO

If YES, please list any

a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

EB4Z - Receipts from Associates
_____YES
_____NO

If YES, please list any

a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

Reports of Damaged Property
_____YES
_____NO

If YES, please list any

a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

SL1 - Locator Accuracy
_____YES
_____NO

If YES, please list any

a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

SL2 - Rewarehousing Projects
_____YES
_____NO

If YES, please list any

a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

SL5 - Warehouse Stock List Change Actions
_____YES
_____NO

If YES, please list any

a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

SL6 - Warehouse Manual Location File Maintenance Actions

_____YES
_____NO

If YES, please list any

a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

SL6 - Warehouse Automated Location File Maintenance Actions

_____YES
_____NO

IF YES, please list any

a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

SL7 - Storage Methods

_____YES
_____NO

If YES, please list any

a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

XX1 - U1050-II Locator Accuracy

_____YES
_____NO

If YES, please list any

a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

XX5 - U1050-II Stock List Change Actions

_____YES
_____NO

If YES, please list any

a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

XX6 - U1050-II Location File Maintenance Actions

_____YES
_____NO

If YES, please list any

a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

XX7 - U1050-II Storage Methods

_____YES
_____NO

If YES, please list any

a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

SX6A - Radioactive Material

_____YES
_____NO

If YES, please list any

a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

SX6C - Chemical Products

_____YES
_____NO

If YES, please list any

a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

WX2A - Containerized Engines

_____YES
_____NO

If YES, please list any

a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

WX2B - Trailer-Mounted Engines

_____YES
_____NO

If YES, please list any

a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

WX2C - Shipping Containerized Engines

_____YES
_____NO

If YES, please list any

a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

Surveillance of Lumber Products
_____YES
_____NO

If YES, please list any
a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

SXK1 - Quality Check of TCTO Kit Records
_____YES
_____NO

If YES, please list any
a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

SXK2 - Quality Check of TCTO Kit Storage
_____YES
_____NO

If YES, please list any
a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

KS1 - Munitions Annual Survey Inspection
_____YES
_____NO

If YES, please list any
a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

KS2 - Munitions Receiving Inspection
_____YES
_____NO

If YES, please list any
a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

KS31 - Munitions Storage and AFTO Form 15 Inspection
_____YES
_____NO

If YES, please list any
a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

KS32 - Munitions Selection for Shipment Inspection
_____YES If YES, please list any
_____NO a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

SX9 - Quality Check of Denied AFLC Form 20 Posting
_____YES If YES, please list any
_____NO a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

TX6 - Quality Check of Denied DD Form 1348 - 1 Posting
_____YES If YES, please list any
_____NO a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

SX3 - Quality Check of Denial Document Research
_____YES If YES, please list any
_____NO a. helpful features you are aware of

b. detrimental features you are aware of

c. changes/suggestions you would make

3. Place an "X" by the quality assurance programs to which you have been assigned as primary or alternate since May 31, 1983.

_____RL1 - Incheck to Receiving by Material Processors
_____RL2 - Receiving Inspection
_____RL3 - Dispatching
_____RL4 - Processing of Receipts from Contractors
_____RL5 - Tailgate Date Accuracy
_____EB3Z - Receipts from Maintenance
_____EB4Z - Receipts from Associates
_____Reports of Damaged Property
_____SL1 - Locator Accuracy
_____SL2 - Rewarehousing Projects
_____SL5 - Warehouse Stock List Change Actions
_____SL6 - Warehouse Manual Location File Maintenance Actions
_____SL6 - Warehouse Automated Location File Maintenance Actions

_____SL7 - Storage Methods
_____XX1 - U1050-II Locator Accuracy
_____XX5 - U1050-II Stock List Change Actions
_____XX6 - U1050-II Location File Maintenance Actions
_____XX7 - U1050-II Storage Methods
_____SX6A - Radioactive Material
_____SX6C - Chemical Products
_____WX2A - Containerized Engines
_____WX2B - Trailer-Mounted Engines
_____WX2C - Shipping Containerized Engines
_____Surveillance of Lumber Products
_____SXK1 - Quality Check of TCTO Kit Records
_____SXK2 - Quality Check of TCTO Kit Storage
_____KS1 - Munitions Annual Survey Inspection
_____KS2 - Munitions Receiving Inspection
_____KS31 - Munitions Storage and AFTO Form 15 Inspection
_____KS32 - Munitions Selection for Shipment Inspection
_____SX9 - Quality Check of Denied AFLC Form 20 Posting
_____TX6 - Quality Check of Denied DD Form 1348-1 Posting
_____SX3 - Quality Check of Denial Document Research

4. Place an "X" by your GS grade.
___GS - 05
___GS - 07
___GS - 09
___GS - 11
___GS - 12
___other
If other, please specify.

