ABSTRACT

AN ANALYSIS OF CRITICAL INCIDENTS FOR RECENTLY EMPLOYED MICHIGAN COOPERATIVE EXTENSION AGENTS WITH IMPLICATIONS FOR TRAINING

by Fred J. Peabody

This study is part of a continuing search for instruments and techniques by which to accurately assess training needs of Cooperative Extension Service personnel. It draws heavily upon previous research and proceeds from a base of theory in three areas: basic human needs; role requirements expressed as training needs; and techniques for identifying and analyzing training needs.

This research was designed to employ the critical incident technique to analyze the jobs of Cooperative Extension Agents. The purposes were to describe the job requirements perceived as critical by a population of Michigan extension agents, to identify the training needs, and to determine possible differences in training needs and job requirements according to the employment position and the tenure of incumbent agents.

Critical incidents comprised the basic data for this study. A critical incident report form was developed which contained scaled response items of both the importance and difficulty of self-reported incidents which agents perceived as critical for job success. Four hundred and forty-four

critical incidents were collected from 74 subjects in 23 small group meetings. The incidents consisted of written descriptions of effective and ineffective job performance. Effective incidents were inferred as representing competencies already possessed by the reporting agent; ineffective incidents were inferred as representing training needs; and the combination of both were inferred to represent critical job requirements.

Incidents were classified among critical performance categories according to a classification system based upon the work of earlier extension researchers. These performance categories consisted of six functional areas of agent job performance.

The data were processed by the Computer Laboratory at Michigan State University. The descriptive statistics employed included percentage and frequency distribution, mean scores of importance and of difficulty, and rank-order. The data are reported in 46 contingency tables which show the frequency, importance, and difficulty of effective and ineffective critical incidents by the assigned critical performance categories. These data are also presented according to the position and tenure of the reporting agents.

Over 98.5 percent of the incidents reported by agents were classified within the critical performance categories of the classification system. A hierarchy of frequency with which critical job requirements occurred was found for agents in general. That hierarchy was: Teaching and Communicating,

Organizing, Conducting Programs, Administering, Program Planning, and Evaluating. Teaching and Communicating was the most frequent critical performance category for Home Economists and Agricultural and Natural Resource Agents, but 4-H - Youth Agents most frequently reported Organizing incidents. Agents of different tenure reported incidents with similar frequency in all categories except Evaluating. Inexperienced agents very infrequently reported incidents classified in the Evaluating category.

Similar frequency rank-orders resulted for competencies (effective incidents), for training needs (ineffective incidents), and for critical job requirements (combined effective and ineffective incidents). Agricultural and Natural Resource Agents and Home Economists most frequently reported Teaching and Communicating competencies, while 4-H - Youth Agents most frequently reported Organizing competencies. Regardless of position, agents most frequently reported training needs in the Teaching and Communicating category.

In general, agents' ratings of the importance of incidents resulted in a rank-order hierarchy which differed from that for frequency. The importance hierarchy was: Organizing, Conducting Programs, Program Planning, Evaluating, Teaching and Communicating, and Administering. While ratings by Home Economists resulted in ranking Organizing as the most important category of critical job requirements, ratings by the 4-H - Youth Agents resulted in ranking Conducting Programs

first. Ratings by Agricultural and Natural Resource Agents resulted in ranking the Evaluating category first in importance. Experienced agents reported Program Planning as most important. Inexperienced agents gave top importance to Organizing.

Agents generally attached much greater importance to the competencies they possessed than to their needs for training. Differential ranks resulted from agents' ratings of the importance of both competencies and training needs according to their position and tenure.

For agents in general, the rank-order hierarchy of difficulty was different from that for either frequency or importance of performing job requirements. The difficulty hierarchy for all agents was: Evaluating, Organizing, Administering, Program Planning, Teaching and Communicating, and Conducting Programs. Agents generally reported less difficulty performing incidents in which they possessed competencies. Perception of incident difficulty varied by agent tenure and position.

Findings are limited to describing the perception of incumbent agents only. Lack of high agreement of incident classification by researcher and judges limits the extent to which the findings ought to be generalized. The use of scaled items in describing critical incidents appears to be a promising refinement to indicate the degree of criticalness of incidents. Several hypotheses related to employment role perception are suggested.

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by

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CHAPTER I

INTRODUCTION

Background

In modern industrial society a highly refined division of labor has resulted in increased role[1] specialization and complex bureaucratic organizations. Hence, the neophyte incumbent to a professional position within an organization likely faces a complex process of role socialization.[2]

Roles in an organization are created in order to fulfill the goals of that organization.[3] Roles thus conceived represent organizational needs. Therefore, the organization holds a vital concern for the behaviors which are essential to successful role performance. The new employee might be viewed as a threat to the organization until he is sufficiently socialized to permit him to successfully perform his role.

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[1]A role consists of a set of expected behaviors for a member of a social group.

[2]Role socialization is the postemployment process by which a person acquires the skills, knowledge, and attitudes associated with successful performance of a professional role.

[3]Daniel Katz and Robert L. Kahn, The Social Psychology of Organizations (New York: John Wiley & Sons, 1966).

Organizations generally have formal role socialization[1] procedures for new employees. These include induction-orientation[2] programs designed to facilitate satisfactory role performance by the new incumbent. The informal socialization seems not to abruptly halt at the end of a few months of employment, but rather extends well into the employment years.[3] The input of institutional resources for the training of personnel is an investment for maintaining and increasing productivity.[4]

The Cooperative Extension Service is one of a number of organizations to which the above generalizations may apply. The Cooperative Extension Service was created by the Federal Congress in 1914 when it passed the Smith-

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[1]Formal or planned role socialization are terms used synonymously with training and consist of purposefully organized learning experiences sponsored by the employing organization.

[2]Induction-orientation programs are planned socialization experiences which are provided prior to, or immediately following, assignment to a role.

[3]Orville G. Brim, Jr. & Stanton Wheeler, Socialization After Childhood: Two Essays (New York: John Wiley & Sons, 1966), p. 18.

[4]Sally J. Olean, Changing Patterns in Continuing Education for Business (Brookline, Mass.: Center for the Study of Liberal Education for Adults, 1967), pp. 8-12.

Lever Act. Its purpose is:

> ...to aid in diffusing among the people of the United States useful and practical information on subjects related to agriculture and home economics and to encourage the application of the same...[1]

There were 13,766 field and state extension personnel working in the United States on August 31, 1966. During the 12 months previous to this date, 1,480 new staff members were hired. Thus, 10.8 percent of all personnel were newly hired.[2]

There were 384 field and state personnel working in Michigan on July 1, 1966. Of that number, 252 were field agents. During the calendar year of 1966 there were 30 agent separations reported.[3] Therefore, the rate of separation or turnover among field agents was 11.9 percent.

The Problem

Extension administrators are responsible for allocating scarce resources for agent training. To the extent that such training is essential to work role fulfillment,

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[1]U. S., Statutes at Large, Vol. XXXVIII (March, 1913 to March, 1915), p. 372.

[2]Federal Extension Service, Report of Programs in Extension Education for Professional Extension Workers (Washington, D. C.: U. S. Dept. of Agriculture, ER&T-48, March, 1967), p. i.

[3]Federal Extension Service, Turnover of Cooperative Extension Agents (Washington, D. C.: U.S. Dept. of Agriculture, PDM-4, April, 1967), p. 1.

it is vital to the extension organization. Given the importance of training, the planner of extension training must understand the job requirements which are critical for successful performance by extension agents. A basic problem of the planner of extension training is to identify training needs,[1] to do it with maximum precision, and to express the needs in behavioral terms.[2]

The specification of training needs is a task which training officers readily acknowledge, but which few have fully achieved. Korb says:

> Like the weather, most training people talk about training programs built upon needs, but the truth of the matter is that very few training programs ...have been built on any thorough going investigation of needs evolved and revealed at the work site.[3]

In this study it is assumed: (1) that training needs for extension agents can and should be "evolved and revealed at the work site"; (2) that training needs will differ according to the tenure of extension agents and according to the nature of the work agents perform; (3) that it is

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[1]Tyler considers educational need to be a gap between the present condition of the learner and the standard or norm to which he is being compared. See: Ralph W. Tyler, Basic Principles of Curriculum and Instruction (Chicago, Ill.: University of Chicago Press, 1950), pp. 4-10.

[2]Robert F. Mager, Preparing Instructional Objectives (Palo Alto: Fearon Publishers, 1962), pp. 13-44.

[3]David L. Korb ,"How to Determine Supervisory Training Needs," Personnel, Vol. 32 (Jan., 1956), p. 338.

necessary and possible to distinguish needs of neophyte agents from those of experienced agents, and needs of agents in one major area of responsibility from those in another. The study investigates a technique for identifying and analyzing extension agent training needs in these terms.

Previous investigators have employed a variety of means for identifying agent training needs. The first, and most direct, is simply to ask agents to specify their own needs. This approach was used by Clark[1] and Coffindaffer.[2] Such procedure has the great merit of involving the agent directly, but it depends upon the dubious assumption that a worker may fully know what he does not know.

A second approach involves seeking the judgments of supervisors or "relevant others" concerning the training needs of individuals or groups of agents. This approach is rather commonly used in practice and has been investigated with extension supervisors in Ohio by McCormick.[3]

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[1]Harry E. Clark, "An Analysis of the Training Needs of Wisconsin County Extension Service Personnel" (unpublished Ph.D. dissertation, University of Wisconsin, 1960).

[2]Billy L. Coffindaffer, "Experiences of Beginning Cooperative Extension Agents and their Implications for an Induction Training Program" (unpublished Ph.D. dissertation, University of Wisconsin, 1961).

[3]Robert W. McCormick, "An Analysis of Training Needs of County Extension Agents in Ohio" (unpublished Ph.D. dissertation, University of Wisconsin, 1959).

If the judgment of others is the sole source for identifying training needs, it has the disadvantage of ignoring the agent's own perception of his situation and his need.

A third approach, the critical incident technique[1] developed and tested in other vocational settings, appears to take account of the shortcomings of the first two mentioned approaches. It involves the role incumbent in the analysis of his work role and permits him to specify significant incidents in role performance. Investigations by Fivars and Gosnell,[2] Jensen,[3] and Glickman and Vallance[4] have been based upon such analyses. These investigations were in such divergent fields as nursing, education, and military services. The critical incident technique was utilized to analyze work performance of incumbents to

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[1]The critical incident technique is a behavioral research method which consists of a set of procedures for collecting and analyzing effective and ineffective behaviors related to the actual performance of a job or activity.

[2]Grace Fivars and Doris Gosnell, Nursing Evaluation: The Problem and the Process: The Critical Incident Technique (New York: The Macmillan Co., 1966).

[3]Alfred C. Jensen, "Determining Critical Requirements for Teachers," Journal of Experimental Education, Vol. 20 (1951), pp. 79-85.

[4]Albert S. Glickman and T. R. Vallance, "Curriculum Assessment with Critical Incidents," Journal of Applied Psychology, Vol. 42 (1958), pp. 329-335.

identify the critical requirements[1] of the job being studied and as a basis for making inferences about training needs of incumbents.

The central purpose of this study is to employ the critical incident technique as a means of describing the critical job requirements of extension agents, of identifying training needs of agents, and of specifying those needs by tenure and by major responsibility of the agents. Specifically the study is designed to answer seven basic questions:

1. Will job behaviors reported as critical incidents[2] by extension agents reveal training needs similar to those identified by other research methods?
2. Do training needs differ by agent position and if so, what is the character of the differences?
3. Do training needs differ by agent tenure and if so, what is the character of the differences?

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[1]Requirements which are critical in the sense that they are associated with definitely effective or ineffective performance of the job or task under study.

[2]A critical incident is an episode which occurs in the performance of a professional role, the consequences of which are judged by the incumbent to be definitely effective or ineffective.

4. What are the requirements agents perceive as critical for effective job performance?
5. Do certain critical job requirements occur more frequently than others?
6. How important do agents view the identified job requirements to be?
7. To what extent do agents experience difficulty in performing the critical requirements of their jobs?

Definition of Terms

Field Extension Agent is a person who occupies a position as an employee of the Cooperative Extension Service and who works on a county, multi-county, area, or district basis. Synonymous terms include Extension Agent, or Agent. Field Extension Agents are often identified according to the following subject responsibilities:

Agriculture and/or Natural Resources
4-H - Youth Programs
Family Living Education or Home Economics

An Experienced Agent is considered to be one who has held a field extension position for 18 months or more. None in this study had been employed more than 6 years.

An Inexperienced Agent is considered to be one who has held a field extension position for less than 18 months. None in this study had been employed less than 3 months.

The Critical Incident Technique is a behavioral research method which consists of a set of procedures for collecting and analyzing effective and ineffective behaviors related to the actual performance of a job or activity.

A Critical Incident is an episode which occurs in the performance of a professional role, the consequences of which are judged by the incumbent to be definitely effective or ineffective.

An Effective Incident is a critical incident in which professional role behaviors were perceived as successful role fulfillment by the reporting agent.

An Ineffective Incident is a critical incident in which professional role behaviors were perceived as unsuccessful role fulfillment by the reporting agent.

Critical Job Requirements are requirements which are critical in the sense that they are associated with definitely effective or ineffective performance of the job or task under study.

Critical Performance Categories are major groups of related critical job requirements.

A Training Need is a gap between the present condition of the learner and the standard or norm to which he is being compared. In this study, a training need is inferred from the report of ineffective incidents.

Incident Importance is the extent to which an agent perceives an incident as likely to influence his success as an agent.

Incident Difficulty is the extent to which an agent felt taxed in executing the tasks involved in a critical incident.

Overview

A frame of reference for the entire study is developed in Chapter I. A description of the background for the study is presented along with a statement of the research problem. The specific questions with which this research deals are stated and important terms are defined.

The theoretical and operational basis for the study are presented in Chapter II. The discussion proceeds from a base of theory in three areas: basic human needs; role requirements expressed as training needs; and techniques for identifying and analyzing training needs.

The study design and procedures are described in Chapter III. Information is presented about the study subjects, the instruments employed and the pretesting procedure followed. Data collection and analysis procedures are described and the research hypotheses are presented.

Chapter IV contains an analysis of the data with descriptions of the findings pertaining to each hypothesis.

A summary of the study, the conclusions, and the implications for further research are presented in Chapter V.

CHAPTER II

THEORETICAL AND OPERATIONAL BASES OF THE STUDY

Introduction

This study is part of a continuing search for instruments and techniques with which to accurately assess training needs of Cooperative Extension Service personnel. It draws heavily upon previous research and proceeds from a base of theory in three areas: basic human needs; role requirements expressed as training needs; and techniques for identifying and analyzing training needs.

Basic Human Needs

In the absence of a single perfect theory of human behavior, it is necessary to draw from several theories to explain human behavior in the work situation.

One of these theories is based upon the concept of human motivation toward need fulfillment. Abraham Maslow[1] contends that certain human needs exist which are nearly culture-free or universal. However, the means for fulfilling those needs may be quite dissimilar among cultures.

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[1]Abraham Maslow, Motivation and Personality (New York: Harper Brothers, 1954).

Maslow views the human condition as such that man is never fully satisfied. Man is seeking what is lacked. His conception of the hierarchical arrangement of human needs is as follows:

Self-actualization
Self-esteem and the esteem of others
Belongingness and love
Safety
Physiological needs

If all needs are unsatisfied, the physiological needs dominate and the others are relegated to the background. Once physiological needs are fulfilled, other, higher needs become dominant. An individual's need state is not static, but is considered to fluctuate with other factors. In this view, when a need is satisfied, it is no longer a motivating force.

Another theory of work behavior relates job satisfaction to a hierarchy of human need fulfillment. Herzberg, Mausner, and Synderman[1] postulated that man possesses two sets of needs. The first are "avoidance needs" to evade pain from the environment. The second set includes the "approach needs" for psychological growth. These reflect

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[1]See Frederick Herzberg, Bernard Mausner, and Barbara Synderman, The Motivation to Work (New York: John Wiley & Sons, 1959), pp. 13-19; and Frederick Herzberg, Work and the Nature of Man (Cleveland: The World Publishing Co., 1966), pp. 71-91.

man's need to know, to understand, and to become self-actualized.

Empirical testing of this theory revealed differentiated factors associated with job satisfaction and dissatisfaction. It was concluded that satisfying and dissatisfying factors are arranged on a unipolar rather than a bipolar scale. The satisfying group contains the intrinsic motivators inherent in the content of the task or job. The dissatisfying group describes man's relationship to the context or environment in which he does his job. These latter, extrinsic motivators are called hygiene factors by Herzberg, but others[1] have labeled them maintenance factors.

Studies[2] which have tested this "motivational--maintenance" theory of job satisfaction have offered the tentative conclusion that performance of a new work task tends to generate greater reaction to the context or environment in which that task is performed. In highly stressful situations, maintenance needs emerge as most important.

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[1]See Scott M. Myers, "Who are your Motivated Workers?," Harvard Business Review, Vol. 42 (Jan.-Feb., 1964), pp. 73-88; and Denzil O. Clegg, "Work as a Motivator," Journal of Cooperative Extension, Vol. 1 (Fall, 1963), pp. 141-148.

[2]A number of studies are reviewed by Herzberg, op. cit., pp. 93-167.

This seems consistent with Maslow's concept of a hierarchy of human needs whereby physiological and security needs are considered basic to other higher needs. Also, one would expect new workers to be concerned about establishing a sense of belonging in the new environment. Contrarily, experienced workers might already have established such a sense and thus turn their attention toward other tasks at hand. In the motivational sense, they are attracted to fulfill needs for human growth and self-actualization.

Myers[1] tested the "maintenance--motivational" theory with employees of an industrial company. Study conclusions essentially supported the theory since the work satisfying factors seemed to be distinct from work dissatisfying factors. Hence, the unipolar characteristic of the theory held when tested under industrial conditions. An adaptation of Myers' model of this theory is shown in Figure 1.

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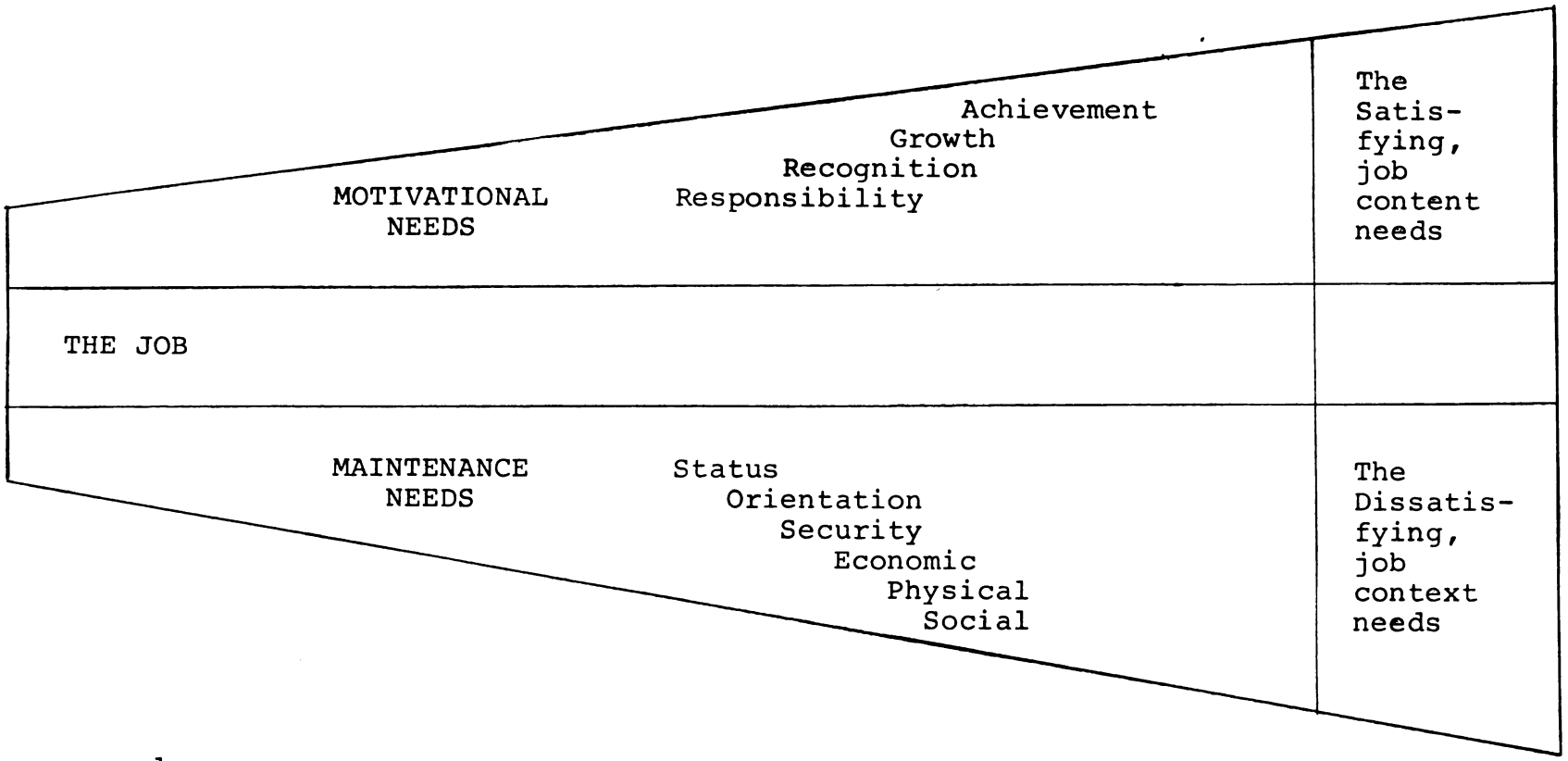
[1]Myers, op. cit., pp. 73-88.