5. Place an "X" by your job designation.
___trainee
___journeyman
___supervisor
___other
If other, please specify.

6. List any additional comments you have concerning the DSQCR In-House Training Guide as a whole or any of its segments.

I would like to thank you again for assisting me in this study.

Elfleda Weigant
Elfleda Weigant

APPENDIX D

QUESTIONNAIRE COVER LETTER

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS OKLAHOMA CITY AIR LOGISTICS CENTER (AFLC)
TINKER AIR FORCE BASE, OKLAHOMA 73145

REPLY TO ATTN OF: DSQCR

SUBJECT: Training Guides

TO: DSQCR Training Guide Users

I am conducting a study of the Distribution Receiving and Storage Quality Section In-House Training Guide at Tinker Air Force Base. The purpose of the study is to gather information about the guide from its users. The information gathered will be included in my thesis, which will be submitted to the faculty of the Graduate College of Oklahoma State University in partial fulfillment of the requirements for the Degree of Master of Science. Your participation in this study is greatly appreciated.

John C. Wilkey
JOHN C. WILKEY, Chief,
Receiving and Storage
Quality Section

Elfleda Weigant
Elfleda Weigant

AFLC - Lifeline of the Aerospace Team

APPENDIX E

LETTER CONCERNING QUESTIONNAIRE

I have reviewed the questionnaire relative to the DSQCR In-House Training Guide and consider it appropriate for the intended purpose of eliciting suitable responses relative to the training guide users' perceptions of the referenced guide.

Robert L. Edwards
Supervisor,
Training Branch
Tinker Air Force Base

Paul H. Goodall
Chief, Training Branch
Tinker Air Force Base

Robert W. Murphy, Major (Dr.), USAF
Chief, Mission Crew Command Instructor
963/DOT AWACS
Tinker Air Force Base

Susan L. Murphy
Education Specialist
Tinker Air Force Base

APPENDIX F

LIST OF DSQCR QUALITY ASSURANCE PROGRAMS AND CORRESPONDING PROGRAM CODES

DSQCR QUALITY ASSURANCE PROGRAMS AND PROGRAM CODES

Incheck to Receiving by Material Processors - RL1
Receiving Inspection - RL2
Dispatching - RL3
Processing of Receipts from Contractors - RL4
Tailgate Date Accuracy - RL5
Receipts from Maintenance - EB3Z
Receipts from Associates - EB4Z
Reports of Damaged Property - no program code assigned
Locator Accuracy - SL1
Rewarehousing Projects - SL2
Warehouse Stock List Change Actions - SL5
Warehouse Manual Location File Maintenance Actions - SL6 Manual
Warehouse Automated Location File Maintenance Actions - SL6 Automated
Storage Methods - SL7
U1050-II Locator Accuracy - XX1
U1050-II Stock List Change Actions - XX5
U1050-II Location File Maintenance Actions - XX6
U1050-II Storage Methods - XX7
Radioactive Material - SX6A
Chemical Products - SX6A
Containerized Engines - WX2A
Trailer-Mounted Engines - WX2B
Shipping Containerized Engines - WX2C
Surveillance of Lumber Products - no program code assigned
Quality Check of TCTO Kit Records - SXK1
Quality Check of TCTO Kit Storage - SXK2
Munitions Annual Survey Inspection - KS1
Munitions Receiving Inspection - KS2
Munitions Storage and AFTO Form 15 Inspection - KS31
Munitions Selection for Shipment Inspection - KS32
Quality Check of Denied AFLC Form 20 Posting - SX9
Quality Check of Denied DD Form 1348-1 Posting - TX6
Quality Check of Denial Document Research - SX3