Figure 1

Employee Maintenance and Motivational Needs[1]



[1]Ibid., p. 86.

The above theories are oriented to needs based upon the psychological nature of the individual. Other theories deal with impinging forces which influence the individual in the work situation. Evidence[1] indicates that one's personality is profoundly influenced by environmental interaction. Therefore, the study of sociological relationships and structure in human organizations is stressed by authors like Merton.[2]

Between the extremes of psychological and sociological theories of human behavior resides the middle ground of social psychological theories. A theory so classified is offered by Katz and Kahn[3] who have suggested a model of socialization into the work role as part of their open-system theory of human organization.

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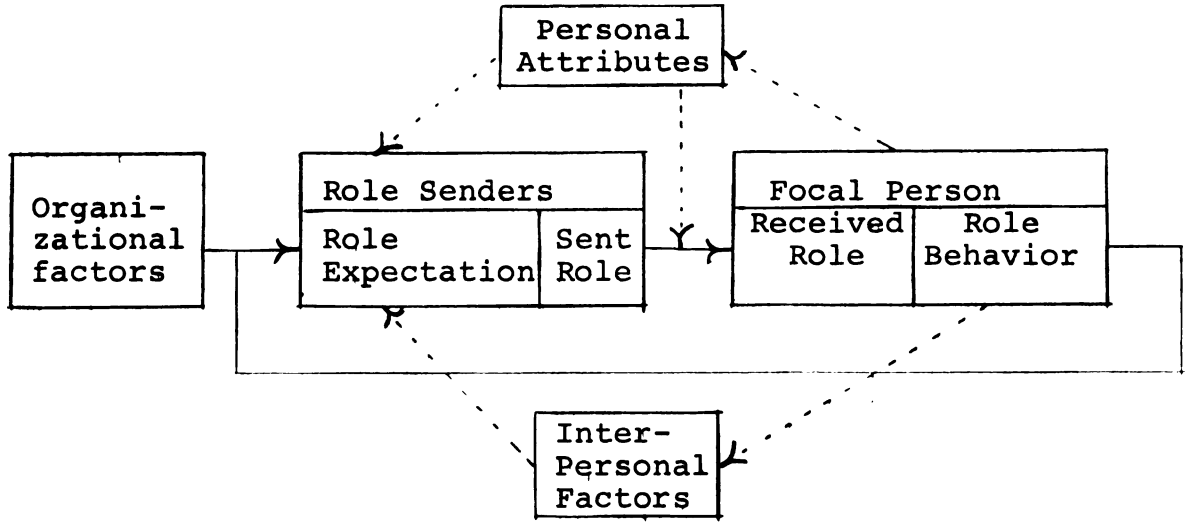
[1]See Robert L. Kahn, Donald M. Wolfe, Robert P. Quinn, and Diedrick J. Snoek, Organizational Stress, Studies in Role Conflict and Ambiguity (New York: John Wiley & Sons, 1964), pp. 35-70; and Katz and Kahn, op. cit., pp. 182-187.

[2]Robert K. Merton, Social Theory and Social Structure (Glencoe, Ill.: The Free Press, 1957).

[3]Katz and Kahn, op. cit., p. 28.

Figure 2

A Theoretical Model for the Taking of Organizational Roles[1]



Solid lines denote causal relationships; broken lines show influencing factors.

The model in Figure 2 depicts a recent incumbent, or "focal person," as the recipient of information from relevant others as to his proper role. The relevant others, or role senders, have their expectations tempered by such organizational factors as institutional goals, needs, policies, etc. Such personal attributes of the focal person as his abilities, values and needs are considered too. Finally, on the basis of these factors, and tempered through interaction, the role senders assess and evaluate the role performance of the incumbent in the focal

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[1] Ibid., pp. 182 and 187.

position. Subsequently, the sender's expectations are communicated to the incumbent.

The incumbent in turn, weighs, evaluates, and assesses these "sent messages" on the basis of his own perceptions which are founded upon his personal attributes, his interactions with relevant others, and his conception of organizational goals, policies, and the like.

From this theoretical view it is apparent that role socialization is likely accomplished by far more than formal induction-orientation and other training experience. The entire system likely plays a part in an intricate process of socialization of the recent incumbent.

Two important assumptions are made in relation to the open-system theory. One assumption is that the organization goals, needs, policies, and structure are not static, but rather occur in what Katz and Kahn[1] have called a "dynamic equilibrium." The individual incumbent similarly does not exist in a static condition, but also grows in a process of dynamic equilibrium. This latter assumption appears to be consistent with Herzberg's[2]

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[1] Ibid., p. 456.

[2] Herzberg, op. cit., pp. 71-91.

concept of motivating factors and with Maslow's concept[1] of man's propensity for self-actualization.

Role Requirements Expressed as Training Needs

A number of studies have been conducted which deal with some aspect of post-employment role learning by professional employees. The emphasis has ranged from evaluation studies of actual induction-orientation programs, to studies of general training needs. Some have followed a psychological approach to analyze the fulfillment of personality needs in the work situation. Those studies most relevant are found in research conducted with educators, workers in business and industry, and cooperative extension employees.

Problems in Identifying Training Needs

Studies of problems and concerns of new faculty members in colleges and universities were conducted by McCaul[2] and Tracy.[3] The former found faculty members

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[1]Maslow, op. cit.

[2]Harlan R. McCall, "Problems of New Faculty Members in Colleges and Universities," North Central Association Quarterly, Vol. 36 (Fall, 1961), pp. 222-234.

[3]Norbert J. Tracy, "Orienting New Faculty Members in Colleges and Universities," North Central Association Quarterly, Vol. 36 (Fall, 1961), pp. 214-221.

had experienced such problems as locating secretarial help and understanding administrative policies. Tracy identified concerns for learning curriculum objectives, content to be taught, and similar areas. Allen and Sutherland[1] studied personal adjustment of faculty members and isolated such influencing variables as value consistency between graduating and hiring institutions; communication effectiveness in hiring interviews; and contract specification.

These studies illustrate a problem common to much behavioral research. The theoretical background which alternately stressed problems, concerns, and adjustments, subsequently delimited the possible findings. The framing of the question conditioned response possibilities.

Studies of elementary and secondary teachers illustrate two possible differences in research approach for determining the content of induction-orientation training. While most authors agree that training should be based upon need, there is not consistent agreement on whose perception of need should be measured. Fishburn[2] emphasized the self-perceived competencies needed by teachers and their

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[1]Lucile A. Allen and Robert L. Sutherland, Role Conflicts and Congruences (Austin, Tex.: Hogg Foundation, The University of Texas, 1963).

[2]C. E. Fishburn, "Learning the Role of the Teacher," Journal of Teacher Education, Vol. 17 (Fall, 1966), pp. 329-331.

relative change in a longitudinal study. McCreary[1], on the other hand, developed a check list of administrators' perception of new elementary teachers' training needs.

Programs and methods for orienting and inducting new teachers have been described by Archer[2] who emphasizes the means of training with limited regard for the ends. It appears to be one thing to show that video tape playback is an effective method or means of training; it is quite another to show which types of behavior are most important to learn.

Several studies in business and industry have attempted to identify a foundation for training programs on the basis of skills, abilities, and understandings necessary for effective job performance. Some of these have focused upon job analysis. Other studies, like those

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[1]Anne P. McCreary, "Determining Individual Needs of Elementary Teachers as a Basis for an Orientation Program," Journal of Educational Research, Vol. 54 (Sept., 1960), pp. 20-24.

[2]Vern B. Archer, Roy A. Edelfelt, and Hite Herbert, "Point Points the Way: Project for the Orientation and Induction of New Teachers," NEA Journal, Vol. 54 (Oct., 1965), pp. 29-30.

of Herzberg[1], Schaffer[2], and Walsh[3], have stressed the relationship of certain personality needs to job satisfaction. A typical approach has been to analyze satisfaction in work according to adaptations of Murray's[4] or Maslow's[5] lists of human needs. While such studies help test psychological theories and have implications for personnel management, they have been criticized on a number of counts. One might question the extent to which the individual determines the perception of the job, or the job determines the perception of the individual performing it. Another concern begs the question, "Is the satisfied or happy worker the productive worker?"

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[1]See Herzberg, et al., The Motivation to Work, op. cit., pp. 3-20; and Herzberg, Work and the Nature of Man, op. cit., pp. 71-91.

[2]R. H. Schaffer, "Job Satisfaction as Related to Need Satisfaction in Work," Psychological Monographs, Vol. 67, No. 14, Whole No. 364, (1953).

[3]Richard P. Walsh, "The Effect of Needs on Responses to Job Duties," Journal of Counselling Psychology, Vol. 6 (1959), pp. 194-198.

[4]Henry A. Murray, Exploration in Personality (New York: Oxford University Press, 1938).

[5]Maslow, op. cit.

It would appear that studies of role socialization which measure satisfaction without consideration of performance level, or which consider an individual's perception as a static entity, are not likely to be useful in identifying training needs.

Training Needs of Cooperative Extension Workers

Related research conducted among cooperative extension workers has been designed to identify perception of role for single positions, or to identify training needed by incumbent agents. Coffindaffer[1] developed a questionnaire to measure difficulty experienced and training needed by 134 low tenured field extension agents in the New England states. His questionnaire employed component tasks drawn from earlier extension studies and from agent narrative reports of job activities.

Training needs of Ohio field agents in 3 positions were investigated by McCormick[2] using a questionnaire. This instrument was designed around nine areas of competency needs identified by an earlier National Extension Task Force for Extension Training (1957). The component items reflected the understanding of a number of leaders as to the role of agents, the organizational goals and objectives, and the potential contribution of several human behavior disciplines.

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[1]Coffindaffer, op. cit.

[2]McCormick, op. cit.

Similarly, Clark[1] developed a questionnaire to measure the importance of, and the training needs for, the nine major extension objectives outlined in the Scope Report[2] as perceived by Wisconsin extension field agents. The 55 component items structured around these nine areas were considered by the author to be representative of the knowledge, understandings, and competencies needed by extension personnel in order to meet organizational objectives.

The above authors have provided valuable information for planning agent training experiences. However, in instances where data were obtained by questionnaire, an underlying assumption is that the items are fully representative of the important content under consideration. The content validity of the research instrument determines the limits of what can be measured by that instrument. The possibility exists that important content items have not been included.

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[1]Clark, op. cit.

[2]This is a popular abbreviation for a publication developed under the chairmanship of Paul A. Miller for the 1957 Extension Committee on Organization and Policy (ECOP) entitled: The Cooperative Extension Service Today; A Statement of Scope and Responsibility (no publisher credited, April, 1958). A Subsequent publication, also known as the 'Scope Report,' was designed to amplify the 1958 edition. This latter publication is: The Agricultural Extension Service, A Guide to Extension Programs for the Future: The Scope and Responsibilities of the Cooperative Extension Service. (Raleigh: North Carolina State College, 1959).

In addition to the above extension researchers, other authors in the field have specified factors which they consider to be important for the performance of agents' roles. Kelsey and Hearne[1] have stressed their perception of important duties performed by agents. Problem areas for agents were identified according to Duncan's[2] view of extension philosophy and the content of training programs offered agents. A National Task Force[3] specified competency needs of agents as implied by the purposes of the Cooperative Extension Service.

The divergent approaches employed by various authors in describing the terms and the sources for identifying training needs are itemized in Figure 3.

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[1]Lincoln D. Kelsey and Cannon C. Hearne, Cooperative Extension Work (Ithaca: Comstock Publishing, 1963), pp. 65-79.

[2]James A. Duncan, Training Cooperative Extension Workers: The Coordinated Approach (Madison: Cooperative Extension Service, University of Wisconsin, April, 1957).

[3]National Task Force on Cooperative Extension Inservice Training, An Inservice Training Program for Cooperative Extension Personnel (Topeka: H. M. Ives & Sons, 1960), pp. 12-15.

Figure 3

Terms and Sources of Extension Agent Training Needs

Author	Term	Source
Kelsey & Hearne[1]	Duties	Author's perception of agent functions.
Duncan[2]	Problem areas	Author's perception of philosophy and content of training programs
National Task Force[3]	Competency needs	Task Force perception of common needs as implied by purposes of extension.
McCormick[4]	Competency needs	Perception of agent competency needs as tested with supervisors and agents.
Clark[5]	Program Emphasis	Measures of agent perception of competency needs.
Coffindaffer[6]	Work areas	Measures of agent perception of task difficulty.

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[1]Kelsey & Hearne, Op. cit., pp. 65-79.

[2]Duncan, op. cit.

[3]National Task Force on Cooperative Extension In-Service Training, op. cit., pp. 12-15.

[4]McCormick, op. cit.

[5]Clark, op. cit.

[6]Coffindaffer, op. cit.

Summary of Implications of Studies of Training Needs

Upon examination of the writings of the extension authors cited in Figure 3, there were persistent categories of job behaviors for extension workers. Such behavioral categories appeared to be descriptions of functions performed by extension agents. While terminology varied by author, reference to one or more of the following categories was found:

1. Planning and developing extension programs
2. Implementing programs through social systems
3. Communicating and using the educational process
4. Conducting programs for developing human, economic, and other natural resources
5. Evaluating programs, conducting research, and solving problems
6. Administering extension work

Furthermore, the following is a summary of implications of researcher decisions which appear to be especially relevant for research related to training needs:

1. The theoretical approach and attendant questions asked by the researcher limits the responses and subsequently the application of results.
2. There is an issue as to whose perception ought to be considered in determining training needs.

3. The identification of the need for and the content of early role socialization on the job appears to be basic to the consideration of methods for accomplishing such socialization.
4. Perception is probably dynamic rather than static. So consideration should be given to impinging factors like environment, group goals and role expectations, and changing psychological attributes.
5. The content validity of a behavioral research instrument largely determines what that device can measure.

Techniques for Identifying and Analyzing Training Needs

In seeking a method for identifying training needs, the critical incident technique (CIT) was uncovered. The CIT consists of a set of procedures for collecting and analyzing effective and ineffective behaviors related to the actual performance of a job or activity.[1] This technique was developed by Dr. John Flanagan as a method to

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[1]Robert M. Kessel, "The Critical Requirements for Secondary School Business Teachers Based upon an Analysis of Critical Incidents" (unpublished Ph.D. dissertation, University of Wisconsin, 1957).

obtain a representative sample of actual incidents of air crew behavior for the purpose of identifying critical requirements for Air Force Officers in World War II. Since then it has frequently been employed to analyze a particular job by identifying its critical requirements. A critical requirement is:

> A requirement which is crucial in the sense that it has been responsible for outstandingly effective or definitely unsatisfactory performance of an important part of a job or activity in question.[1]

Adaptations have been made in the methodology by several investigators since its inception. In recent correspondence, Dr. Flanagan provided a 1963 bibliography of reports of over 200 research applications of the technique.[2]

Applications of the Critical Incident Technique

Flanagan[3] reported nine generalized research applications of the method: criteria measures of performance; proficiency measures; training requirements and evaluation;

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[1]John C. Flanagan, "Critical Requirements: A New Approach to Employee Evaluation," Personnel Psychology, Vol. 2 (1949), p. 420.

[2]Personal correspondence with the author. June 5, 1967.

[3]Flanagan, "The Critical Incident Technique," Psychological Bulletin, Vol. 51 (1954), pp. 327-358.

Many of the early applications of the technique were related to armed services personnel. However, the technique has been used for such divergent purposes as identifying ethical standards of psychologists; determining the critical requirements for private secretaries;[1] developing projective tests for dentists; and testing a motivational theory of worker satisfaction on the job.[2]

Numerous researchers have utilized the critical incident technique in studies related to the educational enterprise. Jensen[3] identified some critical requirements for teachers and recommended these requirements as a basis for teacher evaluation and as a guide for in-service growth. Priorities of training requirements for a group of naval officers were studied by Glickman.[4] He also conducted an evaluation of the naval officer candidate curriculum in relation to critical officer behaviors.

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[1]Eugene J. Kosy, "Critical Requirements for Private Secretaries Based upon an Analysis of Critical Incidents" (unpublished Ph.D. dissertation, University of Wisconsin, 1959).

[2]For instance, see: Clegg, op. cit., pp. 141-148; Herzberg, op. cit., pp. 71-79; and Herzberg, et al., op. cit., pp. 107-120.

[3]Jensen, op. cit.

[4]Glickman & Vallance, op. cit.

Training needs for the staff of a mental institution were identified in a study by Fleming.[1] Steiner[2] used the CIT as a method for teaching and for evaluating the performance of attendants in an institutional setting. Fivars and Gosnell[3] developed objectives for pre-service nursing training programs on the basis of critical incidents collected in the environments where nurses are employed.

In an effort to determine what constitutes "good teaching," some authors[4] have identified the components of effective and ineffective teaching behavior. Similarly, the components of effective and ineffective administrative personnel selection and classification; job design; operational procedures; equipment design; motivational and leadership studies; and counseling.

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[1]Jack W. Fleming, "The Critical Incident Technique as an Aid to Inservice Training," American Journal of Mental Deficiency, Vol. 67 (1962), pp. 41-52.

[2]Kelley E. Steiner and Irene L. Cochran, "Simulated Critical Incident Technique as an Evaluative and Teaching Device," American Journal of Mental Deficiency, Vol. 70 (1966), pp. 835-839).

[3]Fivars and Gosnell, op. cit., p. 59. See: Lane B. Blank, "Critical Incidents in the Behavior of Secondary School Physical Education Instructors," The Research Quarterly, Vol. 29 (1958), pp. 1-6; Melvin Goldin, "Behaviors Related to Effective Teaching," (unpublished Ph.D. dissertation, University of Wisconsin, 1957); and Kessel, op. cit.

behavior by school principals were identified by Cooper.[1] The CIT was employed by Hedlund[2] in developing a predictive device for estimating teaching success of secondary education undergraduates in New York. A standard of performance for nurses was developed through this technique.[3] In the massive study of teacher characteristics by Ryans[4], this technique was used to establish the criteria of relevant teacher behavior.

Two important criticisms are leveled at the critical incident technique. The first is that each reporter of incidents is basing his report upon his own value judgment.[5]

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[1]Bernice Cooper, "Analysis of the Quality of the Behaviors of Principals as Observed and Reported in Six Critical Incident Studies," Journal of Educational Research, Vol. 56 (1963), pp. 410-414.

[2]Paul A. Hedlund, "Cooperative Study to Predict Effectiveness in Secondary School Teaching," Journal of Teacher Education, Vol. 4, (1953), pp. 230-234.

[3]Fivars and Gosnell, op. cit.

[4]David G. Ryans, Characteristics of Teachers (Washington, D. C.: American Council on Education, 1960).

[5]Hobert W. Burns, "Success Criteria and the Critical Incident Technique," Phi Delta Kappan, Vol. 38 (1956), pp. 73-75.

The second relates to the subjective nature of the inductive classification of incidents on an a posterori basis.[1]

Dr. Flanagan speaks to both of these criticisms and reflects his appraisal of the potential for the method:

> ...the critical incident technique, rather than collecting opinions, hunches, and estimates, obtains a record of specific behaviors from those in the best position to make the necessary observations and evaluations. The collection and tabulations of these observations make it possible to formulate the critical requirements of an activity. A list of critical behaviors provides a sound basis for making inferences as to requirements in terms of aptitudes, training, and other characteristics. It is believed that progress has been made in the development of procedures for determining activity requirements with objectivity and precision...[2]

Several assumptions are made when using the CIT. Among the major ones are:

1. Extremities of effective and ineffective behavior can be more accurately identified than those which fall between such extremities.[3]

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[1]For instance see: John E. Corbally, Jr., "The Critical Incident Technique and Educational Research," Educational Research Bulletin, Vol. 35 (1956), pp. 57-62; "Reply to Hobert W. Burns," Phi Delta Kappan, Vol. 38 (1957), pp. 141-142; and "A Study of the Critical Elements of School Board-Community Relations" (unpublished Ph.D. dissertation, University of California, 1955).

[2]Flanagan, "The Critical Incident Technique," op. cit., p. 355.

[3]Corbally, "The Critical Incident Technique and Educational Research," op. cit., p. 57-60.

2. One must not assume that the middle behaviors are inconsequential.[1]

3. Respondents can report incidents in which results are very clearly recognizable in terms of the goals of the activity.

4. There is a common core of behavior in the performance of a given job or task.[2]

The CIT is not a set of rigid rules, but instead consists of a flexible set of principles for collecting behavioral data.[3] Therefore, other investigators have used slightly differing adaptations of the method. The steps which follow represent an effort to eclectically incorporate the essentials of the method from reports of several investigators.

1. The specification of the job or activity to be studied.

   Persons reporting incidents must be clearly instructed as to the job, task, or activity being studied. Time limitations must also be indicated.

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[1] Ibid., p. 58.

[2] This point is discussed by both Hedlund, op. cit. and Ryans, op. cit.

[3] Flanagan, "The Critical Incident Technique," op. cit.

2. Determination of the observer group.

Flanagan's original concept of this technique called primarily for observers who recorded the critical behaviors of the subjects under study with only occasional self-reported incidents by the subjects.[1] Since the mid-fifties, a number of researchers have relied exclusively upon self-reported incidents.[2]

3. The specification of criteria for observer use in reporting critical incidents.

These include the following:

a. A description of the situation regarding:

(1) Time of occurrence
(2) Persons involved
(3) Circumstances leading to the incident

b. A description of the behavior which relates exactly what was done.

c. A statement of why the results of the incident were effective or ineffective.

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[1] Ibid.

[2] For example, each of the following has successfully employed self-reported incidents: Frank D. Alexander, "Pretest of the Critical Incident Technique," unpublished paper, Cooperative Extension Service, Cornell University, circa, 1965; Clegg, op. cit.; Loren F. Goyen, "Critical Components of the Work Environment of County Extension Youth Agents" (unpublished Ph.D. study in progress, University of Wisconsin); Herzberg, et al., op. cit.; Herzberg, op. cit.; and Fred E. Kohl, "Critical Requirements for Idaho Extension Agricultural Agents" (unpublished Ph.D. dissertation in progress, University of Wisconsin).

4. Selection of a method for collecting representative incidents.

Three methods of securing critical incidents have generally been used: individual interviews, group interviews, and mailed questionnaires. Incidents are usually oral or written descriptions of behavior in narrative form. The reputed communication advantage of the individual interview is offset in part by the expense and time incurred in securing the data which results in a decline in the number of subjects that can practically be contacted.[1] Some researchers have resorted to mailed questionnaires as a means for economically increasing sample size. However, there have been instances of very low rates of instrument returns.[2] Some incidents have been discarded due to misunderstood instructions to subjects. Wagner has reported distinct time savings for the group method without loss

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[1]Alexander, op. cit.

[2]Low returns were reported by Bengt-E Andersson and Stig-G Nilsson, "Studies in the Reliability and Validity of the Critical Incident Technique," Journal of Applied Psychology, Vol. 48 (1964), pp. 398-403; Corbally, "A Study of the Critical Elements of School Board-Community Relations," op. cit.; and Goldin, op. cit.

of quality of reported incidents.[1] When incidents are collected in small groups with the researcher present, questions and answers help reduce the likelihood of reporting unusable incidents.

5. Establishing the minimum number of incidents required.

A study in Sweden showed the first 320 critical incidents for retail store managers provided 100 percent of the categories, and 95.3 percent of the subcategories identified from a total of 1,847 incidents.[2] Jensen reported that the first 400 incidents for U. S. school teachers revealed nearly all groups of behaviors found in 1,500 incidents.[3] It therefore appears that a minimum of 320 incidents is required for a representative sample of job behaviors for professional workers.

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[1]Ralph Wagner, "A Group Situation Compared with Individual Interviews for Securing Personnel Information," Personnel, Vol. 1 (Spring, 1948), pp. 93-107.

[2]Andersson and Nilsson, op. cit.

[3]Jensen, op. cit.

6. The acceptance or rejection of incidents on the basis of established criteria.

   Actual behavior must be reported and the criteria specified in Item 3, above, must be met.

7. The performance of a content analysis upon accepted incidents.

   a. Selecting a frame of reference:

      The intended use of the data determines the criteria for this step. For use in personnel selection, the criteria may be psychological traits. Where training uses are of prime concern, criteria may relate to training courses or goals.

   b. Formulation of categories of accepted incidents:

      This has apparently been universally accomplished by an inductive process whereby definitions for each category are developed from the collected data. A panel of judges is commonly used for maintaining objectivity and as a check for reliability.

8. Interpretation of data and reporting results.

   Data are generally interpreted by describing the categories and/or subcategories of incidents. The frequency of incident occurrence and relationships among variables are often reported.

Attributes of the Critical Incident Technique

Several reputed attributes of this technique tend to support the conclusion that it is an appropriate method for the identification of behaviors needed for effective role performance.[1] It will permit the reporting of behaviors by the subjects actually engaged in the task. Their perceptions of both the job and the work situation are considered. It will afford insight into both the ineffective and effective behaviors executed in performing elements of workers' roles. This method makes possible the identification of job behaviors which respondents perceive as critical.

Summary

The determinants of agent training needs may reside in a number of sources:

A hierarchy of basic human needs suggested by Maslow

A maintenance-Motivational theory of work proposed by Herzberg

A theory of role taking in organizations offered by Katz and Kahn

Such theoretical considerations provide a framework for generating hypotheses about agent training needs.

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[1]See discussions by: Burns, op. cit.,; Corbally, "The Critical Incident Technique and Educational Research," op. cit.; Flanagan, "The Critical Incident Technique," op. cit.; and Fleming, op. cit.

The results of previous studies of extension agent training needs suggest there may be six categories of needs which persist for extension agents:

1. Planning and developing extension programs
2. Implementing programs through social systems
3. Communicating and using the educational process
4. Conducting programs for developing human, economic, and other natural resources
5. Evaluating programs, conducting research, and solving problems
6. Administering extension work.

Related research suggests that the method employed to identify training needs might: limit possible subject response; fail to measure perception of the incumbent; focus upon methods of meeting training needs rather than identifying them; treat perception as a static rather than dynamic quality; and fail to identify important needs. It appears the critical incident technique offers a method for surmounting, at least to a high degree, each of these problems.

The CIT seems an appropriate method for identifying training needs and for specifying job requirements of extension agents as perceived by incumbents. The eight-step procedure generally followed by those employing the CIT is as follows:

1. Specify the job or activity to be studied
2. Determine the composition of the observer group
3. Specify the criteria for observer use in reporting critical incidents
4. Select a method for collecting representative incidents
5. Establish the minimum number of incidents required
6. Accept or reject incidents on the basis of established criteria
7. Perform a content analysis of accepted incidents
8. Interpret the data and report the results.

CHAPTER III

METHODOLOGY

Introduction

The methods employed to determine critical job requirements and to identify training needs of field extension agents are described in this chapter. Four major sections are developed. The first presents demographic characteristics of participating agents. The next describes the instruments employed and the pretesting procedure followed. Another describes the data collection procedures and finally, data analysis is discussed and research hypotheses are presented.

The subjects

On the basis of findings of Andersson and Nilsson and of Jenson, it appeared that approximately 70 subjects would be needed to provide the minimum number of critical incidents required for this study. Since it was unnecessary and economically unfeasible to include all Michigan agents, it was necessary to decide whether to use a random sample of all agents, or to select a population of agents with contiguous years of service. The latter decision was made since it appeared to minimize the probable age and tenure differences among respondents.

Both experienced and inexperienced agents' perceptions of job requirements and training needs were desired. However, the first three months of agent work seemed largely devoted to induction experiences and therefore was judged to be prerequisite for enabling agents to report critical incidents. Agents thus were selected as subjects in chronological order of their tenure beginning with those employed three months prior to launching the investigation and extending back over whole years until more than 70 had been selected. This resulted in 74 subjects who comprised the total population of Michigan Cooperative Extension Agents who had experienced not more than six years, nor less than three months of duty and were employed in a field agent position on December 1, 1967.

A dichotomy was arbitrarily established according to agent tenure. Agents with less than 18 months of extension employment were considered to be inexperienced since such a period seemed a reasonable requirement for agents to grasp important role expectations. Agents with 18 or more months of extension employment were considered to be experienced since all would have had an opportunity to plan an extension program and at least begin to execute the plan.

Agents were asked to report such personal demographic characteristics as age, sex, employment position, tenure, previous work experience, and educational level

since such variables might be differentially related to training needs.

About two-thirds of the agents comprising the study population were males and one-third were females. As indicated in Table 1, the 25 Agricultural and Natural Resource Agents were males and the 22 Extension Home Economists were females. Among the 27 4-H - Youth Agents, 24 were males and three were females.

Approximately 90 percent of the 4-H - Youth Agents were below 36 years of age and 70 percent of them fell within the 26 through 35 year range. Extension Agricultural Agents were older, with 80 percent of them 31 years or older; and 40 percent of them 36 years or older. The distribution of Extension Home Economists' ages formed a dichotomy with 27 percent in the youngest (21-25) age group and 54 percent in the older (over 40) age group. This might reflect a typical pattern of the young home economist employed until the child bearing years, leaving employment to bear children, and then returning to professional employment in later life.

Fifty percent of the agents were classified as experienced and fifty percent were classified as inexperienced agents as previously explained. Table 3 shows that about three-fourths of the 4-H - Youth Agents were

TABLE 1

DISTRIBUTION OF RESPONDENTS BY SEX AND EMPLOYMENT POSITION

Sex:	4-H - Youth Agents		Extension Home Economists		Agricultural & Natural Resource Agents		Total	
	N	%	N	%	N	%	N	%
Male	24	88.89	0	0	25	100.00	49	66.22
Female	3	11.11	22	100.00	0	0	25	33.78
Total	27	100.00	22	100.00	25	100.00	74	100.00

TABLE 2

DISTRIBUTION OF RESPONDENTS BY AGE AND EMPLOYMENT POSITION

Age group by Years:	4-H - Youth Agents		Extension Home Economists		Agricultural & Natural Resource Agents		Total	
	N	%	N	%	N	%	N	%
21-25	5	18.52	6	27.27	0	0	11	14.86
26-30	9	33.33	1	4.55	5	20.00	15	20.27
31-35	10	37.04	1	4.55	10	40.00	21	28.38
36-40	2	7.41	2	9.09	6	24.00	10	13.51
Over 40	1	3.70	12	54.55	4	16.00	17	22.97
Total	27	100.00	22	100.00	25	100.00	74	100.00

TABLE 3

DISTRIBUTION OF RESPONDENTS BY TENURE AND POSITION

Tenure:	4-H - Youth Agents		Extension Home Economists		Agricultural & Natural Resource Agent		Total	
	N	%	N	%	N	%	N	%
Experienced[a]	7	25.93	12	54.55	18	72.00	37	50.00
Inexperienced[b]	20	74.07	10	45.45	7	28.00	37	50.00
Total	27	100.00	22	100.00	25	100.00	74	100.00

[a]Experienced agents were those who had held an extension position for 18 months or more. None had been employed more than 6 years.

[b]Inexperienced agents were those who had held an extension position for less than 18 months. None had been employed less than 3 months.

TABLE 4

RESPONDENT PREVIOUS WORK EXPERIENCE AND EMPLOYMENT POSITION

Previous Work Experience	4-H - Youth Agents		Extension Home Economists		Agricultural & Natural Resource Agent		Total	
	N[a]	%	N[a]	%	N[a]	%	N[a]	%
Teaching	18	66.67	18	81.82	11	44.00	47	63.51
Public Service	7	25.93	3	13.64	12	48.00	22	29.73
Business and Industry	11	40.78	4	18.18	9	36.00	24	32.43
Research	1	3.70	2	9.09	5	20.00	8	10.81
None	1	3.70	2	9.09	3	12.00	6	8.11

[a]Columns will sum greater than the number of respondents since several previous experiences may be reported by one individual.

inexperienced, while over 70 percent of the Agricultural and Natural Resource Agents were experienced. The Home Economists were almost equally divided; about 55 percent were classed as experienced and about 45 percent were inexperienced.

Teaching was the most frequently reported previous work experience for agents in this study. A considerably larger proportion of Extension Home Economists and 4-H - Youth Agents had teaching experiences before extension employment than did Extension Agricultural and Natural Resource Agents.

The second most frequent work experience was in business and industry. Public service (other than teaching) ranked a close third and was the most frequently reported experience of Agricultural and Natural Resource Agents. Public service was considered to include employment with such agencies as Social Welfare Departments, the U. S. Forest Service, Michigan Department of Conservation, U. S. Soil Conservation Service, Farmers Home Administration, and others.

Research experience was reported by about 10 percent of the agents. Extension Agricultural and Natural Resource Agents more frequently reported research experience than either 4-H - Youth Agents or Extension Home Economists.

About eight percent of all agents had no previous work experience before extension employment.

The educational backgrounds of the agents are reported in Table 5. Approximately four-fifths of them had academic credits beyond their Bachelor's degree. About one-half had completed their Master's degree or had worked beyond it. Such accomplishments were more frequently reported by Extension Agricultural and Natural Resource Agents than by either 4-H - Youth Agents or Extension Home Economists. Incumbents to the latter two positions most frequently reported having a Bachelor's degree plus some credits, but not enough for a Master's degree.

TABLE 5

RESPONDENT LEVEL OF ACADEMIC ATTAINMENT
BY EMPLOYMENT POSITION

Academic Attainment	4-H - Youth Agent		Extension Home Economist		Agricultural and Natural Resource Agent		Total	
	N	%	N	%	N	%	N	%
Bachelor's	5	18.52	7	31.82	4	16.00	16	21.62
Bachelor's Plus	15	55.56	8	36.36	5	20.00	28	37.84
Master's	4	14.81	3	13.64	6	24.00	13	17.57
Master's Plus	3	11.11	4	18.18	8	32.00	15	20.27
Doctor's	0	0	0	0	2	8.00	2	2.70
Total	27	100.00	22	100.00	25	100.00	74	100.00

Instrumentation

Two principal instruments, plus associated instructions, were developed for this investigation: A Critical Incident Report Form, attached in Appendix A; and a Classification System for Critical Incidents, Appendix B.

The Critical Incident Report Form was developed for use of respondents in self-reporting incidents. This form was structured to assure that reported incidents would meet the criteria for acceptance noted in Chapter II. The content of the questions was designed to meet these criteria. The order of questions about each incident was adapted from that followed in oral interviews by Alexander.[1] The questions were:

1. Exactly what did you do?
2. What circumstances led up to the incident?
3. What was your objective?
4. Who was involved?
5. What were the results of your action?
6. When did this incident take place?

This research is concerned with the significance of agent training needs and job requirements. One indication of the significance of such needs and requirements is the frequency with which agents report them. The Critical Incident Report Form was designed to collect information about critical incidents so they could be classified into

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[1]Alexander, op. cit., pp. 1-5.

common groups of agent needs or job requirements. The frequency with which incidents occurred would be one indication of the significance of such needs or requirements. That is, large numbers of incidents in a given group would tend to indicate more significant activities; small numbers of incidents would tend to indicate less significant activities.

However, frequency alone seemed not to provide a complete picture since it did not fully indicate the degree of criticalness of a need.[1] To illustrate, a commercial fisherman might seldom need to swim, but if the need arose but once it would be highly critical. Therefore, an indication of the importance of a training need seemed to be a considerable refinement over the frequency of occurrence alone. Respondents were asked to indicate on a seven-point scale the extent to which they believed each self-reported incident was likely to influence their success as an extension agent.

It was also desired to determine if agents differentially reported the difficulty experienced in executing critical incidents. Respondents were asked to indicate on

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[1]Interpretation of incident frequency is discussed by: Corbally, "The Critical Incident Technique and Educational Research," op. cit.; Glickman and Vallance, op. cit.; Flanagan, "Critical Requirements: A New Approach to Employee Evaluation," Personnel Psychology, Vol. 2 (1949), pp. 419-425; and Andersson and Nilsson, op. cit.

a seven-point scale how difficult it was to do each self-reported incident.

The questionnaire was constructed so respondents could provide descriptions of three effective and three ineffective incidents, for a total of six incidents. A separate page was used for reporting each incident with the pages alternating between effective and ineffective incidents.

Effective incidents were considered to indicate competencies or skills possessed by the reporting agents. Ineffective incidents were considered to indicate training needs of the reporting agents. The combination of all effective and ineffective incidents, when classified, was considered to reflect agent job requirements.

The potential for maximizing the number of usable reported incidents seemed greatest with small group meetings of respondents. Since the respondent's understanding of the instructions was deemed to be crucial to the validity of the research data, incident descriptions, special effort was made to insure adequate and uniform communication of instructions. A full page of instructions, including examples of incidents from other professions, preceeded the critical incident report form. To provide audio reinforcement to the visually presented instruction, this page was tape recorded and the four-minute recording was played in

each group meeting. The general information was narrated on the recording by the researcher, but the sample incidents were each narrated by a different voice. During data collection meetings, the subjects were encouraged to both read and listen to the instructions.

Respondents were asked to provide the following personal demographic information:

Name	Employment experience
Sex	Educational level attained
Age	Extension tenure

A classification System for Critical Incidents

A classification system was required to meaningfully interpret the critical incidents collected in this research and relate them to the variables under study. Other researchers using the CIT have apparently, without exception, classified the collected incidents a posteriori. Typically the incidents were collected and the classification system was then inductively developed from the collected data.

In the present study a classification system was developed a priori. It was noted in the review of extension literature that there appeared to be six functional groups of agent job behaviors which persisted among the writings of several authors in the field. These six groups of agent behaviors served as the major categories of the classification

system used in this study. These categories are herein referred to as critical performance categories (CPC's). Hypotheses were generated about the CPC's and about the relationship of other variables to the CPC's.

Component subcategories were assigned to each category. The subcategories were generalized statements of agent behaviors. They were primarily derived from over 200 items used by earlier cited extension researchers.[1]

The typical behaviors subsumed under each performance category were not necessarily exhaustive of all possible behaviors reported. The intent was to use the itemized behaviors as guides or as typical examples of appropriate behaviors for a single category.

Pretesting Procedure

After individual members on the doctoral guidance committee offered suggestions for refinement in both the form and the procedure, the incident report form was pretested. The pretest subjects were ten students currently enrolled in college who had served as Extension Assistants for one or more summers. All had worked in county extension offices as Assistants during the summer of 1967.

Each pretest subject was telephoned by the researcher and asked to participate in the research. If they responded

[1]The researchers include McCormick, op. cit., Clark, op. cit., Coffindaffer, op. cit., and Alexander, op. cit.

favorably, a personal letter was sent. This letter briefly described the procedure and requested a card be returned to indicate a preference for a meeting time. Four meetings were held. Attendance ranged from one to four at each meeting.

The ten pretest subjects responded favorably to the task. They provided a total of 57 of the requested 60 incidents. Eight subjects provided six incidents each, one subject provided five incidents and another provided four incidents. The mean time spent by each subject was one hour and 35 mintues. The time ranged from one hour to two hours and 15 minutes. The mean time spent in writing each incident was slightly over 16 minutes. This appeared reasonable, and the decision was made to request six incidents from each participant in the study.

A change was made in the Critical Incident Report Form as a result of the pretesting experience. The order of the questions about the incident was altered since the subjects had difficulty describing the incident without first describing the circumstances which led to the incident. This change was incorporated and subsequently printed in the form in which it appears in Appendix A.