APPENDIX G

CORRELATION DATA

CORRELATION DATA

X	Y
5	5
5	4
3	3
3	4
5	3
3	1
2	0
2	1
6	4
5	3
5	4
7	6
6	7
4	4
4	3
4	3
4	3
5	3
4	1
3	1
4	2
4	2
3	2
3	1
3	2
3	2
2	1
3	1
3	1
2	1
5	2
5	2
5	2

X=training guide segments used
Y=quality assurance programs worked
Pearson Product Moment Correlation=0.7611464
df=31

APPENDIX H

SL1 TRAINING GUIDE SEGMENT

The SL1 Locator Accuracy Training Guide Segment is provided as an example of the format and composition of a DSQCR In-House Training Guide segment. It was selected due to its brevity; however, the format and composition are similar to that of the other thirty-two segments.

APPENDIX I

PROCEDURES

Locator Accuracy (SL1)

General Procedures

1. Check one-half of the sample (stuffers from the G091.90AL computer selection) against the actual material warehouse location to ensure compatibility.

2. Check the other half of the sample (taken from the warehouse locations adjacent to those indicated on the stuffer) against the D103.251F microfiche locator record to ensure compatibility.

3. After the inspection of each storage area has been completed, record inspection results on AFLC Forms 558, Quality Control Surveillance Data.

4. Write reports compiling and analyzing data following the inspections of the storage areas.

5. Prepare viewgraph charts.

6. Post trend charts in the storage areas.

7. Maintain a program notebook.

8. Maintain files of the applicable G091 products.

Applicable Regulations

AFR 69-8
AFLCR 74-13
DSQOI 74-5, Appendix 1
DSQOI 74-51

Sampling

1. Stationary lot sampling is utilized.

2. The Acceptable Quality Level (AQL) is 1.50%.

3. The lot consists of all the locations listed on the D103.251F listing/microfilm/microfiche.

4. MIL-STD-105D, general inspection level II, is used to determine the sample size.

Procedure for Selecting the Sample

1. Send a letter to DSFSBF requesting a location sequence (product code 12) and microfiche listing for the applicable storage area(s).

2. Send the letter at least ten days before the end of the month prior to the month during which the inspection is scheduled. For example, if the inspection is scheduled for October, request the products at least ten days prior to the end of September. The products will be run the first available weekend in October, thus allowing adequate time for the sample items to be inspected before the end of the month.

3. Notify DSQS (Pat Kennedy) when the letter is sent. DSQS serves as the contact point for G091 products.

4. The lot size is obtained by ACD from the computer. ACD will contact DSQS to determine the sample size.

5. One-half of the sample items are selected by the computer. These sample items are sent in the form of stuffers to DSQS who forwards them to DSQCR.

6. The microfiche is picked up in Building 1, Room 208, in the Microform Service Center.

7. The other half of the sample is pulled from the locations adjacent to those indicated on the G091 computer-selected stuffers.

8. Each warehouse or outside storage area will be inspected at least once a year. An annual inspection schedule designates which storage area(s) is (are) to be inspected each month. Coordination should be made with DSQE (Inventory Branch) to determine during which month the inventory actions will be concentrated. No storage area will be inspected during this month.

9. Send a copy of the annual inspection schedule to HQ AFLC/QE by the end of January each year.

Inspection

1. Check each stuffer against the actual physical material for the characteristics listed in DSQOI 74-5, Appendix 1.

2. While in the process of conducting the inspection using the stuffers, the other half of the sample will be selected. Make note of the national stock number, unit of issue, and condition of material in a location next to the location containing the item printed on the stuffer. You should select one adjacent location for each stuffer. Take the information obtained and check it against the D103 locator record to ensure compatibility. Inspect each sample item for the characteristics listed in DSQOI 74-5, Appendix 1.

3. If any of the information is incompatible, obtain a K interrogation from one of the keypunch units (located in Bldgs. 10, 416, and 3705). Submit the national stock number in order to obtain a K interrogation.

4. This program should be performed in conjunction with the program - Storage Methods - when feasible. The same set of samples may be used.

5. Bring any discrepancies found to the attention of the responsible supervisor for corrective action. Have the supervisor sign and date the discrepant sample item or AFLC Form 558.

6. File each discrepant sample item annotated with adequate information to explain the circumstances related to the error. This information may be needed for future reference.