On the basis of the pretest experience a change was made in the amount and kind of information sent to the subject before the data collection meeting. The pretest subjects

indicated a need for general examples of critical incidents before arriving at the meeting. They reported that a description of the method alone was inadequate to prepare them for reporting critical incidents. Also, they indicated that the fact that they were to report six incidents should be stressed before arriving at the meeting. These suggestions were incorporated into the research procedure.

Data Collection Procedure

Extension administrators were asked to send letters to the participating agents on their respective field staffs to alert them to this research and ask the agents' cooperation. A suggested letter was drafted by the researcher and provided to each administrator along with a list of agents to be invited to participate. The researcher also provided attachments for the letters which contained a map showing the location of the study subjects as well as a list of the subjects by counties. This was done to facilitate group travel, where necessary, to attend small group data collection meetings. A sample of the administrator letter and attachments is included in Appendix C.

A similar letter was sent to the county agent-in-charge to inform him of this research effort.

Three days later, a letter was sent by the researcher to each agent subject which explained the purpose of the

research, alerted him to the small group nature of the effort, and indicated that a telephone call would be forthcoming seeking his participation. This letter is shown in Appendix D.

A telephone call to each subject elicited, with no exceptions, affirmative responses to the invitation to participate. Schedules were arranged during this telephone conversation so that each agent could attend a data collection meeting.

A letter of confirmation was sent to each agent approximately one week before the data collection meeting was held. More CIT details were included in this letter and examples of incidents were provided. This letter is attached as Appendix E.

Procedure in each data collection meeting was structured to insure agent understanding of instructions. The following statement was made at the beginning of each meeting:

> I appreciate your willingness to take time from your busy schedules to participate in this research. The purpose of this study is to try to find what specific actions are necessary for performing the role of an extension agent. The intent is to analyze your job, not to evaluate you. Please complete the first page of your questionnaire, then I will have more instructions for you. Remember, your responses will remain confidential.

When all agents had supplied the data on page one of the questionnaire, the tape recording of instructions and examples of incidents was played. The agents were encouraged

to simultaneously listen and read the material on page two of the questionnaire attached as Appendix A.

Agents were then encouraged to ask questions. Following a discussion the agents were asked to individually write three effective and three ineffective critical incidents. If questions were raised by the subjects as they wrote the incidents, the researcher attempted to answer them. However, the researcher tried not to influence the nature of the incidents reported by subjects other than to repeat the instructions given on page two of the questionnaire.

Critical incidents were collected from 74 extension agents in 23 meetings. The meetings ranged in size from two to 11 agents. The mean attendance per meeting was 3.21 agents. All incidents were collected during the six-week period which ended in January, 1968.

Each agent reported six incidents, thus a total of 444 incidents were collected. The agent time spent in the single meeting which each attended ranged from 60 to 180 minutes. The mean time spent per meeting was 101.2 minutes. Hence, the mean respondent time invested per incident was about 17 minutes.

Data Analysis

This research was designed as a descriptive study. Since it was a study of a finite population, the respondents

were considered a total universe and any differences which occurred were considered to be actual differences. Descriptive statistics were employed throughout.

The statistical treatment of classified incidents included the computation of percentage and frequency distributions and mean scores for Critical Incident Report Form items which dealt with the importance and difficulty of the classified incidents. Rank-orders were derived by constructing frequency tables and by computing the mean scores of scaled responses to "importance" and "difficulty" items. An equal distance was assumed between the alternative choices in the scaled items.

To determine the reliability of incident classification, each incident was independently classified on three occasions for category and subcategory by the researcher according to the definitions contained in "The Classification System for Critical Incidents."[1] Symbols for each classification were recorded on the back of the form, thus subsequent classification was possible without knowledge of previous classification. Percentages of agreement of the subsequent classifications by the researcher were computed.

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[1]See Appendix B.

Three judges were asked to independently classify by category and subcategory a 10 percent sample of all reported incidents. The percentages of agreement of the judges with the researcher's classification were computed.

A plan was followed which had been devised to handle incidents which did not seem to fit the classification system. All incidents which appeared too difficult to classify by this system were to be so coded by the researcher. If more than 5 percent of all incidents were so coded, the above judges were to be asked to function with the researcher as a panel to review each "difficult" incident. If 3 out of 4 on the panel agreed upon a category and subcategory within the system, an incident was to be so classified. If 3 out of 4 agreed that an incident fell beyond the system, it was to be coded as "unclassified."

In the event that more than 5 percent of all reported incidents were "unclassified," the panel was to inductively consider additional categories and subcategories provided that 3 out of 4 agreed that more than 5 percent of all reported incidents fell within each newly identified category.

The data were processed by the Computer Laboratory at Michigan State University. Symbols for the classified incidents and other raw data were transferred by the rearcher to a "Data Coding Form," from which keypunchers prepared data cards. Consultants in the Computer Laboratory recommended an appropriate computer program.

The Hypotheses

Previous investigators have identified behaviors which are important for successful extension agent performance. Common findings of these earlier studies of extension tasks were adapted and arranged into critical performance categories. Critical incidents reported by extension agents were expected to fall within those categories. Hence, the following hypothesis was posed:

H_1 Five or more percent of the classified critical incidents reported by extension agents fall within each of the following critical performance categories:

a. Program planning

b. Organizing

c. Teaching and Communicating

d. Conducting programs

e. Evaluating

f. Administering

The postulated relationship of several variables with critical performance categories are indicated in the hypotheses which follow. It is postulated that Hypothesis H_1 will hold regardless of agent position or tenure. The following hypothesis was therefore suggested.

H_2 Each critical performance category contains 5 percent or more of the classified critical incidents regardless of reporting agent:

a. Position

b. Tenure

Just as a frequency hierarchy of satisfying factors was identified in studies founded on the motivational-maintenance theory, so too might a hierarchy of critical performance categories emerge in the present study. Agents might report as effective and ineffective incidents behaviors which, when classified, would form a hierarchy of frequency, importance, and difficulty.

In addition, the earlier cited extension studies have isolated hierarchical relationships based upon such factors as the importance of certain skills and understandings for job performance; the perceived degree of need; and the difficulty experienced in performing certain tasks. In the present study, the incidents would similarly be expected to be differentially distributed among the critical performance categories according to frequency, importance, and difficulty. It was hypothesized that:

H_3 The distribution among critical performance categories of critical incidents reported by extension agents are differentially arranged in rank-order according to:

a. The frequency of reported effective incidents

b. The frequency of reported ineffective incidents

c. The frequency of all incidents

d. The perceived importance to job success of all incidents

e. The perceived difficulty of executing all incidents.

It was assumed that socialization to agent-roles is a process which does not end with the induction procedure, but rather is one which extends throughout agents' professional careers. It seemed reasonable to expect increasing years of service to be associated with differentiation in agent perception of appropriate role behavior. Hence, the reported frequency, importance, and difficulty of executing critical incidents were expected to vary according to agent tenure.

Further, if inexperienced agents are seeking a sense of belonging to the organization, they would be expected to report incidents which reflect concerns about structural relationships, policies, goals, sources of sanctions and rewards, and appropriate behavior within the extension bureaucracy. These incidents would be classified as components of the critical performance category entitled "Administering." Behaviors in this category are perhaps more stressful, and therefore more difficult for neophyte agents to perform.

It was assumed that there is a broadening of agent orientation over time. That is, early in the agent's work experience his concern might tend to focus upon organizational maintenance factors and upon relevant others who may provide a feeling of belonging. With further experience, the agent might tend to expand his perception of

appropriate role behavior toward broader role performance. Therefore, experienced agents were expected to report incidents which reflected broader perceptions of role as represented by the performance category of "Program Planning." Behaviors in this category are perhaps more stressful, and therefore more difficult for experienced agents to perform. It was therefore hypothesized:

H_4 The difficulty scores of critical incidents are differentially distributed among critical performance categories according to the tenure of reporting agents:

a. The mean score of difficulty is higher in the Administering category for inexperienced than for experienced agents.

b. The mean score of difficulty is higher in the Program Planning category for experienced than for inexperienced agents.

In the reasoning which prefaced Hypotheses H_4, a differential perception of incident difficulty according to agent tenure was postulated. Similar reasoning led to the postulate that agents differentially perceive the importance of incidents according to their tenure. Hence, the following hypothesis:

H_5 The importance scores of critical incidents are differentially distributed among critical performance categories according to the tenure of the reporting agents:

a. The mean score of importance in the Administering category is higher for inexperienced than for experienced agents.

b. The mean score of importance in the Program Planning category is higher for experienced than for inexperienced agents.

Both effective and ineffective incidents were components of the critical performance categories referred to in Hypotheses H_1 through H_5. This application of the critical incident technique has been called "job analysis." It leads to the identification of what Flanagan has called "critical requirements."[1] The purpose of such an analysis in this study was to provide understanding of the elements of agents' roles which they perceived as being crucial for success.

However, the central purpose of this study was to refine the specification of training needs of extension agents. The report of ineffective incidents was herein considered to infer training needs since agents were asked to report incidents which they had actually ineffectively performed. The hypothesis and questions which follow were developed to examine possible differential relationships of certain variables with effective and ineffective incidents.

It was an extension of the rationale for Hypotheses H_3, H_4, and H_5 which led to the postulate that agents will differentially report effective and ineffective critical incidents among the performance categories according to agent tenure. Hence, the following hypothesis was posed:

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[1]Flanagan, "Critical Requirements: A New Approach to Employee Evaluation," op. cit.

H_6 The frequency of report of effective and of ineffective incidents varies among critical performance categories according to the tenure of the agents reporting:

a. Experienced agents more frequently than inexperienced agents report effective incidents which are classified in the Program Planning category.

b. Experienced agents more frequently than inexperienced agents report ineffective incidents which are classified in the Administering category.

Some Questions

In addition to testing the above hypothesized relationships, these data were also analyzed to seek answers to the following questions:

1. What is the relationship of tenure to the difficulty of executing effective and ineffective incidents?

2. What is the relationship of position to the difficulty of executing effective and ineffective incidents?

3. What is the relationship of tenure to the importance of executing effective and ineffective incidents?

4. What is the relationship of position to the importance of executing effective and ineffective incidents?

Summary

A detailed description of the research method used in this study is provided. The first section contains a description of the 74 Michigan Cooperative Extension Service

Agents who were the subjects of this study. The subjects had experienced not more than six years, nor less than three months of duty and were employed in a field agent position on December 1, 1967. The following agent demographic variables are described by employment position: age, sex, extension tenure, previous work experience, and level of education attained.

A critical incident report form is described which was designed to permit written descriptions of effective and ineffective critical incidents by subjects and to elicit their response on scales of incident importance and difficulty. The report form was pretested with ten college students who had been employed in county extension offices as Assistants during the summer of 1967. The development of an incident classification system consisting of six critical performance categories is described as having been founded upon earlier studies of agent training needs.

Information is provided about the procedure followed in collecting 444 critical incidents in 23 small group meetings. Correspondence and instructions to the subjects by tape recording are described.

This research is a descriptive study of a finite population which employs descriptive statistics. The reliability of the classification of incidents by the researcher was assessed by three judges. The preparation of data for and the tabulation of data by the Computer Center is described.

CHAPTER IV

FINDINGS

Introduction

The major findings of this study are presented in this chapter. The data resulted from the classification among six critical performance categories (CPC's) the critical incidents reported by a population of Michigan Cooperative Extension Agents. Each incident was classified in a single category and subcategory. Data pertaining to the relationship of certain variables with the CPC's are presented. The chapter is organized around the study hypotheses. The concluding section contains data pertaining to certain questions raised in Chapter III.

In one sense, the classification system (Appendix B) was itself an hypothesis since it was unknown whether incidents would fall within or without the defined categories of the system. Since each incident was classified in one, and only one, category and subcategory, this seemed to be a rigorous test of the system.

The agreement of the researcher's classification of critical incidents on three separate readings is shown in Table 6. The category classification on the second reading agreed with the first for 78.8 percent of the incidents and

the agreement for subcategory classifications was 63.2 percent. On the third reading, category classifications agreed with those on second reading for 89.6 percent of the incidents; and subcategory classification agreement between second and third readings increased to 77.2 percent.

TABLE 6

RESEARCHER AGREEMENT IN CLASSIFYING CRITICAL INCIDENTS BY CATEGORY AND SUBCATEGORY

	Second classification agreed with the first:		Third classification agreed with the second:	
	N	%	N	%
Category	350	78.8	398	89.6
Subcategory	281	63.2	361	77.2

Three judges were asked to independently classify by category and subcategory a 10 percent sample of the reported incidents employing the "Classification System for Critical Incidents." Each judge spent about four hours in this task. The results of the judges' classifications are reported in Table 7 as the percentage of agreement of the judges' classification by category and subcategory with the researcher's classification. The judges classified 25 percent of the incidents in different categories than the researcher did. One or more judge agreed with the researcher's category classification for 75 percent of the incidents; two or more judges agreed with the researcher's category classification for 47.2 percent of the incidents; and all three

judges agreed with the researcher's category classification for 20.45 percent of the incidents.

TABLE 7

AGREEMENT OF JUDGES' AND RESEARCHER'S CLASSIFICATIONS OF A SAMPLE OF 44 CRITICAL INCIDENTS

	Percent of Cases:			
	No judge agreed	1 or more judge agreed	2 or more judges agreed	3 judges agreed
Category	25.00	75.00	47.72	20.45
Subcategory	43.18	56.81	29.54	11.36

There was persistently less agreement on subcategory classification than on category classification. Examples of incident classification by the researcher and the judges are provided in Appendix F.

Low agreement of classification might be attributed to a number of causes. The judges might have lacked familiarity with the classification system since less than an hour was used in orientation of the judges. The definitions in the system may not have been sufficiently discrete. Instructions to the judges may have lacked specificity. Perhaps these results support the contention of some writers who are critical of the subjective nature of the critical incident classification process.

There were 41 incidents coded by the researcher as difficult to classify. Hence, nearly 10 percent of the

original 444 incidents were so coded. Researcher agreement of classification was very low with this "difficult" group. The second category classification had not agreed with the first for any of the 41 incidents. Only 58.5 percent of the third classification agreed with the second.

It was decided to test the impact of removing the 41 "difficult" incidents from the total originally reported. As shown in Table 8, the category agreement increased to 86.8 percent when the second classification was compared with the first for 403 incidents. This was 8 percent higher than the similar classification of the total 444 incidents shown in Table 6. Agreement rose to 92.8 percent on the third classification for the 403 incidents, an increase of 3.2 percent. Subcategory agreement similarly increased to 69.7 percent and 84.1 percent on second and third classifications respectively.

TABLE 8

RESEARCHER AGREEMENT IN CLASSIFYING 403 CRITICAL INCIDENTS BY CATEGORY AND SUBCATEGORY

	Second classification agreed with the first:		Third classification agreed with the second:	
	N	%	N	%
Category	350	86.2	374	92.8
Subcategory	281	69.7	339	84.1

The three judges were asked to function as a panel, with the researcher, to review each of the 41 incidents since

this number of incidents exceeded the 5 percent maximum specified in the classification plan. Panel members spent about four hours in which they independently read and classified a photocopy of each incident and then discussed the classification each had selected. In the event that 3 of the 4 panel members agreed upon a category and subcategory, an incident was so classified.

Thirty-five incidents were so agreed upon and assigned to categories and subcategories with the other incidents. Six were considered to fall outside the classification system and were rejected. Therefore, the basic data of this research consisted of 438 critical incidents which were classified among six categories and component subcategories in a classification system developed a priori. Thus, 98.65 percent of the reported incidents were classified among the CPC's of the system and only 1.35 percent were classed outside the system.

Frequency Distribution of Classified Incidents

The distribution of 98.65 percent of the reported incidents was another issue since incidents might have been differentially distributed among the categories of the classification system. Hypothesis H_1 posits the distribution of the incidents.

H_1 Five or more percent of the classified critical incidents reported by extension agents fall within each of the following critical performance categories:

a. Program Planning

b. Organizing

c. Teaching and Communicating

d. Conducting Programs

e. Evaluating

f. Administering

The distribution of the classified incidents is shown by CPC in Table 9. There is considerable variation in the distribution of incidents among the categories.

The CPC, "Teaching and Communicating" received the greatest number of critical incidents. About one-third of the incidents were classified in this category. The emphasis in this category was upon reaching and teaching people. It included behaviors of sending and receiving messages. Relevant behaviors pertained to both the learning and the communication process. The basic concern was with process rather than the content taught or communicated.

This finding is an interesting contrast to the preliminary results reported by Alexander[1] when pretesting the critical incident technique. He found only 5 incidents related to communication and 1 related to teaching in a total of 122 incidents. However, category definitions in Alexander's

[1]Alexander, op. cit.

work excluded from teaching and communicating those incidents related to organizing, counseling, and conducting demonstrations.

TABLE 9

DISTRIBUTION AMONG CRITICAL PERFORMANCE CATEGORIES OF 438 CRITICAL INCIDENTS REPORTED BY EXTENSION AGENTS

Critical Performance Category:	Critical Incident Number	Percent	Rank
Teaching and Communicating	150	34.25	1
Organizing	105	23.97	2
Conducting Programs	86	19.64	3
Administering	51	11.64	4
Program Planning	27	6.16	5
Evaluating	19	4.34	6
Total	438	100.00	

The distribution of incidents among component subcategories within the CPC of Teaching and Communicating is shown in Table 10. Component subcategories are considered to be critical job requirements for extension agents. The most frequent critical job requirements for agents when Teaching or Communicating was, "using appropriate method to communicate or teach." This job requirement contained over 60 percent of the Teaching and Communicating incidents. The absence of any incidents reporting the establishment of a feedback system will be noted.

Since Table 9 shows 34.25 percent of the incidents were classified in this category, Hypothesis H_1d was supported and Teaching and Communicating was accepted as a CPC.

TABLE 10

FREQUENCY AND RANK-ORDER OF CRITICAL JOB REQUIREMENTS FOR THE CRITICAL PERFORMANCE CATEGORY OF TEACHING AND COMMUNICATING

Critical Job Requirements:	Critical Incident Number	Percent	Rank
Using appropriate method to communicate or teach	91	60.67	1
Analyzing communication patterns and/or organizing messages	28	18.67	2
Adapting communication and teaching to the individual	17	11.33	3
Motivating the clientele	14	9.33	4
Establish a feedback system	0	0	0
Total	150	100.00	

Organizing was the second ranked CPC in frequency of incidents. Nearly 24 percent, or 105 incidents were so classified as reported in Table 9. This category was considered to include behaviors of implementing programs through social systems. Incidents might include organizing individuals into groups and organizing groups for social action. Other behaviors were the identification of early adopters and leaders; the analysis of the power structure; and the use or organization of groups to achieve program objectives. Such behaviors were considered to be instrumental actions which enabled an agent to conduct programs within the social system in which the extension service functions.

The distribution of incidents in the Organizing CPC varied considerably as shown in Table 11. The most frequent critical job requirement was, "using existing groups and/or relating parts of the social system." The second ranking critical job requirement was, "organizing groups." These two critical job requirements contained over two-thirds of the critical incidents in this category.

TABLE 11

FREQUENCY AND RANK-ORDER OF CRITICAL JOB REQUIREMENTS FOR THE CRITICAL PERFORMANCE CATEGORY OF ORGANIZING

Critical Job Requirements:	Critical Incident		
	Number	Percent	Rank
Using existing groups and/or relating parts of the social system	40	38.10	1
Organizing groups	28	26.67	2
Identifying and/or using early adopters or leaders	15	14.29	3
Developing rapport with clientele	10	9.52	4
Considers values, attitudes, needs, etc., of self and others	9	8.57	5
Analyzing the power structure	3	2.86	6
Total	105	100.00	

It is somewhat surprising that agents so infrequently reported incidents related to the development of rapport with the clientele or the analysis of the power structure. It might be expected that recently employed agents would

often report such behaviors if they were motivated to fulfill belonging needs as Maslow suggests.

As indicated in Table 9, 23.97 percent of the incidents were classified within the Organizing CPC. Hypothesis H_1b was therefore supported and Organizing was accepted as a CPC.

Conducting Programs was the third ranking CPC. This category contained nearly 20 percent of all the classified incidents. It was considered to reflect the understanding, knowledge, and abilities of an agent to provide experiences which improved the state of human, economic, and other natural resources. Behavior was interpreted to include the act of knowing. The outcomes of the use of knowledge were stressed rather than the process of imparting knowledge.

Hypothesis H_1d was supported on the basis of the data in Table 9 since 19.64 percent of the incidents were classified in this category. Conducting Programs was accepted as a CPC.

"Providing technical information" was the first ranked critical job requirement. The second ranked was, "developing leadership abilities in self-and/or others." These two critical job requirements contained nearly three-fourths of all incidents classified as Conducting Programs. Neither the critical job requirement, "Interpreting the

impact of change," nor that of "learning technical information" were reported in significant numbers.

TABLE 12

FREQUENCY AND RANK-ORDER OF CRITICAL JOB REQUIREMENTS FOR THE CRITICAL PERFORMANCE CATEGORY OF CONDUCTING PROGRAMS

Critical Job Requirement:	Critical Incident Number	Percent	Rank
Providing technical information	38	44.19	1
Developing leadership abilities in self or others	26	30.23	2
Developing insight into and/or exciting people about development potential	19	22.09	3
Interpreting the impact of change and trends	2	2.33	4
Learning technical information	1	1.16	5
Total	86	100.00	

The fourth ranked CPC was Administering. This category consisted primarily of internal administrative behaviors of agents which might enable the actions to occur in the other five categories. It will be noted in Table 9 that 51 incidents, or 11.64 percent of the total, were classified in this category, thus affirming Administering as a CPC.

Component critical job requirements for Administering are shown in Table 13. "Managing work consistent with resources" accounts for nearly one-half of the incidents in

this category. "Coordinating work with co-workers" accounts for another one-fifth of them. These agents very infrequently reported incidents reflecting efforts to obtain support for extension programs.

TABLE 13

FREQUENCY AND RANK-ORDER OF CRITICAL JOB REQUIREMENTS FOR THE CRITICAL PERFORMANCE CATEGORY OF ADMINISTERING

Critical Job Requirements:	Critical Incident Number	Percent	Rank
Managing work consistent with resources	24	47.06	1
Coordinating work with co-workers	10	19.61	2
Making decisions consistent with extension policies	7	13.73	3
Using knowledge of the structure, function, policies, and programs of extension	6	11.76	4
Obtaining support for extension programs	4	7.84	5
Total	51	100.00	

The CPC ranking fifth in frequency was Program Planning. This category included agent behaviors of analyzing impinging situations, assessing available resources and formulating an explicit plan of action for conducting extension programs. Only 27 incidents, a surprisingly low 6.16 percent of all classified incidents, were classified in this category as shown in Table 9. Since the process of

program planning and development appeared to be a basic expectation of agent performance, more critical incidents were anticipated in this category.

Component critical job requirements of the Program Planning CPC are shown in Table 14. The most frequent requirement was "using human resources in program development." Over 51 percent of the incidents in this category were so classified. Another 25 percent were classed in the job requirement of "analyzing social, political, or economic situations." Over three-fourths of the incidents were classified in these two critical job requirements. Only one incident involved "developing a program plan," while only 5 incidents related to "determining the availability of resources for programs." Apparently agents in this study did not very often perceive program planning and development as critical for successful job performance.

The 6.16 percent of the incidents classified in this category was sufficient to affirm Program Planning as a CPC.

On the basis of frequency, the lowest ranked of the 6 CPC's was entitled, Evaluating. This category included agent behaviors intended to assess the results of extension programs; to conduct research trials; and to solve work related problems. Creative thinking, innovation and logical reasoning were included.

TABLE 14

FREQUENCY AND RANK-ORDER OF CRITICAL JOB REQUIREMENTS FOR THE CRITICAL PERFORMANCE CATEGORY OF PROGRAM PLANNING

Critical Job Requirements:	Critical Incident Number	Percent	Rank
Using human resources in program development	14	51.85	1
Analyzing social, political, or economic situation	7	25.93	2
Determining the availability of resources for programs	5	18.52	3
Developing a Program Plan	1	3.70	4
Total	27	100.00	

The component critical job requirements of the Evaluating CPC are shown in Table 15. It is readily apparent that agents did not frequently report incidents which were classified in this category. Incidents involving creativity and problem solving accounted for 57.9 percent of the Evaluating incidents. Incidents of agent research represented 42.1 percent of the total.

The numbers upon which the following percentages were based are so small as to raise serious doubts about the significance of differences among critical job requirements. Indeed, the more impressive finding in Table 15 is the extremely small number in this category. Apparently, agents did not frequently perceive behaviors of this nature as

critical job requirements. Not a single incident was classified as "measuring the results of extension programs."

TABLE 15

FREQUENCY AND RANK-ORDER OF CRITICAL JOB REQUIREMENTS FOR THE CRITICAL PERFORMANCE CATEGORY OF EVALUATING

Critical Job Requirement:	Critical Incident Number	Percent	Rank
Thinking creatively or reasoning logically	8	42.11	1
Conducting applied research	6	31.58	2
Using the problem solving approach	3	15.79	3
Conducting opinion surveys	2	10.53	4
Measuring the results of extension programs	0	0	0
Total	19	100.00	

As incidated in Table 9, there were 19 incidents, or 4.34 percent of the total classified in this category. Evaluating was not affirmed as a CPC for all agents.

In sum, Hypotheses H_1a, b, c, d, and f were supported by these data. Hypothesis H_1e was not supported.

Relationship of Agent Position and Tenure to CPC's

Hypothesis H_1 was designed to test the distribution among CPC's of all classified incidents reported by all agents. Hypothesis H_2 represented an attempt to examine possible relationships of position and tenure of agents with CPC's into

which incidents reported by those agents were classified.

H_2 Each CPC contains 5 percent or more of the classified critical incidents regardless of reporting agent:

a. Position

b. Tenure

Table 16 reveals the distribution of critical incidents among CPC's according to the position of the reporting agent. This table should be read in the following manner: of the incidents reported by 4-H Agents, 40 were classified in the CPC of Teaching and Communicating. These 40 incidents comprised 25.2 percent of all incidents reported by 4-H Agents. Teaching and Communicating ranked second in frequency of incidents reported by 4-H Agents.

Fifty-six incidents classified as Teaching and Communicating represented 42.4 percent of all incidents reported by Extension Home Economists. Similarly, 54 incidents, or 36.7 percent of the incidents reported by Agricultural and Natural Resource Agents were classified in the Teaching and Communicating CPC.

It is apparent from Table 16 that 4 categories were affirmed as CPC's regardless of agent position: Teaching and Communicating; Organizing; Conducting Programs; and Administering. However, the category of Program Planning was not affirmed for Agricultural and Natural Resource Agents.

Nor was the Evaluating category affirmed for 4-H - Youth Agents or for Home Economists. These data support Hypothesis H_2a 1 through 4, while they fail to support Hypothesis H_2 5 and 6.

Some differences occurred among agent positions in terms of frequency distributions of reported incidents among CPC's. Incidents reported by 4-H Agents were most frequently classified in the Organizing category. One might expect the 4-H Agent role to be oriented toward working with groups in social systems.

Home Economists shared with Agricultural and Natural Resource Agents a first place frequency ranking for Teaching and Communicating, but a larger percentage of incidents reported by the Home Economists were classified in this category. This suggests that communication and teaching behaviors are more frequently perceived as critical for successful job performance by Home Economists.

Agricultural and Natural Resource Agents had a slightly higher percentage of incidents classified as Conducting Programs. This perhaps reflects the technical orientation of incumbent Agricultural and Natural Resource Agents.

Only the Administrative category maintained a consistent frequency rank among all positions. Hence, agents perceived administrative behaviors as being critical to job

TABLE 16

DISTRIBUTION OF CRITICAL INCIDENTS AMONG 6 CRITICAL PERFORMANCE CATEGORIES BY POSITION OF REPORTING AGENT

Critical Performance Category	4-H - Youth Agents			Home Economists			Agr'l. & N.R. Agents			Total		
	N	%	Rank	N	%	Rank	N	%	Rank	N	%	Rank
Teaching and Communicating	40	25.2	2	56	42.4	1	54	36.7	1	150	34.3	1
Organizing	51	32.1	1	26	19.7	2	28	19.0	3	105	24.0	2
Conducting Programs	34	21.4	3	19	14.4	3	33	22.5	2	86	19.6	3
Administering	19	11.9	4	17	12.9	4	15	10.2	4	51	11.6	4
Program Planning	10	6.3	5	11	8.3	5	6	4.1	6	27	6.2	5
Evaluating	5	3.1	6	3	2.3	6	11	7.5	5	19	4.3	6
Total	159	100.0		132	100.0		147	100.0		438	100.0	

success with about equal frequency. That frequency, however, was so uniformly low as to rank performance in this category fourth in a ranked list of six CPC's by incumbents in each position.

The distribution of incidents in the Program Planning category was less consistent. Incidents reported by both 4-H Agents and Home Economists were more frequently classified here than were Agricultural and Natural Resource Agent reported incidents. While numbers involved are small, it does suggest that 4-H Agents and Home Economists may more frequently perceive program planning and development behaviors as critical job requirements.

Critical incidents reported by Agricultural and Natural Resource Agents were more frequently classified in the Evaluating category than were incidents from other agents. Apparently these agents more frequently perceive evaluation and research behaviors as critical job requirements.

The distribution of critical incidents among CPC's according to the tenure of the reporting agent is shown in Table 17. Experienced agents reported 70 incidents which were classified as Teaching and Communicating behaviors. These represented 32.0 percent of the classified incidents reported by experienced agents. Eighty, or 36.5 percent of the incidents reported by inexperienced agents were classified in the Teaching and Communicating category. This

category was therefore ranked first by frequency of incidents for both experienced and inexperienced agents. However, it will be noted that a greater proportion of the incidents reported by inexperienced agents were classified in this category.

Both experienced and inexperienced agents were consistent in the number and proportion of incidents classified in the categories of Organizing, Conducting Programs, and Program Planning. The difference in proportions for each of these categories was less than 1 percent. Only a slight difference occurred in the Administering category.

Hypothesis H_2b is supported from the data in Table 17 for experienced agents, but not supported in all cases for inexperienced agents. Only one category, Evaluating, failed to be affirmed as a CPC for inexperienced agents. This was a CPC for experienced agents. Incidents classified in this category were 1.8 percent and 6.8 percent respectively of those reported. Apparently inexperienced agents much less frequently perceived evaluation and research behaviors as being critical job requirements.

These data supported Hypothesis H_2b in all except the Evaluating category.

TABLE 17

DISTRIBUTION OF CRITICAL INCIDENTS AMONG 6 CRITICAL PERFORMANCE CATEGORIES BY TENURE OF REPORTING AGENT

Critical Performance Category	Experienced			Inexperienced			Total		
	N	%	Rank	N	%	Rank	N	%	Rank
Teaching and Communicating	70	31.96	1	80	36.53	1	150	34.25	1
Organizing	53	24.20	2	52	23.74	2	105	23.97	2
Conducting Programs	44	20.09	3	42	19.18	3	86	19.64	3
Administering	23	10.50	4	28	12.73	4	51	11.64	4
Program Planning	14	6.39	6	13	5.94	5	27	6.16	5
Evaluating	15	6.85	5	4	1.83	6	19	4.34	6
Total	219	100.00		219	100.00		438	100.00	

Hierarchies of CPC's for Incident Frequency, Importance, and Difficulty

Hypothesis H_3 postulated a hierarchy of critical performance categories according to incident frequency, importance and difficulty. Specifically it stated:

H_3 The distribution among critical performance categories of critical incidents reported by extension agents are differentially arranged in rank-order according to:

a. The frequency of reported effective incidents

b. The frequency of reported ineffective incidents

c. The frequency of all incidents

d. The mean score of importance of all incidents

e. The mean score of difficulty of all incidents

Table 18 shows the frequency distribution among six CPC's of effective and ineffective incidents, and the totals of these incidents. The Teaching and Communicating category contained the greatest number of effective incidents, of ineffective incidents, and hence of total incidents. The same rank-order occured for the six CPC's regardless of incident effectiveness. While percentages varied, no variance was sufficient to alter the rank-order of categories.

For instance, nearly 8 percent more ineffective than effective incidents were classified as Teaching and Communicating behaviors. Conversely, more effective than ineffective incidents were classified in the categories of Organizing and

TABLE 18

DISTRIBUTION AMONG SIX CRITICAL PERFORMANCE CATEGORIES OF AGENT REPORTED EFFECTIVE AND INEFFECTIVE CRITICAL INCIDENTS

Critical Performance Category	Critical Incidents: Effective N	%	Rank	Ineffective N	%	Rank	Total N	%	Rank
Teaching and Communicating	66	30.3	1	84	38.2	1	150	34.3	1
Organizing	62	28.5	2	43	19.5	2	105	24.0	2
Conducting Programs	50	22.9	3	36	16.4	3	86	19.6	3
Administering	17	7.8	4	34	15.5	4	51	11.6	4
Program Planning	14	6.4	5	13	5.9	5	27	6.2	5
Evaluating	9	4.1	6	10	4.5	6	19	4.3	6
Total	218	100.0		220	100.0		438	100.0	

of Conducting Programs by 9 percent and 6.5 percent respectively. Ineffective incidents surpassed effective incidents by two to one in the Administering category.

Regardless of the above variations, the rank-order persisted for the six CPC's. It appears in general that the competencies possessed by agents, as inferred from incidents perceived as effective, and agent training needs, as inferred from incidents perceived as ineffective, form similar rank-order hierarchies. The data in Table 18 fail to support Hypotheses H_3a and b.

Hierarchy of CPC's for Incident Importance

These data were next analyzed to determine mean scores and to derive rank-orders of importance for all classified incidents as a test of Hypothesis H_3d.

The mean scores of importance for all incidents reported by all agents as classified among CPC's are shown in Table 19. Mean scores of importance ranged from a low of 4.53 for Administering behaviors to a high of 4.96 for Organizing behaviors. The rank-order of mean scores of importance differed from the rank-order of frequencies reported in Table 18, thereby lending support to the assertion by Corbally[1] that importance or "degree of criticalness" for

[1]Corbally, "The Critical Incident Technique and Educational Research," op. cit., p. 60.

job success is not necessarily revealed by the frequency with which critical incidents are reported.

Examination of the data in Table 19 revealed that no two mean scores of importance were precisely the same; a hierarchy existed. However, there were 3 groups of categories which had importance scores of similar magnitude. Importance scores for Organizing and Conducting Programs resulted in derived ranks of 1 and 2 respectively, but the range of mean scores was only .05 on a seven-point scale. The derived rank for the Program Planning category was third with a mean score which fell at about the mid-point of the range of all scores. Importance scores for the categories of Evaluating, Teaching and Communicating, and Administering resulted in ranks of fourth, fifth, and sixth respectively. The range of mean scores among these categories was .05 points on the seven-point scale.

These agents seemed to perceive two CPC's as having more influence upon job success than other categories. Agents rated incidents classified in Organizing and Conducting Program categories as more important. Lower scores were reported for incidents classified in Evaluating, Teaching and Communicating, and Administering categories. Program Planning incidents were rated about mid-way between the lowest and highest categories in importance.

TABLE 19

FREQUENCY AND MEAN SCORES OF IMPORTANCE FOR AGENT REPORTED CRITICAL INCIDENTS DISTRIBUTED AMONG CRITICAL PERFORMANCE CATEGORIES

Critical Performance Category	Number of Incidents	Mean Score of Importance	Rank-Order of Importance
Teaching and Communicating	150	4.54	5
Organizing	105	4.96	1
Conducting Programs	86	4.91	2
Administering	51	4.53	6
Program Planning	27	4.78	3
Evaluating	19	4.58	4
Total	438	4.73	

Hierarchy of CPC's for Incident Difficulty

Hypothesis H_3e posited a hierarchy of difficulty scores among CPC's. The distribution among CPC's of the mean scores of difficulty reported by agents is shown in Table 20. Scores ranged from a low of 3.13 for Conducting Programs, to a high of 4.05 for the Evaluating category. This spread of .92 for difficulty scores was compared with the spread of .43 for importance scores. Therefore, there was a greater variability among difficulty than among importance scores.

TABLE 20

FREQUENCY AND MEAN SCORES OF DIFFICULTY FOR AGENT REPORTED CRITICAL INCIDENTS DISTRIBUTED AMONG CRITICAL PERFORMANCE CATEGORIES

Critical Performance Category	Number of Incidents	Mean Score of Difficulty	Rank-order of Difficulty
Teaching and Communicating	150	3.37	5
Organizing	105	3.78	2
Conducting Programs	86	3.13	6
Administering	51	3.76	3
Program Planning	27	3.41	4
Evaluating	19	4.05	1
Total	438	3.50	

It will be noted in Table 20 that certain difficulty scores were nearly identical. Mean difficulty scores of 3.37 and 3.41 were determined for the categories of Teaching and Communicating and Program Planning, respectively. The difference was only .04 points. Agents failed to strongly differentiate the difficulty of executing these categories. Component incidents of Program Planning and of Teaching and Communicating seemed to be perceived as nearly equally difficult to execute. Such incidents were, however, perceived as more difficult to execute than those classified as Conducting Programs.

Another close pair of difficulty scores were found for Organizing and for Administering incidents. The mean

scores were 3.78 and 3.76 respectively. Agents apparently did not significantly differentiate the difficulty of working with social systems from that of administering extension work. However, these categories were clearly seen as more difficult than those of Organizing and Administering.

The mean difficulty score for Evaluating was the greatest for any category. Agents apparently perceived behaviors involving evaluation, research, and problem solving as more difficult than behaviors classified in other categories.

Table 19 shows that the mean score of importance for all incidents was 4.73. Table 20 shows that the mean score of difficulty for all incidents was 3.50. This difference in mean scores of 1.23 points on a seven-point scale appeared to be substantial.

The hierarchies which resulted from testing Hypothesis H_3 were reported in Tables 18, 19, and 20. The rank-order of CPC's differed according to the frequency of incident report, the mean score of importance, and the mean score of difficulty. Table 21 shows a summary of the derived rank-order for those 3 variables. It was noted earlier that rank-order did not vary according to the frequency of reporting incidents as effective or as ineffective. Hence, these data failed to support Hypothesis H_3a and b. However, there was support for Hypothesis H_3c, d, and e, so differentiated hierarchies were found for incident frequency, importance and difficulty among CPC's.

TABLE 21

SUMMARY OF THE RANK-ORDER OF CRITICAL PERFORMANCE CATEGORIES BY THE FREQUENCY, IMPORTANCE, AND DIFFICULTY OF EXECUTING CRITICAL INCIDENTS

Critical Performance Category	Frequency of Incidents:			Mean Scores of:	
	Effective	Ineffective	All:	Importance	Difficulty
Teaching and Communicating	1	1	1	5	5
Organizing	2	2	2	1	2
Conducting Programs	3	3	3	2	6
Administering	4	4	4	6	3
Program Planning	5	5	5	3	4
Evaluating	6	6	6	4	1

Agent Tenure and Incident Difficulty

Hypothesis H_4 contained postulates of the relationship of tenure to the difficulty of executing critical incidents. It stated:

H_4 The difficulty scores of critical incidents are differentially distributed among critical performance categories according to the tenure of reporting agents:

a. The mean score of difficulty is higher in the Administering category for inexperienced than for experienced agents.

b. The mean score of difficulty is higher in the Program Planning category for experienced than for inexperienced agents.

The distribution of mean scores of difficulty among CPC's according to agent tenure is shown in Table 22. A mean score of difficulty of 4.17 was computed for incidents reported by experienced agents and classified within the Administering category. This was the most difficult category for experienced agents. On the other hand, a mean score of difficulty of 3.43 was computed for incidents reported by inexperienced agents and classified in this category. Hence, these data failed to support Hypothesis H_4a. Inexperienced agents did not report higher difficulty scores in the Administering category than experienced agents as hypothesized. Instead, the inverse of this hypothesis held.

A mean score of difficulty of 3.36 was computed for incidents reported by experienced agents and classified in the Program Planning category. This was the least difficult category for experienced agents. However, a mean score of difficulty of 3.46 was calculated for incidents reported by inexperienced agents.

These data failed to support Hypothesis H_4b. Experienced agents did not report higher scores of difficulty for Program Planning incidents. Indeed, the mean scores of difficulty were higher for inexperienced than for experienced agents.