7. Record inspection results monthly on AFLC Form 558.

Reports

1. A report compiling and analyzing data obtained during the inspections will be written at the end of the month.

2. The operating divisions are required to submit a reply concerning corrective action taken to improve the quality in their area when the error rate reaches or exceeds the midpoint between the AQL and UCL (Upper Control Limit). When the error rate exceeds the UCL, the responsible division is required to furnish Part II to the RCS: LOG-QE(M)7604 report.

Viewgraph Charts

1. Plot the error rate using the appropriate color tape as follows:

    a. Plot with red tape when the percent defective exceeds the UCL.

    b. Plot with green tape when the percent defective does not exceed the AQL.

    c. Plot with yellow tape when the error rate exceeds the AQL but not the UCL.

2. Update the charts monthly.

Charts in Storage Areas

1. Post charts indicating inspection data in the following locations:

    a. Section I - break area in Bldg. 416

    b. Section II - section office in Bldg. 10

    c. Section III - by the unit office in Bldg. 3705 (stockroom A)

2. Update the charts after each inspection is completed.

Program Notebook

1. Maintain an up-to-date program notebook.

2. Separate notebooks are maintained for Locator Accuracy and Storage Methods.

APPENDIX J

APPLICABLE REGULATION

OKLAHOMA CITY AIR LOGISTICS CENTER
Directorate of Distribution
Quality Management Division
Tinker Air Force Base OK 73145

DSQOI 74-5

5 May 1980

Quality and Reliability Assurance

DISTRIBUTION SYSTEMS QUALITY CONTROL PROGRAMS FOR STORAGE

This instruction establishes policies, responsibilities and procedures for implementing the storage portion of the Distribution Systems Quality Control Program as outlined in AFLCR 74-13. Guidelines for the storage operations are outlined in AFR 69-8.

1. OBJECTIVE. To provide management with a reliable, timely and comprehensive data-generating and recording system for determining the effectiveness of subordinate operations being inspected.

2. RESPONSIBILITIES. The Quality Management Division (DSQ) will accomplish all inspections and analyses. The Custody and Depot Supply Branch (DSQC) will monitor and perform all program inspections in accordance with DSQOI 74-51, paragraph 3.

3. SAMPLING AND INSPECTION PROCEDURES. Sampling and inspection procedures will be specified in each appendix.

4. DATA RECORDING. Procedures will be outlined in each appendix.

5. CONTROLS AND CORRECTIVE ACTION.

   a. Errors will be brought to the attention of responsible management personnel for immediate corrective action.

   b. Rejected lots will be cause for rescreening, selective screening and/or increased management action by the responsible organization.

   c. Increased management action will be recommended when the percent defective reaches or exceeds the acceptable quality level (AQL).

6. REPORTS AND ANALYSES. Guidelines in DSQOI 74-51, Appendix 3, will be utilized.

7. References. AFR 69-8, AFLCR 74-13 and DSQOI 74-51.

Supersedes DSQOI 74-5, 27 December 1976. (See signature page for summary of changes.)
No. of printed pages: 2
OPR: DSQC (Jack Klutts)
DISTRIBUTION: S, X: DSMES . . . 1; 2854ABG/DAPA . . . 2

OKLAHOMA CITY AIR LOGISTICS CENTER
Directorate of Distribution
Quality Management Division
Tinker Air Force Base OK 73145

APPENDIX 1
DSQDI 74-5

May 1980

LOCATOR ACCURACY

The purpose of this instruction is to measure the accuracy of the central material locator record in relation to the physical material location.

1. SPECIFICS TO BE SAMPLED/INSPECTED. The sample will be the D103.251F listing/microfilm/microfiche and the actual warehouse material locations.

2. POINT(S) AT WHICH INSPECTION OCCURS. One-half of the sample will be selected from the D103 listing/microfilm/microfiche and one-half from the actual warehouse material location.

3. FREQUENCY OF INSPECTION. Each distribution warehouse and outside storage area will be sampled at least yearly (reference schedule of inspection furnished AFLC). This inspection should be performed in conjuntion with DSQDI 74-5, Appendix 7 (SL7) storage methods, when feasible.

4. EXPLANATION OF AN ERROR. An error is any instance of incompatibility between the central material locator record and the physical material location which can impact on locator accuracy and customer support.