TABLE 22

DISTRIBUTION OF MEAN SCORES OF DIFFICULTY FOR CRITICAL INCIDENTS CLASSIFIED AMONG CRITICAL PERFORMANCE CATEGORIES BY TENURE OF REPORTING AGENT

Critical Performance Category	Experienced Agents: No. of Incidents	Difficulty Mean Score	Difficulty Rank-order	Inexperienced Agents: No. of Incidents	Difficulty Mean Score	Difficulty Rank-order
Teaching and Communicating	70	3.44	5	80	3.30	5
Organizing	53	3.79	3	52	3.77	2
Conducting Programs	44	3.52	4	42	2.71	6
Administering	23	4.17	1	28	3.43	4
Program Planning	14	3.36	6	13	3.46	3
Evaluating	15	4.07	2	4	4.00	1
Total	219	3.66		219	3.34	

It is apparent from Table 22 that Teaching and Communicating ranked fifth in difficulty for both experienced and inexperienced agents. The Evaluating category was rated as difficult by both tenure groups with respective rankings of second and first. However, only 4 incidents reported by inexperienced agents were classified as Evaluating incidents, compared with 15 for experienced agents. Inexperienced agents much less frequently reported Evaluating incidents, but tended to agree with experienced agents that such incidents were difficult to perform.

The mean score of difficulty for incidents reported by experienced agents exceeded the score for inexperienced agents in all CPC's with one exception: The Program Planning category. The mean score of difficulty for all incidents reported by experienced agents exceeded that for inexperienced agents by .32 points on a seven-point scale.

Agent Tenure and Incident Importance

Just as Hypothesis H_4 tested the relationship of tenure to difficulty of executing critical incidents, Hypothesis H_5 tested the relationship of tenure to importance.

H_5 The importance scores of critical incidents are differentially distributed among critical performance categories according to the tenure of the reporting agents:

a. The mean score of importance in the Administering category is higher for inexperienced than for experienced agents.

b. The mean score of importance in the Program Planning category is higher for experienced than for inexperienced agents.

Mean scores of importance for CPC's by agent tenure are shown in Table 23. A mean score of importance of 4.83 was computed in the Administering category for incidents reported by experienced agents resulting in a third ranking in importance for this group of agents. A mean score of importance of 4.29 was computed for incidents reported by inexperienced agents. Consequently, the Administering category was ranked the least important for inexperienced agents.

Instead of the hypothesized direction, it was found that the experienced agents perceived Administrative incidents as more important than did inexperienced agents.

A mean score of importance of 4.93 was computed for Program Planning incidents reported by experienced agents. Hence, this category was ranked first in importance for this group of agents. On the other hand, a mean score of importance of 4.62 was found for Program Planning incidents reported by inexperienced agents, so this category was ranked fourth in importance for inexperienced agents.

These data support the hypothesis that experienced agents did perceive planning incidents as holding more importance for job success than did inexperienced agents.

TABLE 23

DISTRIBUTION OF MEAN SCORES OF IMPORTANCE FOR CRITICAL INCIDENTS CLASSIFIED AMONG CRITICAL PERFORMANCE CATEGORIES BY TENURE OF REPORTING AGENT

	Experienced Agents:			Inexperienced Agents:		
Critical Performance Category	No. of Incidents	Importance Mean Score	Importance Rank-order	No. of Incidents	Importance Mean Score	Importance Rank-order
Teaching and Communicating	70	4.67	5	80	4.42	5
Organizing	53	4.81	4	52	5.12	1
Conducting Programs	44	4.91	2	42	4.90	3
Administering	23	4.83	3	28	4.29	6
Program Planning	14	4.93	1	13	4.62	4
Evaluating	15	4.47	6	4	5.00	2
Total	219	4.77		219	4.68	

The similarity of the mean scores of importance for all incidents can be seen in Table 23. This contrasts sharply with the differences noted in Table 22 for mean difficulty scores. There was more variability among the means of importance scores for inexperienced than for experienced agents. Mean importance scores ranged from 4.47 to 4.93 for experienced agents while the range was from 4.29 to 5.12 for inexperienced agents. This lends support to the postulate that with extension work experience, agents become more homogeneous in their perception of appropriate job behavior.

Table 23 shows that importance scores for the Teaching and Communicating category resulted in a fifth-place rank of importance for both experienced and inexperienced agents. The category of Conducting Programs was almost identically perceived by both groups. Incidents in the Organizing category were however perceived as more important by inexperienced than by experienced agents. The derived ranks for the Organizing category were first and fourth respectively for these two groups of agents.

So few incidents reported by inexperienced agents fell into the Evaluating category that little can be interpreted from the importance scores. These incidents were rated as the least important by experienced agents.

Agent Tenure and Incident Effectiveness

It was postulated that agents would differentially report incident effectiveness according to agent tenure. Specifically it was hypothesized:

H_6 The frequency of report of effective and of ineffestive incidents varies among critical performance categories according to the tenure of the agents reporting:

a. Experienced agents more frequently than inexperienced agents report effective incidents which are classified in the Program Planning category.

b. Experienced agents more frequently than inexperienced agents report ineffective incidents which are classified in the Administering category.

The frequency distribution of effective incidents among CPC's by tenure of reporting agents is shown in Table 24. The Program Planning category contained more effective incidents for experienced than for inexperienced agents, although the difference was less than 2 percent. This difference is in the direction postulated, thus supporting Hypothesis H_6a.

Table 24 reveals an amazing similarity of the frequency of reporting effective incidents by CPC. The greatest difference for experienced and inexperienced agents was found in the Evaluating category, but it did not reach five percent. This suggests that agents of different tenures do not differentially perceive effective incidents.

Next, the hypothesis of possible differences of the frequency of reporting ineffective incidents by tenure of reporting agent was tested. Table 25 shows the distribution of ineffective incidents by CPC for experienced and for inexperienced agents. The Administering category contained more ineffective incidents for inexperienced than for experienced agents. This is contrary to the direction postulated. These data failed to support Hypothesis H_6b.

About 9 percent more ineffective incidents were classified in the Teaching and Communicating category for inexperienced than for experienced agents. The Evaluation category contained 5.45 percent more ineffective incidents for experienced agents. A similar situation existed in the Organizing category which contained 4.55 percent more ineffective incidents for experienced agents. These results suggest possible differentiation of training needs in these 3 categories based upon agent tenure.

Agent Tenure, Incident Difficulty and Effectiveness

In addition to testing the above hypotheses, these data were analyzed to seek answers to several questions. The first was:

Q_1 What is the relationship of agent tenure to the difficulty of executing effective and ineffective incidents?

TABLE 24

FREQUENCY DISTRIBUTION AMONG CRITICAL PERFORMANCE CATEGORIES OF EFFECTIVE INCIDENTS BY TENURE OF REPORTING AGENT

Critical Performance Category	Experienced Agent Incidents:		Inexperienced Agent Incidents:		All Agent Incidents:	
	Number	Percent	Number	Percent	Number	Percent
Teaching and Communicating	33	30.28	33	30.28	66	30.28
Organizing	29	26.61	33	30.28	62	28.44
Conducting Programs	24	22.02	26	23.85	50	22.93
Administering	8	7.34	9	8.26	17	7.80
Program Planning	8	7.34	6	5.50	14	6.42
Evaluating	7	6.42	2	1.83	9	4.13
Total	109	100.00	109	100.00	218	100.00

TABLE 25

FREQUENCY DISTRIBUTION AMONG CRITICAL PERFORMANCE CATEGORIES OF INEFFECTIVE INCIDENTS BY TENURE OF REPORTING AGENT

Critical Performance Category	Experienced Agent Incidents:		Inexperienced Agent Incidents:		All Agent Incidents:	
	Number	Percent	Number	Percent	Number	Percent
Teaching and Communicating	37	33.64	47	42.73	84	38.18
Organizing	24	21.82	19	17.27	43	19.55
Conducting Programs	20	18.18	16	14.55	36	16.36
Administering	15	13.64	19	17.27	34	15.45
Program Planning	6	5.45	7	6.36	13	5.91
Evaluating	8	7.27	2	1.82	10	4.55
Total	110	100.00	110	100.00	220	100.00

The mean scores of difficulty for effective incidents are reported in Table 26. In general, experienced agents reported higher difficulty scores for effective incidents than inexperienced agents reported. The means of difficulty scores for all effective incidents were 3.43 and 3.15 respectively for the two groups of agents. The range of mean difficulty scores for inexperienced agents was from 2.75 to 4.00; scores for inexperienced agents ranged from 2.33 to 3.58.

Evaluating was the most difficult category for experienced agents; for inexperienced agents, Teaching and Communicating was the most difficult. Experienced agents apparently perceived Teaching and Communicating incidents as less difficult since the derived ranking for this category was fifth place.

The Conducting Programs category was nearly a full point, on a seven-point scale, more difficult for experienced than for inexperienced agents. Similarly, the mean difficulty score in the Administering category was more than a full point greater for the experienced agents. With the exception of the Evaluation category, there was little variability in the frequency of reporting effective incidents.

These data suggest that incidents do not vary significantly in the frequency with which they are reported as effective according to agent tenure. However, it appears

TABLE 26

DISTRIBUTION OF MEAN SCORES OF DIFFICULTY AMONG CRITICAL PERFORMANCE CATEGORIES FOR EFFECTIVE INCIDENTS BY TENURE OF REPORTING AGENT

Critical Performance Category	Experienced Agents: No. of Incidents	Difficulty Mean Score	Difficulty Rank-order	Inexperienced Agents: No. of Incidents	Difficulty Mean Score	Difficulty Rank-order
Teaching and Communicating	33	3.39	5	33	3.58	1
Organizing	29	3.52	2	33	3.55	2
Conducting Programs	24	3.42	4	26	2.50	5
Administering	8	3.50	3	9	2.33	6
Program Planning	8	2.75	6	6	2.67	4
Evaluating	7	4.00	1	2	3.00	3
Total	109	3.43		109	3.15	

that experienced agents perceive the effective incidents they report as more difficult to execute.

The question of the difficulty of executing ineffective incidents was examined in Table 27. Once again, experienced agents in general reported higher difficulty scores for ineffective incidents than did inexperienced agents. The means for all ineffective incidents were 3.88 and 3.53 respectively for the two groups of agents. Mean difficulty scores ranged from a low of 3.49 to a high of 4.53 for experienced agents. Scores for inexperienced agents ranged from 3.06 to 5.00.

Ineffective incidents in the Administering category were the most difficult for experienced agents, while ineffective incidents in the Evaluating category were the most difficult for inexperienced agents. Only 2 incidents were involved for inexperienced agents in the Evaluating category. Experienced agents gave higher difficulty scores than did inexperienced agents in the categories of Teaching and Communicating, Conducting Programs, and Administering. The differences for the mean scores of difficulty in these categories were .38, .59, and .58 points, respectively.

Greater variability existed between experienced and inexperienced agents in the frequency of reporting ineffective incidents than was the case for effective incidents.

TABLE 27

DISTRIBUTION OF MEAN SCORES OF DIFFICULTY AMONG CRITICAL PERFORMANCE CATEGORIES FOR INEFFECTIVE INCIDENTS BY TENURE OF REPORTING AGENT

Critical Performance Category	Experienced Agents: No. of Incidents	Difficulty Mean Score	Difficulty Rank-order	Inexperienced Agents: No. of Incidents	Difficulty Mean Score	Difficulty Rank-order
Teaching and Communicating	37	3.49	6	47	3.11	5
Organizing	24	4.13	3	19	4.16	2
Conducting Programs	20	3.65	5	16	3.06	6
Administering	15	4.53	1	19	3.95	4
Program Planning	6	4.17	2	7	4.14	3
Evaluating	8	4.12	4	2	5.00	1
Total	110	3.88		110	3.53	

Also, both experienced and inexperienced agents reported higher scores of difficulty for ineffective than for effective incidents.

A summary of mean difficulty scores for all critical incidents according to the tenure of reporting agents is shown in Table 28. The mean difficulty scores were 3.66 and 3.34 for experienced and inexperienced agents respectively.

Conducting Program incidents received higher difficulty scores by .81 points on a seven-point scale for experienced than for inexperienced agents. Mean difficulty scores for experienced agents in the Administering category, exceeded those for inexperienced agents by .74 points. These two categories account for the major portion of the variance of mean difficulty scores for all classified incidents.

Agent Position, Incident Difficulty, and Effectiveness

Attention was next directed toward examining possible differences in difficulty scores according to the employment position of the reporting agent. The question was:

Q_2 What is the relationship of position to the reported difficulty of executing effective and ineffective incidents?

Table 29 shows the mean scores of difficulty for effective incidents according to the employment position of the reporting agent. Teaching and Communicating was perceived as somewhat more difficult for 4-H - Youth Agents

TABLE 28

DISTRIBUTION OF MEAN SCORES OF DIFFICULTY AMONG CRITICAL PERFORMANCE CATEGORIES FOR ALL CRITICAL INCIDENTS BY TENURE OF REPORTING AGENT

Critical Performance Category	Experienced Agents: No. of Incidents	Difficulty Mean Score	Difficulty Rank-order	Inexperienced Agents: No. of Incidents	Difficulty Mean Score	Difficulty Rank-order
Teaching and Communicating	70	3.44	5	80	3.30	5
Organizing	53	3.79	3	52	3.77	2
Conducting Programs	44	3.52	4	42	2.71	6
Administering	23	4.17	1	28	3.43	4
Program Planning	14	3.36	6	13	3.46	3
Evaluating	15	4.07	2	4	4.00	1
Total	219	3.66		219	3.34	

TABLE 29

DISTRIBUTION OF MEAN SCORES OF DIFFICULTY AMONG CRITICAL PERFORMANCE CATEGORIES FOR EFFECTIVE INCIDENTS BY POSITION OF REPORTING AGENT

Critical Performance Category	4-H - Youth Agents: No. of Incidents	Difficulty Mean Score	Difficulty Rank-order	Home Economists: No. of Incidents	Difficulty Mean Score	Difficulty Rank-order	Agricultural and Natural Resource Agents: No. of Incidents	Difficulty Mean Score	Difficulty Rank-order
Teaching and Communicating	14	3.64	2	26	3.38	2	25	3.36	3
Organizing	28	3.29	3	18	3.61	1	16	3.88	1
Conducting Programs	23	3.17	4	10	2.10	5	17	3.12	4
Administering	6	3.17	4	5	2.60	3	6	2.83	6
Program Planning	5	3.00	6	6	2.33	4	3	3.00	5
Evaluating	3	4.33	1	0	0.00	-	6	3.50	2
Total	79	3.33		65	3.09		73	3.37	

than for either Home Economists or Agricultural and Natural Resource Agents. Organizing was more difficult for Extension Home Economists than for 4-H - Youth Agents, and even more difficult for Agricultural and Natural Resource Agents. The Conducting Programs category was less difficult by more than 1 point on a seven-point scale for Extension Home Economists than for incumbents of the other positions. There was considerable variability among scores in the remaining categories. However, the numbers of incidents in these categories (Administering, Program Planning, and Evaluating) were so small as to cast doubt upon the meanings of the differences.

The mean score of difficulty for effective incidents reported by 4-H - Youth Agents was 3.32 and for Agricultural and Natural Resource Agents it was 3.37. The two scores were nearly identical, but the Extension Home Economists' mean score was 3.09. In general then, Extension Home Economists tended to perceive the effective incidents they reported as less difficult to execute than incumbents to the other two positions.

The mean scores of difficulty for ineffective incidents according to the position of the reporting agent are shown in Table 30. Agricultural and Natural Resource Agents rated Teaching and Communicating incidents lower by 1.00 point on the seven-point difficulty scale than did 4-H - Agents and lower by .79 points than did Extension Home

TABLE 30

DISTRIBUTION OF MEAN SCORES OF DIFFICULTY AMONG CRITICAL PERFORMANCE CATEGORIES FOR INEFFECTIVE INCIDENTS BY POSITION OF REPORTING AGENT

Critical Performance Category	4-H - Youth Agents: No. of Incidents	Difficulty Mean Score	Difficulty Rank-order	Home Economists: No. of Incidents	Difficulty Mean Score	Difficulty Rank-order	Agricultural and Natural Resource Agents: No. of Incidents	Difficulty Mean Score	Difficulty Rank-order
Teaching and Communicating	26	3.69	4	29	3.48	5	29	2.69	5
Organizing	23	4.00	3	8	4.38	3	12	4.25	1
Conducting Programs	11	3.27	6	9	2.67	6	16	3.88	4
Administering	13	3.69	4	12	4.75	1	9	4.22	2
Program Planning	5	5.20	2	5	4.40	2	3	2.00	6
Evaluating	2	6.00	1	3	3.67	4	5	4.00	3
Total	80	3.88		66	3.79		74	3.45	

Economists. Difficulty scores for Agricultural and Natural Resource Agents resulted in ranking the Organizing category first in difficulty, while scores for 4-H Agents and Home Economists resulted in ranking it third in difficulty.

Derived difficulty rankings in sixth place were found in the Conducting Programs category for both 4-H Agents and Home Economists, but the latter agents reported lower difficulty ratings by .60 points. Agricultural and Natural Resource Agents gave higher difficulty ratings to the Conducting Programs category. The Administering category received the highest mean difficulty score from the Home Economists. This resulted in a second ranking for Agricultural and Natural Resource Agents, but a fourth for 4-H - Youth Agents.

The mean scores of difficulty for ineffective incidents reported by 4-H - Youth Agents and by Home Economists were nearly identical. Agricultural and Natural Resource Agents however, had a lower mean difficulty score. In general, Agricultural and Natural Resource Agents perceived the ineffective incidents they reported as less difficult to execute than incumbents to the other positions. A comparison of the mean scores of difficulty in Tables 29 and 30 revealed that all agents reported higher difficulty scores for ineffective than for effective incidents. The difference was only slight, however, for Agricultural and Natural Resource Agents.

Difficulty scores for effective and ineffective incidents are combined in Table 31. Difficulty scores for Teaching and Communicating incidents ranged downward from 3.67 for 4-H - Youth Agents, to 3.44 for Extension Home Economists, and to 3.00 for Agricultural and Natural Resource Agents. However, the reverse order held for the Organizing category. For both effective and ineffective incidents, the Organizing category was consistently perceived as most difficult for Agricultural and Natural Resource Agents. The conducting Programs category was perceived as least difficult by Extension Home Economists.

Incidents in the Administering category were perceived as about equally difficult for 4-H - Youth and Agricultural and Natural Resource Agents, with respective mean scores of 3.53 and 3.62. It was the most difficult category for Extension Home Economists. Program Planning was rated as considerable more difficult by 4-H Agents than by other incumbents. Home Economists perceived Program Planning incidents as more difficult than did Agricultural and Natural Resource Agents. The numbers in the Evaluation category are small, but it will be noted this category was rated the most difficult by 4-H - Youth Agents. Others rated it about equally difficult.

In general, Extension Home Economists and Agricultural and Natural Resource Agents about equally rated the difficulty

TABLE 31

DISTRIBUTION OF MEAN SCORES OF DIFFICULTY AMONG CRITICAL PERFORMANCE CATEGORIES FOR ALL CRITICAL INCIDENTS BY POSITION OF REPORTING AGENT

Critical Performance Category	4-H - Youth Agents: No. of Incidents	Difficulty Mean Score	Difficulty Rank-order	Home Economists: No. of Incidents	Difficulty Mean Score	Difficulty Rank-order	Agricultural and Natural Resource Agents: No. of Incidents	Difficulty Mean Score	Difficulty Rank-order
Teaching and Communicating	40	3.67	3	55	3.44	4	54	3.00	5
Organizing	51	3.61	4	26	3.85	2	28	4.04	1
Conducting Programs	34	3.21	6	19	2.37	6	33	3.48	4
Administering	19	3.53	5	17	4.12	1	15	3.67	3
Program Planning	10	4.10	2	11	3.27	5	6	2.50	6
Evaluating	5	5.00	1	3	3.67	3	11	3.73	2
Total	159	3.60		131	3.44		147	3.41	

of executing all reported incidents. The means were 3.44 and 3.41 respectively. However, the 4-H - Youth Agents reported greater difficulty. They provided an overall mean difficulty rating of 3.60.

Agent Tenure, Incident Importance and Effectiveness

Attention was next directed toward possible differences in importance scores according to the tenure of the reporting agent and the effectiveness of the critical incident. The question was:

Q_3 What is the relationship of tenure to the importance of executing effective and ineffective incidents?

The distribution of mean importance scores for effective incidents among critical performance categories is shown according to the tenure of the reporting agent in Table 32. There was only slight variation in the mean scores among the categories. Scores for experienced agents ranged from a high of 5.59 to a low of 5.13, giving a range of .46 points. The range for inexperienced agents was also narrow, from a high of 6.00 to a low of 5.38. A range of only .39 occurred among the mean scores for all agents.

Inexperienced agents assigned slightly higher importance scores for Teaching and Communicating and for Organizing categories. The Conducting Programs category was the only one in which experienced agents gave a higher importance score, but this difference was only .20 points. In general,

TABLE 32

DISTRIBUTION OF MEAN SCORES OF IMPORTANCE AMONG CRITICAL PERFORMANCE CATEGORIES FOR EFFECTIVE INCIDENTS BY TENURE OF REPORTING AGENT

Critical Performance Category	Experienced Agents: No. of Incidents	Importance Mean Score	Importance Rank-order	Inexperienced Agents: No. of Incidents	Importance Mean Score	Importance Rank-order
Teaching and Communicating	33	5.52	3	33	5.70	2
Organizing	29	5.59	1	33	5.61	4
Conducting Programs	24	5.58	2	26	5.38	6
Administering	8	5.25	4	9	5.67	3
Program Planning	8	5.13	6	6	6.00	1
Evaluating	7	5.14	5	2	5.50	5
Total	109	5.48		109	5.61	

inexperienced agents reported higher importance scores for effective incidents than did inexperienced agents, but the difference in mean scores was only .13 points on a seven-point scale.

There seemed to be a division of importance scores for experienced agents between two groups of categories. The first 3 categories listed in Table 32 were rated at about the same magnitude of importance. The last 3 categories were less important for experienced agents. Importance scores by inexperienced agents resulted in ranks of first, second, and third for Program Planning, Teaching and Communicating, and Administering categories, respectively.

The frequency distribution of effective incidents for the two tenure groups will also be noted in Table 32. With the exception of the Evaluating category, it seems remarkable that both groups would report effective incidents which were so similarly distributed among CPC's. Perhaps this indicates that the two tenure groups hold similar perceptions of effective job behaviors.

The distribution of mean importance scores for ineffective incidents among CPC's according to the tenure of the reporting agent is shown in Table 33. The Administering and Evaluating categories were rated as considerably more important than the remaining categories by experienced agents.

Table 33

DISTRIBUTION OF MEAN SCORES OF IMPORTANCE AMONG CRITICAL PERFORMANCE CATEGORIES FOR INEFFECTIVE INCIDENTS BY TENURE OF REPORTING AGENT

Critical Performance Category	Experienced Agents: No. of Incidents	Importance Mean Score	Importance Rank-order	Inexperienced Agents: No. of Incidents	Importance Mean Score	Importance Rank-order
Teaching and Communicating	37	3.92	4	47	3.53	5
Organizing	24	3.88	5	19	4.26	2
Conducting Programs	20	4.10	3	16	4.13	3
Administering	15	4.60	2	19	3.63	4
Program Planning	6	4.67	1	7	3.43	6
Evaluating	8	3.88	5	2	4.50	1
Total	110	4.07		110	3.77	

Inexperienced agents rated incidents in Evaluating, Organizing, and in Conducting Program categories as more important than other categories.

The mean importance score for ineffective incidents by experienced agents was 4.07 and for inexperienced agents it was 3.77. Hence, experienced agents reported higher importance scores for ineffective incidents than did inexperienced agents. The opposite condition was reported for effective incidents in Table 32 where inexperienced agents' importance scores exceed those of experienced agents.

There was a much lower importance score attached to ineffective incidents than to effective incidents. Mean importance scores for experienced agents ranged from 5.48 for effective incidents (Table 32) to 4.07 for ineffective incidents (Table 33). The range for inexperienced agents was from 5.61 to 3.77. The comparable range for experienced and inexperienced agents' importance scores was from 1.41 to 1.81 respectively.

Importance scores for effective and ineffective incidents are combined in Table 34 according to agent tenure. The more important categories for experienced agents were: Program Planning, Conducting Programs, Administering, and Organizing. The more important categories for inexperienced agents were: Organizing; Conducting Programs; Program Planning; and Evaluation. Numbers of incidents in the latter

TABLE 34

DISTRIBUTION OF MEAN SCORES OF IMPORTANCE AMONG CRITICAL PERFORMANCE CATEGORIES FOR ALL CRITICAL INCIDENTS BY TENURE OF REPORTING AGENT

Critical Performance Category	Experienced Agents: No. of Incidents	Importance Mean Score	Importance Rank-order	Inexperienced Agents: No. of Incidents	Importance Mean Score	Importance Rank-order
Teaching and Communicating	70	4.67	5	80	4.42	5
Organizing	53	4.81	4	52	5.12	1
Conducting Programs	44	4.91	2	42	4.90	3
Administering	23	4.83	3	28	4.29	6
Program Planning	14	4.93	1	13	4.62	4
Evaluating	15	4.47	6	4	5.00	2
Total	219	4.77		219	4.68	

category were very small.

The differences noted earlier between importance scores for experienced and inexperienced agents very nearly disappeared when scores were combined for effective and ineffective incidents. Table 34 shows a mean importance score of 4.77 for all incidents reported by experienced agents. The mean score for inexperienced agents was 4.68.

A striking contrast results when difficulty scores reported in Tables 26, 27, and 28 are compared with importance scores in Tables 32, 33, and 34. Whether incidents were effective, ineffective, or a combination of both, agents recorded considerably higher scores for importance than for difficulty. This holds regardless of agent tenure.

Agent Position, Incident Importance and Effectiveness

Attention was next directed toward possible differences in importance scores according to the position of the reporting agent and the effectiveness of the critical incident. The question was:

Q_4 What is the relationship of position to the importance of executing effective and ineffective incidents?

Table 35 shows the importance scores for effective incidents according to the position of the reporting agent. In general, the mean scores of importance for all effective incidents did not extensively vary by the position of the

TABLE 35

DISTRIBUTION OF MEAN SCORES OF IMPORTANCE AMONG CRITICAL PERFORMANCE CATEGORIES FOR EFFECTIVE INCIDENTS BY POSITION OF REPORTING AGENT

Critical Performance Category	4-H - Youth Agents: No. of Incidents	Importance Mean Score	Importance Rank-order	Home Economists: No. of Incidents	Importance Mean Score	Importance Rank-order	Agricultural & Natural Resource Agents: No. of Incidents	Importance Mean Score	Importance Rank-order
Teaching and Communicating	14	5.50	4	26	5.69	2	25	5.52	2
Organizing	28	5.71	3	18	5.50	3	16	5.50	3
Conducting Programs	23	5.39	5	10	5.80	1	17	5.41	4
Administering	6	6.50	1	5	5.20	4	6	4.67	6
Program Planning	5	6.20	2	6	4.83	5	3	5.67	1
Evaluating	3	5.33	6	0	0	-	6	5.17	5
Total	79	5.66		65	5.54		73	5.40	

reporting agent. However, some categories were differentially rated by the agents. For instance, the Administering category was rated as most important by 4-H - Youth Agents. Though the number of effective incidents was low, the Evaluating category was rated as least important by Youth Agents.

Extension Home Economists rated effective incidents in the Conducting Programs category as the most important, with Teaching and Communicating incidents a close second. Low importance scores were attached to the effective Program Planning incidents which is opposite the pattern reported by incumbents of the other positions. The Home Economists reported no effective incidents of Evaluating.

For Agricultural and Natural Resource Agents, the importance score was highest in the Evaluating category, but only 3 effective incidents were so classified. Importance scores for Teaching and Communicating and Organizing categories resulted in ranks of second and third, respectively.

Table 36 contains the mean scores of importance for ineffective incidents according to the position of reporting agent. In general, the mean scores of importance for all ineffective incidents did not extensively vary by agent position. The means were 4.04, 3.76, and 3.95 for the three positions.

However, there were variations among categories both within and among agent positions. The 4-H - Youth Agents

[illegible] as effective incidents of Evaluating.

For Agricultural and Natural Resource Agents, the importance score was highest in the Evaluating category, but only 8 effective incidents were so classified. Importance scores for Teaching and Communicating and Organizing categories resulted in ranks of second and third, respectively.

Table 46 contains the mean scores of importance for ineffective incidents according to the position of reporting agent. In general, the mean scores of importance for all ineffective incidents did not extensively vary by agent position. The means were 4.06, 3.76, and 3.96 for the three positions.

However, there were variations among categories both within and among agent positions. The 4-H - Youth Agents

TABLE 36

DISTRIBUTION OF MEAN SCORES OF IMPORTANCE AMONG CRITICAL PERFORMANCE CATEGORIES FOR INEFFECTIVE INCIDENTS BY POSITION OF REPORTING AGENT

Critical Performance Category	4-H - Youth Agents: No. of Incidents	Importance Mean Score	Importance Rank-order	Home Economists: No. of Incidents	Importance Mean Score	Importance Rank-order	Agricultural and Natural Resource Agents: No. of Incidents	Importance Mean Score	Importance Rank-order
Teaching and Communicating	26	3.96	3	29	3.59	5	29	3.59	6
Organizing	23	4.04	2	8	4.25	2	12	3.92	5
Conducting Programs	11	4.73	1	9	3.44	6	16	4.06	3
Administering	13	3.92	4	12	3.83	3	9	4.56	2
Program Planning	5	3.60	5	5	4.40	1	3	4.00	4
Evaluating	2	3.00	6	3	3.67	4	5	4.60	1
Total	80	4.04		66	3.76		74	3.95	

rated ineffective incidents in the Conducting Programs category as more important than other categories. The categories of Program Planning and Evaluating were both infrequently reported and rated low in importance by 4-H - Youth Agents.

Extension Home Economists on the other hand, rated ineffective incidents in the categories of Program Planning and Organizing as holding more importance than those in the Conducting Programs category. The more important categories for Agricultural and Natural Resource Agents were Evaluating and Administering; the Teaching and Communicating category was ranked lowest by them.

It was noted earlier that importance scores for ineffective incidents were consistently lower than those for effective incidents, regardless of agent tenure. When comparing Tables 35 and 36, that same difference was found, regardless of agent position. Mean Scores of importance for ineffective incidents were lower than those for effective incidents by 1.62 points for 4-H - Youth Agents, 1.78 for Extension Home Economists, and 1.45 for Agricultural and Natural Resource Agents.

Importance scores for effective and ineffective incidents were combined in Table 37 according to agent position. The mean score of importance for all incidents reported by 4-H - Youth Agents was slightly higher than for agents in

TABLE 37

DISTRIBUTION OF MEAN SCORES OF IMPORTANCE AMONG CRITICAL PERFORMANCE CATEGORIES FOR ALL CRITICAL INCIDENTS BY POSITION OF REPORTING AGENT

Critical Performance Category	4-H - Youth Agents: No. of Incidents	Importance Mean Score	Importance Rank-order	Home Economists: No. of Incidents	Importance Mean Score	Importance Rank-order	Agricultural and Natural Resource Agents: No. of Incidents	Importance Mean Score	Importance Rank-order
Teaching & Communicating	40	4.50	5	55	4.58	4	54	4.48	6
Organizing	51	4.96	2	26	5.12	1	28	4.82	3
Conducting Programs	34	5.18	1	19	4.68	2	33	4.76	4
Administering	19	4.74	4	17	4.24	5	15	4.60	5
Program Planning	10	4.90	3	11	4.64	3	6	4.83	2
Evaluating	5	4.40	6	3	3.67	6	11	4.91	1
Total	159	4.84		131	4.64		147	4.67	

other positions. The Home Economists and Agricultural and Natural Resource Agents had nearly identical mean importance scores for all incidents (4.64 and 4.67, respectively).

The 4-H Agents rated the importance of incidents in the Conducting Programs category much higher than did other agents. The 4-H Agents also recorded higher importance values for Administering incidents than did the Home Economists. The Agricultural and Natural Resource Agents reported more Evaluating incidents, and they placed considerably higher importance scores upon those incidents.

Summary

Agent reported critical incidents were classified among six critical performance categories. Hypotheses about the frequency, importance, and difficulty of executing those categories of incidents were tested. In addition, hypothesized relationships of the critical performance categories to agent tenure and employment position were tested. A summary of the acceptance or rejection of the study hypotheses is presented in Table 38.

These data were also analyzed to answer four questions about the relationship of agent tenure and agent position to the difficulty and importance of executing effective and ineffective critical incidents. A summary of the results of this analysis is presented in Table 39.

TABLE 38

SUMMARY OF THE ACCEPTANCE OR REJECTION OF HYPOTHESES BASED UPON AN ANALYSIS OF STUDY DATA

Hypothesis:	Analysis: Supported	Failed to Support
H_1a	x	
b	x	
c	x	
d	x	
e		x
f	x	
H_2a (1-4)	x	
a (5-6)		x
b (1-5)	x	
b (6)		x
H_3a		x
b		x
c	x	
d	x	
e	x	
H_4a		x
b		x
H_5a		x
b	x	
H_6a	x	
b		x

TABLE 39

SUMMARY OF MEAN SCORES OF DIFFICULTY AND IMPORTANCE BY TENURE AND POSITION OF REPORTING AGENTS AS ANALYZED IN RESPONSE TO STUDY QUESTIONS

Agent Variable	Mean Difficulty Scores of Critical Incidents: Effective	Ineffective	All	Mean Importance Scores of Critical Incidents: Effective	Ineffective	All
Agent Tenure:						
Experienced	3.43	3.88	3.66	5.48	4.07	4.77
Inexperienced	3.15	3.53	3.34	5.61	3.77	4.68
Agent Position:						
4-H - Youth Agent	3.33	3.88	3.60	5.66	4.04	4.84
Extension Home Economist	3.09	3.79	3.44	5.54	3.76	4.64
Agricultural and Natural Resource Agt.	3.37	3.45	3.41	5.40	3.95	4.67

Agents generally assigned greater difficulty scores to ineffective than to effective incidents, regardless of the tenure or position of the reporting agent. Inexperienced agents gave lower difficulty scores than experienced agents to both effective and ineffective incidents. The 4-H - Youth Agents assigned lower difficulty scores than other agents to effective incidents. Agricultural and Natural Resource Agents reported less difficulty for ineffective incidents than did other agents.

Agents generally assigned greater importance scores to effective than to ineffective incidents, regardless of the tenure or position of reporting agent. Experienced agents gave lower importance scores than inexperienced agents to effective incidents. Inexperienced agents gave lower importance scores to ineffective incidents than did experienced agents. The 4-H - Youth Agents reported higher importance scores than other agents for effective, ineffective and all incidents. The Home Economists and Agricultural and Natural Resource Agents reported nearly identical importance scores for all incidents.

CHAPTER V

SUMMARY AND CONCLUSIONS

The Problem

This research was designed to employ the critical incident technique to analyze the jobs of Cooperative Extension agents. The purposes were to describe the critical job requirements as perceived by a population of extension agents, to identify the training needs as inferred from self-reported incidents of ineffective job performance, and further, to determine possible differences in training needs according to the position and the tenure of incumbent agents.

Respondents

All respondents in this study were employees of the Michigan Cooperative Extension Service who had experienced not more than 6 years, nor less than 3 months of duty and were employed in a field agent position on December 1, 1967. A summary of findings about the respondents is given below:

1. Of the 74 respondents in this study, 25 were Agricultural and Natural Resource Agents; 22 were Extension Home Economists, and 27 were 4-H - Youth Agents. About two-thirds of the

agents were male and one-third were female.

2. Over one-half of the 4-H - Youth Agents were between 21 and 30 years of age while over one-half of the Extension Home Economists were over 40 years. Nearly two-thirds of the Agricultural and Natural Resource Agents were between 31 and 40 years old.
3. The 4-H - Youth Agents were more often inexperienced in extension work while the Agricultural and Natural Resource Agents were more often experienced. The Extension Home Economists were more equally divided between the experience groups; about 55 percent were experienced and 45 percent were inexperienced.
4. Teaching was the most frequently reported previous work experience for 4-H - Youth Agents and for Extension Home Economists. Agricultural and Natural Resource Agents more frequently reported public service[1] as their previous work experience.
5. Over two-thirds of the Extension Home Economists and the 4-H - Youth Agents held a Bachelor's degree or had earned credits beyond it, but not enough for a Master's degree. Nearly two-thirds of the Agricultural and Natural Resource Agents

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[1]Public service primarily consisted of employment with governmental agencies like the U. S. Soil Conservation Service.

held a Master's degree or higher. Forty percent had earned credits beyond a Master's Degree.

Procedures

Critical incidents were collected in small group meetings from incumbent field extension agents. The incidents were classified by the researcher according to a classification system developed a priori and based upon the work of earlier extension investigators. Three judges classified a random sample of incidents. As outcomes of the research procedure:

1. The 74 respondents reported 444 critical incidents in 23 meetings. Attendance at those meetings ranged from 2 to 11 agents each. Mean attendance per meeting was 3.2 agents. Each agent, as requested, reported 6 incidents, of which 3 were perceived as effective and 3 ineffective. Mean respondent time per incident was about 17 minutes.
2. Four hundred thirty-eight, or 98.6 percent of a total of 444 critical incidents, were classified among the categories of the classification system which had been developed a priori.
3. The researcher's agreement of third independent classification with the second was 89.6 percent

for categories and 77.2 percent for subcategories.

4. One or more judges agreed with the researcher's classification for 75 percent of the incidents by categories and 56.8 percent of the incidents by subcategories. Two or more judges agreed with the researcher's classification of 47.7 percent of the incidents by categories and with his classification of 29.5 percent by subcategories.

The descriptive statistics employed to analyze critical incidents included percentage and frequency distributions, mean scores of both importance and difficulty, and derived rank-order. The data were processed by the Computer Laboratory at Michigan State University. The findings were presented in detail in Chapter IV. The balance of this chapter is devoted to a restatement of the principal findings and to the conclusions based upon those findings.

Findings and Conclusions

The critical performance categories outlined in Table 40 are generalized groups of critical incidents which reflect agents' perceptions of critical requirements for successfully performing their jobs. The subcategories are more specific job requirements perceived as critical by extension agents. There is a hierarchy of frequency with which the job requirements occur. More than one-half of all incidents were classified in two critical performance categories: (1) Teaching

and Communicating, and (2) Organizing. It is therefore concluded that Michigan Extension Agents most frequently perceive such component behaviors as teaching, sending and receiving messages, organizing groups, and implementing programs through social systems as critical for successful job performance.

The critical performance categories of Evaluating, Administering, and Program Planning are less frequently perceived as critical job requirements. That is, agents do not as frequently view as critical such behaviors as conducting applied research or solving problems; managing resources and administering extension work; or planning and developing extension programs.

Agent perception of job requirements differ somewhat by agent position. The 4-H - Youth Agents more frequently perceive Organizing behaviors as critical job requirements, while Extension Home Economists and Agricultural and Natural Resource Agents more frequently view their jobs as requiring Teaching and Communicating behaviors. Agricultural and Natural Resource Agents, more often than others, perceive tasks related to Evaluating as critical job requirements. Agricultural Agents do not very often view Program Planning behaviors as critical job requirements, while extension youth workers and home economists do.

TABLE 40

SUMMARY OF THE FREQUENCY RANK-ORDER OF CRITICAL PERFORMANCE CATEGORIES AND COMPONENT CRITICAL JOB REQUIREMENTS FOR MICHIGAN EXTENSION AGENTS

Critical Performance Categories	Critical Job Requirements
TEACHING AND COMMUNICATING	1. Using appropriate method to communicate or teach. 2. Analyzing communication patterns and/or organizing messages. 3. Adapting communication and teaching to the individual. 4. Motivating the clientele.
ORGANIZING	1. Using existing groups and/or relating parts of the social system. 2. Organizing groups. 3. Identifying and/or using early adopters or leaders. 4. Developing rapport with clientele. 5. Considering values, attitudes, needs, etc. of self and others. 6. Analyzing the power structure.
CONDUCTING PROGRAMS	1. Providing competent technical information. 2. Developing leadership abilities of self or others. 3. Developing insight into and/or exciting people about development potential. 4. Interpreting the impact of change and trends. 5. Learning technical information.

Critical Performance Categories	Critical Job Requirements
ADMINISTERING	1. Managing work consistent with resources. 2. Coordinating work with co-workers. 3. Making decisions consistent with extension policies. 4. Using knowledge of the structure, function, policies, and programs of extension. 5. Obtaining support for extension programs.
PROGRAM PLANNING	1. Using human resources in program development. 2. Analyzing social, political, or economic situation. 3. Determining the availability of resources for programs. 4. Developing a program plan.
EVALUATING[a]	1. Thinking creatively or reasoning logically. 2. Conducting applied research. 3. Using the problem solving approach. 4. Conducting opinion surveys.