5. SAMPLING AND INSPECTION PROCEDURES.

a. Sampling. A stationary lot sampling plan will be utilized. The sampling plan for this quality check is based on MIL-STD-105D, inspection level II, acceptable quality level (AQL) of 1.50%.

b. Inspection. The lot size for this check will be the total number of locations indicated on the D103.251F listing/microfilm/microfiche, whichever is available and/or most economical. MIL-STD-105D will be utilized to determine the sample size. Sample size will be divided as follows: One-half of the sample size will be selected from the D103 listing/microfilm/microfiche (stuffers from the G091.90AL computer selection) and one-half from the actual warehouse locations.

(1) Quality check SL11 (D103)
(a) The sample source will be the D103 record
(b) The quality check will be performed at the warehouse location
(c) Each sample will be inspected for the characteristics listed below:

No. of printed pages: 3
OPR: DSQC (Jack Klutts)
DISTRIBUTION: S, X: DSMES . . . 1; 2854ABG/DAPA . . .

CODE	DESCRIPTION
L01	Incorrect location. Material not in assigned location. Found in immediate area.
L02	Incorrect location. Material not in assigned location, or immediate area.
L04	Locator record and material not compatible (transposition of NSN) (not applicable to MMC)
L05	Locator record and material not compatible (condition)
L07	Locator record and material not compatible (U/I)
L08	Mutiple NSNs assigned to a location
L09	Other material in location
L12	Failure to initiate "kill" action
V04	Mixed material

(2) Quality check SL12 (warehouse)

(a) The sample source will be the warehouse material location
(b) The checkpoint will be the D103 locator record
(c) Each sample will be inspected for the characteristics listed below:

CODE	DESCRIPTION
L01	Incorrect location. Material not in assigned location. Found in immediate area.
L03	No locator record (location not established)
L04	Locator record and material not compatible (transposition of NSN) (not applicable to MMC)
L05	Locator record and material not compatible (condition)
L07	Locator record and material not compatible (U/I)
L08	Multiple NSNs assigned to a location
V04	Mixed material

6. DATA RECORDING. Sample results will be recorded on AFLC Form 558, "Quality Control Surveillance Data," in accordance with DSQOI 74-15, DSOI 74-4, AFLCR 74-13 with the following exceptions:

COLUMN	ENTRY
B	Enter four-digit operation code (SL11 or SL12), as applicable
F	Omit on all entries
J	Enter material location on all discrepant items
P & Q	Omit on all entries
R	Enter storage area routing symbol
T , U V & W	Omit on all entries
X	Omit on all entries

7. CONTROLS AND CORRECTIVE ACTIONS.

a. All system deficiencies noted will be brought to the attention of the supervisor responsible for corrective action.

b. Operating divisions will be required to submit a reply as to corrective action taken to improve the quality in their area as outlined in DSQOI 74-51, Appendix 3, paragraph 2a(3).

8. FORMS REFERENCED.

AFLC Form 558 (paragraph 6)

William B. Walker
WILLIAM B. WALKER
Chief, Quality Management Division

----------Summary of Changes----------
Update operating instruction and characteristics checklist to be in alignment with AFLCR 74-13 and DSQOI 5-1

APPENDIX K

REQUEST FOR PRODUCTS

22 September 1982

DSQCR (3634/6630)

Request for Location Sequence and Microfiche Listing

DSFSBF

Request a location sequence (product code 12) and microfiche listing be furnished DSQCR for Warehouse M12. These listings are required to perform the October 1982 quality inspection of Locator Accuracy (SL1) and Storage Methods (SL7) in accordance with DSQOI 74-5, Appendices 1 and 7.

James D. Scruggs
Quality Assurance Specialist
Custody Quality Branch

APPENDIX L

INSPECTION SCHEDULE

ANNUAL SCHEDULE FOR FY82

Locator Accuracy-SL1
Storage Methods-SL7

OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
M12	A10	A03	A01F	M16	A16	M13		C01	M51	A18	C05
			A01M			M18		C16			
			A01N			M19		H05			
			A95			M23		H07			
						M30		H08			
						M31		V34			
						M32		V35			
						U13		V38			
						U19					
						U23					
						U42					

Location Audit Program (Phase 1) for m16 is 13 Oct. to 18 Dec.

Location Audit Program for all other warehouses is 26 Apr. to 7 may.

AF FORM SEP 77 3130 GENERAL PURPOSE (10½" X 8")

U.S. G.P.O. 1980-310-971/4182

APPENDIX M

SAMPLE ITEM

DSQA

INSPECTION SAMPLE SELECTION 08 SEP 82 G091

OKLAHOMA CITY ALC

CC	OPN CODE	INSP DATE	INSP NO	CON D	ER C	NATIONAL STOCK NUMBER	DOC/MANIFEST/ GBL/LOCATION	TOTAL ITEM/ DOLLAR VALUE	TOTAL UNIT INSP	UNIT DEF	DEF CODE	CAUSE CODE	RESP CODE	ORGN CODE	ACT CODE	PRG CD	PY DT CC
1	2-5	6-9	10-12	13	14	15-29	30-44	45-49	50-54	55-58	59-61	62-64	65-68	69-74	75	76	77
						1680005167061	C05B 283E027										
						1280007791430	E28 - not on fiche										

IDC. XXX COND CD. A U/I. EA

A ea

APPENDIX N

AFLC FORMS 558

CARD CODE	OPERATION CODE	DATE OF INSPECTION	INSPECTOR NUMBER	CONDITION	ERRC/OTHER	STOCK NUMBER H				DOCUMENT, MANIFEST GBL NO. OR LOCATION	TOTAL ITEMS/ DOLLAR VALUE	TOTAL UNITS INSPECTED (Sampled)	UNITS DEFECTIVE	DEFECT CODE	CAUSE CODE	RESPONSIBILITY CODE	ORGANIZATIONAL CODE	ACTION CODE	PKG CODE	DATE OF PKG CODE	CONTRACT A/B/C		
A	B	C	D	E	F	FSC	NCB	NIIN	MMC	J	K	L	M	N	P	Q	R	S	T	U	V	W	X
1	2-5	6-9	10-12	13	14	15-18	19-20	21-27	28-29	30-44	45-49	50-54	55-58	59-61	62-64	65-68	69-74	75	76	77	78	79	80
Z	SL11	1078	11								63	63					DSFSB						
Z	SL12	1078	11								62	62					DSFSB						

REMARKS:

warehouse A16 chace/mcknight/19 mar. 81

DCALC INSP 13 INSPECTION

AFLC FORM MAY 76 558 PREVIOUS EDITION IS OBSOLETE.

QUALITY CONTROL SURVEILLANCE DATA

*USGPO: 1976 — 757-066/7669

CARD CODE	OPERATION CODE	DATE OF INSPECTION	INSPECTOR NUMBER	CONDITION	ERRC/OTHER	STOCK NUMBER H				DOCUMENT, MANIFEST GBL NO. OR LOCATION	TOTAL ITEMS/ DOLLAR VALUE	TOTAL UNITS INSPECTED (Sampled)	UNITS DEFECTIVE	DEFECT CODE	CAUSE CODE	RESPONSIBILITY CODE	ORGANIZATIONAL CODE	ACTION CODE	REQ CODE	DATE OF REQ CODE	CONTRACT A/B/C		
A	B	C	D	E	F	FSC	NCB	NIIN	MMC	J	K	L	M	N	P	Q	R	S	T	U	V	W	X
t	2-5	6-9	10-12	13	14	15-18	19-20	21-27	28-29	30-44	45-49	50-54	55-58	59-61	62-64	65-68	69-74	75	76	77	78	79	80
Z	SL11	1055	11								99	99					DSFSA						
1	SL11	1055	11	A		3695	P42	017		M12A 4256033	1	1	1	L01			DSFSA	B					
Z	SL12	1055	11								100	100					DSFSA						

REMARKS:

warehouse m12 chace/mcknight/24Feb.81

CCALC INSP 13 INSPECTION

AFLC FORM MAY 76 558 PREVIOUS EDITION IS OBSOLETE.

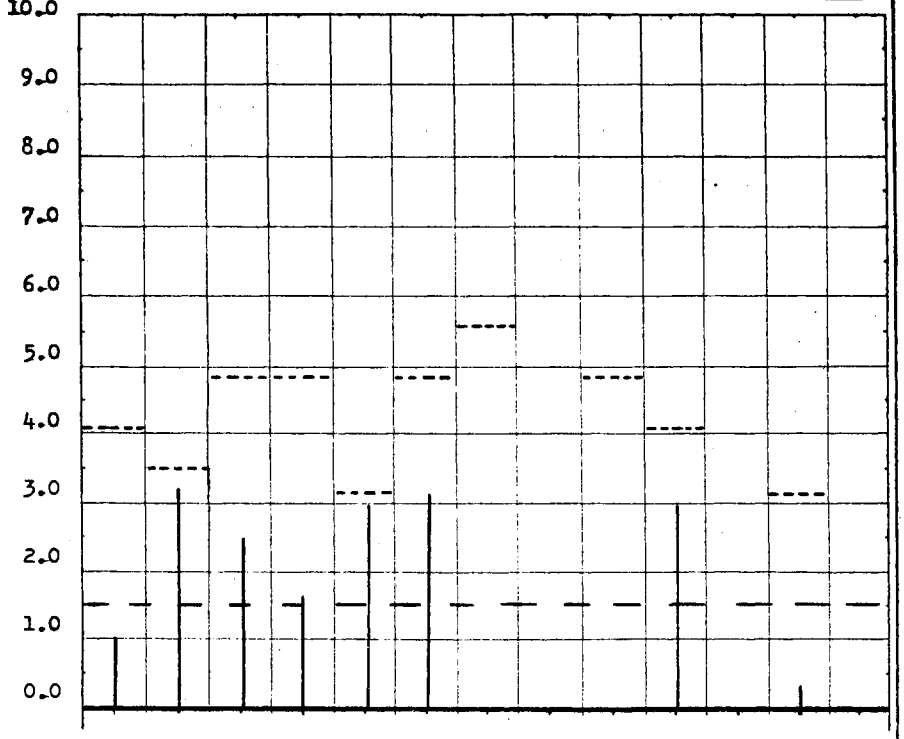
QUALITY CONTROL SURVEILLANCE DATA

*USGPO: 1976 — 757-066/7869

APPENDIX O

PROGRAM NOTEBOOK CHART

% Defective — LOCATOR ACCURACY — MONTHLY — SL1



FY 82	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
Items Insp	200	315	125	125	500	125	80		125	200		500	
Items Disc	2	10	3	2	15	4	0		0	6		1	
% Disc	1.00	3.17	2.40	1.60	3.00	3.20	0.00		0.00	3.00		0.20	
AQL — — —	1.50	1.50	1.50	1.50	1.50	1.50	1.50		1.50	1.50		1.50	
UCL - - - - - - - -	4.08	3.55	4.76	4.76	3.13	4.76	5.58		4.76	4.08		3.13	
Lot Size		10629	16001	2224	12478	1275	697			7459		36513	
Sample Size	200	315	125	125	500	125	80		125	200		500	
Type of Insp	N	N	N	N	N	N	N		N	N		N	
Char	L03-2	L03-5	L03-2	L08-1	L02	L02-1				L12		L03	
		N04-2	L12-1	L12-1	L08	L08-3				L02			
					L12					L03			
										L07			
										L08			
Warehouse	M12	A10	A03	A01	M16	A16	S40					C05	

SOURCE AND/OR LEGEND

APPENDIX P

VIEWGRAPH CHART

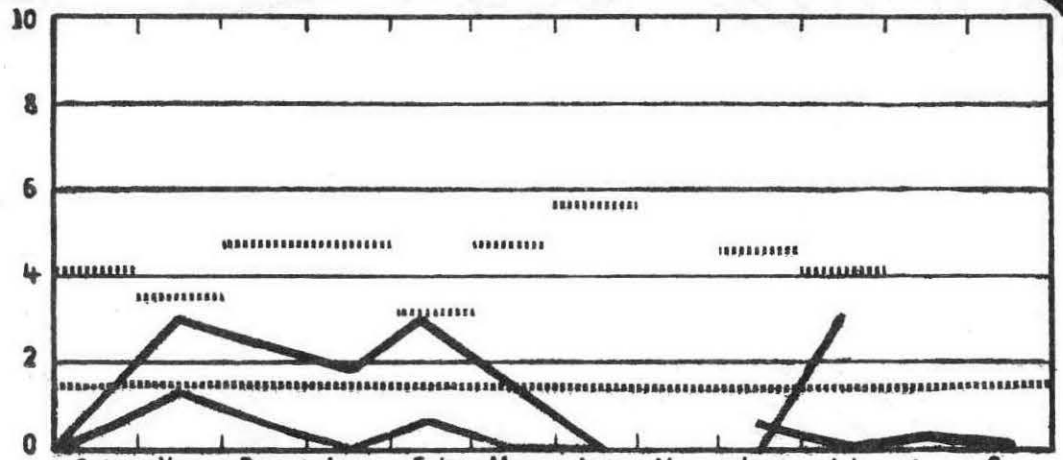
LOCATOR ACCURACY

DIVISION:
DSF

FY81
TREND ——
AVG: .36%

AFLC ·····
AQL: 1.50%

FY82



	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
ITEMS INSPECTED	200	315	125	125	500	125	80		125	200		
ITEMS DISCR	2	10	3	2	15	2	0		0	6		
PERCENT DISCR —	1.00	3.17	2.40	1.60	3.00	1.60	0.00		0.00	3.00		
UCL ·····	4.08	3.55	4.76	4.76	3.13	4.76	5.58		4.76	4.08		
STORAGE AREA	M12	A10	A03	A01	M16	A16	540		C01	M51		
*INVENTORY												

APPENDIX Q

SL1 REPORT

DSQCR/Mr Scruggs 3634/wec/21 Sept 1982

DSQ

Locator Accuracy (SL1)

DSF

1. Subject inspection was accomplished in warehouse C05 for September 1982 in accordance with AFLCR 74-13 and DSQDI 74-5, Appendix 1. The purpose of this program is to measure the accuracy of the central material locator record in relation to the physical material location and to assure that the program is maintained within the AQL of 1.50%.

2. Inspection results are as follows:

Lot Size	36,513
Sample Size	500
Number Discrepant	1
Percent Discrepant	0.20%
Acceptable Quality Level (AQL)	1.50%
Mid Point	2.32%
Upper Control Limit	3.13%

Explanation of error: NSN 2840007982533PL was found in C05B295H030; location not established on D103.

3. This is the second consecutive year that C05 had an exceptionally low error rate for this check. Warehouse personnel are doing an excellent job of maintaining locator accuracy.

4. All quality data used in this inspection is filed in DSQCR/6176. Contact James Scruggs should further information be needed.

Cy to: DSQ
DSFS
DSFO
DSQSQ
DSFSC

VITA

Elfleda J. Weigant

Candidate for the Degree of

Master of Science

Thesis: A STUDY OF THE DISTRIBUTION RECEIVING AND STORAGE QUALITY SECTION IN-HOUSE TRAINING GUIDE AT TINKER AIR FORCE BASE

Major Field: Occupational and Adult Education

Biographical:

Personal Data: Born in Shawnee, Oklahoma, October 8, 1949, the granddaughter of Mayo and Ruby Bates. Married to Michael Weigant on August 8, 1970.

Education: Graduated from Shawnee High School in Shawnee, Oklahoma, in 1967; received Bachelor of Science degree in Spanish and French from Oklahoma State University in 1972; completed requirements for Master of Science degree at Oklahoma State University in May, 1986.

Professional Experience: Secondary Spanish Teacher at Shawnee Mid High School, 1972-1978; Executive Secretary to the City Manager of Shawnee, Oklahoma, 1978; Security Administration Clerk-Typist at Tinker Air Force Base, 1978-1979; Distribution Quality Assurance Specialist at Tinker Air Force Base, 1979-1983; Lead Maintenance Electro-mechanical, Engine Accessories, and Precision Measuring Equipment Quality Assurance Specialist at Tinker Air Force Base, 1983-1985; Maintenance Branch Quality Assurance Specialist at Tinker Air Force Base, 1985; Acting Quality Assurance Flight Control/Plastics Supervisor at Tinker Air Force Base, 1985; Lead Maintenance Flight Control Quality Assurance Specialist at Tinker Air Force Base, 1985-present.

Professional Organizations: Air Force Association, Tinker Management Association, Federal Manager's Association.

Honorary Organizations: Phi Kappa Phi