[a]Affirmed as a critical performance category only for Agricultural and Natural Resource Agents and for inexperienced agents.

Agent perception of critical job requirements differs only slightly according to agent tenure. They appear to agree about a great majority of job requirements. However, inexperienced agents much less frequently perceive Evaluating and other research behaviors as critical for job success.

In general, Extension Agents appear to perceive the critical requirements of their jobs as occurring in similar frequency, regardless of their own competency in fulfilling those requirements. The competencies possessed by agents, as inferred from effective incidents, and the training needs of agents, as inferred from ineffective incidents, form similar rank-order hierarchies. It is concluded that in general, agent training needs are distributed in about the same manner as agent competencies.

The rank-order of importance varied considerably from that of frequency. In general, agents appear to rate as most important for job success behaviors like: (1) working with social systems, and (2) conducting programs. These results suggest that the measure of importance provided an indication of the "degree of criticalness" of job requirements beyond that revealed by an analysis of incident frequency.

The rank-order of difficulty differed from that of either incident frequency or importance. Agents appear to generally perceive Evaluating behaviors as much more difficult than behaviors related to Conducting Programs.

Agents reported higher values on a seven-point scale for incident importance than for incident difficulty. Perhaps this reflects the agents' need to achieve success or possibly their need to avoid failure.

Exprienced and inexperienced agents differ in their perception of the difficulty of performing incidents. Experienced agents reported higher difficulty scores than inexperienced agents. Perhaps those with longer tenure have a greater sense of belonging to the organization and are less fearful to admit difficulty. Or, perhaps agent perception of appropriate role behavior expands with socialization, resulting in greater complexity and hence, greater difficulty of execution.

Agents differ in their perception of the importance of critical job requirements according to their tenure. Experienced agents attach most importance to Program Planning behaviors, while inexperienced agents view Organizing behaviors as most important. In this study, there was less variance in importance scores for experienced than for inexperienced agents. This lends support to the postulate that with extension employment experience, agents become more homogeneous in their perception of appropriate job behavior.

There was little difference between the two tenure groups in the frequency of reported effective incidents. This may have resulted from the failure of the classification

system to discriminate subtle differences in perceptions of effectiveness. Or, perhaps agents' perceptions of their own effectiveness develop at the early induction period; they might be developed previous to employment.

Training needs appear to differ according to agent tenure. Such needs, as inferred from ineffective incidents, were present in each critical performance category. Differential training needs are suggested according to agent tenure for the critical performance categories of Teaching and Communicating, Organizing, and Evaluating.

It is more difficult for experienced agents to perform critical incidents whether the incidents are effective or ineffective. In addition, agents seem to have more difficulty in performing ineffective than effective incidents. Lack of training appears to contribute to agent difficulty in performing incidents perceived as critical for job performance.

Agents differ in their perception of the difficulty of executing effective and ineffective incidents according to the position of reporting agents. The 4-H - Youth Agents expressed more difficulty with ineffective incidents than other agents. While it was more extreme for 4-H Agents, agents in general appeared more likely to experience difficulty with ineffective incidents where agents lacked training, than with effective incidents where the agent possessed needed competencies.

Agents differentially perceive the importance of both effective and ineffective incidents according to agent tenure. Experienced agents rated ineffective incidents as more important and effective incidents as less important than did inexperienced agents. However, both experienced and inexperienced agents seem to attach more importance to incidents in which they possess competencies than to incidents in which they lack competencies--inexperienced agents appeared especially likely to do so. It is a conjecture that the greater importance attached to effective incidents might reflect agent needs to attain self-esteem and the esteem of others.

Agents of different positions appear not to agree upon the relative importance of either effective or ineffective incidents. Youth agents, for instance, accord greater importance to their competency of Administering their work, while Home Economists view their competencies of Conducting Programs as more important. Differences by position recur in the hierarchy of agent training needs too. The 4-H Agents rate training needs related to Conducting Extension Programs as most important; Home Economists attach more importance to Program Planning training needs; while Evaluation or research training needs appear more important for Agricultural and Natural Resource Agents.

A summary of the rank-order of Critical Performance Categories by the frequency, difficulty, and importance of critical incidents according to the tenure of the reporting agent is presented in Table 41 for effective incidents; in Table 42 for ineffective incidents; and in Table 43 for all incidents.

A summary of the rank-order of Critical Performance Categories by the frequency, difficulty, and importance of critical incidents according to the position of the reporting agent is presented in Table 44 for effective incidents; in Table 45 for ineffective incidents; and in Table 46 for all incidents.

Conclusions about the Critical Incident Technique

It is concluded that the critical incident technique lends itself to the collection of incidents in small groups of 2 to 11 respondents. It is possible for persons supplying data to write 3 effective and 3 ineffective critical incidents in less than 2 hours.

A central purpose of this study was to employ the critical incident technique as a means for identifying the job requirements and agent training needs. It was not known whether this technique would identify needed job behaviors which had not been identified by other methods. The incident

TABLE 41

SUMMARY OF THE RANK-ORDER OF CRITICAL PERFORMANCE CATEGORIES FOR FREQUENCY, DIFFICULTY, AND IMPORTANCE OF EFFECTIVE CRITICAL INCIDENTS BY TENURE OF REPORTING AGENT

Critical Performance Category	Experienced Agents			Inexperienced Agents			All Agents		
	Frequency	Difficulty	Importance	Frequency	Difficulty	Importance	Frequency	Difficulty	Importance
Teaching and Communicating	1	5	3	1	1	2	1	3	1
Organizing	2	2	1	1	2	4	2	2	2
Conducting Programs	3	4	2	3	5	6	3	4	4
Administering	4	3	4	4	6	3	4	5	5
Program Planning	4	6	6	5	4	1	5	6	3
Evaluating	6	1	5	6	3	5	6	1	6

TABLE 42

SUMMARY OF THE RANK-ORDER OF CRITICAL PERFORMANCE CATEGORIES FOR FREQUENCY, DIFFICULTY, AND IMPORTANCE OF INEFFECTIVE CRITICAL INCIDENTS BY TENURE OF REPORTING AGENT

Critical Performance Category	Experienced Agents			Inexperienced Agents			All Agents		
	Frequency	Difficulty	Importance	Frequency	Difficulty	Importance	Frequency	Difficulty	Importance
Teaching and Communicating	1	6	4	1	5	5	1	6	6
Organizing	2	3	5	2	2	2	2	4	3
Conducting Programs	3	5	3	4	6	3	3	5	1
Administering	4	1	2	2	4	4	4	2	2
Program Planning	6	2	1	5	3	6	6	3	5
Evaluating	5	4	5	6	1	1	5	1	4

TABLE 43

SUMMARY OF THE RANK-ORDER OF CRITICAL PERFORMANCE CATEGORIES FOR FREQUENCY, DIFFICULTY, AND IMPORTANCE OF ALL CRITICAL INCIDENTS BY TENURE OF REPORTING AGENT

Critical Performance Category	Experienced Agents			Inexperienced Agents			All Agents		
	Frequency	Difficulty	Importance	Frequency	Difficulty	Importance	Frequency	Difficulty	Importance
Teaching and Communicating	1	5	5	1	5	5	1	5	5
Organizing	2	3	4	2	2	1	2	2	1
Conducting Programs	3	4	2	3	6	3	3	6	2
Administering	4	1	3	4	4	6	4	3	6
Program Planning	6	6	1	5	3	4	5	4	3
Evaluating	5	2	6	6	1	2	6	1	4

TABLE 44

SUMMARY OF THE RANK-ORDER OF CRITICAL PERFORMANCE CATEGORIES FOR FREQUENCY, DIFFICULTY, AND IMPORTANCE OF EFFECTIVE CRITICAL INCIDENTS BY POSITION OF REPORTING AGENT

Critical Performance Category	4-H - Youth Agents			Home Economists			Ag & N.R. Agents		
	Frequency	Difficulty	Importance	Frequency	Difficulty	Importance	Frequency	Difficulty	Importance
Teaching and Communicating	3	2	4	1	2	2	1	3	2
Organizing	1	3	3	2	1	3	3	1	3
Conducting Programs	2	4	5	3	5	1	2	4	4
Administering	4	4	1	5	3	4	4	6	6
Program Planning	5	6	2	4	4	5	6	5	1
Evaluating	6	1	6	-	-	-	4	2	5

TABLE 45

SUMMARY OF THE RANK-ORDER OF CRITICAL PERFORMANCE CATEGORIES FOR FREQUENCY, DIFFICULTY, AND IMPORTANCE OF INEFFECTIVE CRITICAL INCIDENTS BY POSITION OF REPORTING AGENT

Critical Performance Category	4-H - Youth Agents			Home Economists			Ag. & N.R. Agents		
	Frequency	Difficulty	Importance	Frequency	Difficulty	Importance	Frequency	Difficulty	Importance
Teaching and Communicating	1	4	3	1	5	5	1	5	6
Organizing	2	3	2	4	3	2	3	1	5
Conducting Programs	4	6	1	3	6	6	2	4	3
Administering	3	4	4	2	1	3	4	2	2
Program Planning	5	2	5	5	2	1	6	6	4
Evaluating	6	1	6	6	4	4	5	3	1

TABLE 46

SUMMARY OF THE RANK-ORDER OF CRITICAL PERFORMANCE CATEGORIES FOR FREQUENCY, DIFFICULTY, AND IMPORTANCE OF ALL CRITICAL INCIDENTS BY POSITION OF REPORTING AGENT

Critical Performance Category	4-H - Youth Agents			Home Economists			Ag. & N.R. Agents		
	Frequency	Difficulty	Importance	Frequency	Difficulty	Importance	Frequency	Difficulty	Importance
Teaching and Communicating	2	3	5	1	4	4	1	5	6
Organizing	1	4	2	2	2	1	3	1	3
Conducting Programs	3	6	1	3	6	2	2	4	4
Administering	4	5	4	4	1	5	4	3	5
Program Planning	5	2	3	5	5	3	6	6	2
Evaluating	6	1	6	6	3	6	5	2	1

classification system employed in this study was largely developed from items contained in questionnaires used by other extension researchers. Therefore, if the critical incident technique were to identify important job behaviors not contained in previous research instruments, one would expect such behaviors to fall outside the classification system.

Since it was possible to classify over 98.5 percent of the incidents within this classification system, it was concluded that the critical incident technique failed to reveal significant numbers of important job behaviors beyond those shown by other research methods. However, this result suggests that the critical incident technique revealed needed job behaviors which are similar to those revealed by other research methods. In addition, it made possible the ranking of needed behavior according to frequency, importance, and difficulty, thus providing evidence of the degree of criticalness of identified needs.

The classification system employed in this study was sufficiently comprehensive for the researcher to classify nearly all the reported incidents with about 90 percent category consistency. However, judges' agreement was considerably less, thereby lending credence to claims of subjectivity for the system employed in this study and for the critical incident technique in general. Therefore, it appears that this

classification system requires refinement and further testing to enhance both its comprehensive nature and its reliability as a research instrument. It does seem reasonable to conclude that this system was sufficiently comprehensive for the researcher to classify the critical incidents reported by the agents in this study.

The critical incident technique as employed in this study permitted a description of job requirements as perceived by a population of Michigan extension agents; it permitted inferences of training needs for those agents; and it revealed differences in inferred job requirements and training needs by position and tenure of participating agents.

Limitations

1. The application of the critical incident technique in this study involved only incumbent agents, thereby resulting in a reflection of the perception of this single group.
2. The results of this study are subject to the limitations of cross-sectional research. Changes over time can only be assumed to be represented in the variables under study.
3. This research describes agent job behaviors as they currently exist. It should not be interpreted

as describing them as they ought to be or as they may be at some future date. Similarly, the objectives in the work situation were those actually being pursued and not necessarily those that ought to be pursued.

4. The relatively low level of agreement of category classification by researcher and judges limits the extent to which these findings ought to be generalized.
5. Confidence in the findings of this research is limited at points due to the small number of subjects involved. This was particularly evident when analyzing variables by agent position.

Summary of Conclusions

1. There is a hierarchy of frequency with which agent job requirements are perceived to occur among critical performance categories.
2. Agent perceptions of job requirements differ somewhat by agent position.
3. Agent perceptions of job requirements differ only slightly by agent tenure.
4. In general, agent training needs are distributed among critical performance categories in about the same frequency as agent competencies.

5. Agents appear to differentiate between the frequency with which job requirements occur and the importance attached to those requirements.
6. Agents differentiate among frequency, importance, and difficulty of performing critical incidents thereby suggesting that the degree of criticalness varies with the measure employed.
7. Agents generally seem to place higher ratings upon the importance than upon the difficulty of performing the incidents they reported.
8. Agents apparently differ in their perceptions of the difficulty of performing incidents according to their tenure since experienced agents reported higher difficulty scores than did inexperienced agents.
9. Agents appear to differ in their perceptions of the importance of job requirements according to their tenure.
10. The frequency with which self-reported competencies occur among critical performance categories does not seem to differ by agent tenure.
11. The frequency with which training needs occur among critical performance categories differs according to agent tenure.

12. Lack of training evidently contributes to agent difficulty in performing incidents perceived as critical for job performance.
13. Competencies and training needs seem to differ according to agent position.
14. Perceptions of the importance of competencies and training needs appear to differ according to agent tenure.
15. Agents of different positions apparently do not agree on the importance of competencies and training needs.
16. The critical incident technique lends itself to collection of incidents in small groups of 2 to 11 respondents.
17. The critical incident technique failed to reveal significant numbers of job behaviors beyond those shown by other research methods.
18. The critical incident technique makes possible the ranking of needed job behaviors according to their frequency, importance, and difficulty.
19. The classification system developed for this study was sufficiently comprehensive to classify agent reported critical incidents, but both refinement and further testing are needed.

Implications and Recommendations

The results of this study offer several practical applications to the Cooperative Extension Service. The critical performance categories and subcategories provide a description of extension agents' views of the critical requirement of their job. The results of this job analysis should provide understanding of the things agents consider critical for successful job performance.

Future research with such "relevant others" as administrators, specialists, and clientele would reveal additional dimensions of agent job requirements as perceived by others.

Agent training needs were identified as they occurred within the reality of the situation in which agents work. Hierarchies were specified for the frequency with which training needs occurred; for the difficulty associated with those needs; and for the importance attached to the training needs. These hierarchies provide a potential criterion for establishing a priority of agent training. Future research in this area, if it is to analyze the variables by agent position, should involve greater numbers of agents.

This study revealed that the 3 categories of job requirements most frequently reported contrasted sharply with those least frequently reported. Such evidence could be useful for extension administrators as they make training and other personnel management decisions.

It appears that the initial 3 month induction period may be very important in developing agent perception of the critical requirements of their jobs. After 3 months, the agents in this study held similar perceptions of the frequency with which job requirements occurred. This is not to imply that agents do not change their ideas about some aspects of their jobs. Their perception of difficulty and importance do seem to change with time. Indeed, agents appeared to report greater difficulty as they gained job experience. The need for agent training does not seem to decline with increasing tenure, but rather changes in emphasis.

The agents reported more difficulty in performing incidents in which they lacked competencies. This suggests that special efforts might be necessary if training were to be provided in such areas as conducting applied research, planning extension programs, and administrative behaviors.

It seems useful to know that agents do not generally view the importance of critical job requirements in the same way they report the frequency of their occurrence. It would probably require considerably less motivation to alter competencies of agents in those areas they already believe to be of greater importance.

The results of this study should provide useful evidence for making judgments about differentiating training

on the basis of agent position and/or tenure depending upon the training needs to be met.

It appears that the use of scaled items in conjunction with the critical incident technique offers opportunities for researchers to refine the interpretation of the results. Further application and refinement of such scaling efforts appear potentially rewarding.

The classification system employed in this study requires considerable refinement. Since it does seem to hold promise for analyzing agent job performance, other researchers may make adaptations in the system.

Studies in changes of perception of appropriate role behaviors would likely be promising terrain for future research. The results of this study suggest the hypothesis that with socialization, agent perception of appropriate role behavior expands, resulting in greater complexity and hence greater difficulty of performance. It is recommended that a longitudinal research project for studying changes in agent job perception over time be assigned to a division of the Michigan Cooperative Extension Service.

An hypothesis which grows from this study is that agents become more homogeneous in their perceptions of appropriate role behavior as length of extension work experience increases. The question of changes in agent perception of role behavior during the initial 3 months of induction seems

promising for future research. Also, to what extent do agents differ in employment role perception at the point of entry in the extension organization?

APPENDIX A

A QUESTIONNAIRE FOR EXTENSION AGENTS REPORTING CRITICAL INCIDENTS

Please complete the information requested below. No personal information will be revealed for individuals. You are asked to give your name only in case more information is needed. You are assured that individual information will remain confidential.

Background Information

1. Name: _____

2. Today's Date: _____

3. Sex: ☐ Male ☐ Female

4. Present Age: _____ **Present Extension Position** _____

5. On what date did you join the Michigan Cooperative Extension Service?

6. Have you held other extension positions? ☐ Yes ☐ No

   If yes, please give the following information:

Type of Position	How Long Held?

8. What type(s) of work did you do before joining the Cooperative Extension Service:

Employer	Dates of Service	Nature of Responsibility

9. What is the highest academic degree you have completed?

   (Please check): Major area of completed degree(s):

   ☐ Bachelor's _____

   ☐ Master's _____

   ☐ Specialist's _____

   ☐ Doctor's _____

10. How many term hours of graduate work have you completed beyond your highest degree?

    _____

The Information Below Will Help You Complete This Questionnaire

On the following pages you are asked to provide examples of things you have done in connection with your job as an extension agent. Some things you may feel were particularly effective, others you might now judge were very ineffective things for an Extenstion agent to do.

This research method is called the critical incident technique. The purpose of this study is to identify the specific actions which are required for the performance of an extension agent's role. Since you are in the best position to know what you do in your job, your frank answers are extremely important.

This method has been widely used in other professions. Examples of both effective and ineffective incidents are given below. These are provided just to give you an idea of the kind of information needed. You will notice that the examples contain answers to each of the following questions about the incident:

1. Exactly what did you do?
2. What circumstances led up to the incident?
3. What was your objective?
4. Who was involved?
5. What were the results of your action?
6. When did this incident take place?

An Effective Incident for a Teacher

I was teaching a unit of tumbling in a seventh grade gym class. I asked one boy to practice some stunts outside the class and then demonstrate them to the rest of the class. This boy was self-conscious due to his size and age. His neuro-muscular skills were poor and the other kids made fun of him. I wanted him to develop self-confidence by learning how to do some stunts well. When the rest of the class saw him demonstrate the stunts, they were very surprised. This was an effective incident because the class began to respect this boy. He became more confident and was treated as "one of the gang." This happened in January of 1965.

An Ineffective Incident for a Nurse

When on duty in the hospital emergency room I became irritated with the number of forms that had to be filled out before a patient could be treated. I was short-tempered with my supervisor and I told her this was a needless waste of time. I felt that carbon impregnated forms could reduce the time and effort and permit quicker treatment. She was angry for my lack of tact and refused to listen to my idea. My encounter with the supervisor happened when a child was in terrific pain, but I wasn't permitted to treat him until the parents had completed 3 different forms. I wanted to improve the speed of patient care. However, this was an ineffective incident because it resulted in severed communication with my supervisor and the idea I suggested was never used. This was in October of 1966.

An Effective Incident for a School Superintendent

I brought some data before the school board about the drop-out rate in our school. I proposed that groups of teachers, local citizens, and consultants be contacted to study this matter and suggest methods for combating the drop-out situation. I became concerned when I found that our drop-out rate was at its highest level in 25 years. I wanted to prevent this loss of human potential. This proved to be an effective incident since the board endorsed the idea in April of 1966 and as a result, a new "drop-in" program is now being initiated.

An Ineffective Incident for a Minister

I contacted ten fellow clergymen to promote the idea of a supervised "Teen-Center" in our community. When we met, the others seemed favorable to the idea, but I could never get their active support. I was promoting the idea because there had been a rash of juvenile delinquency. I thought a Teen-Center would help prevent it. This was an ineffective incident because the other clergymen failed to act on the idea or to suggest other alternatives. This happened just before Christmas in 1964.

CRITICAL INCIDENT REPORT FORM

Think back over your experience as an extension agent in Michigan. You probably have done many things in your job which you would now judge as being very effective - things that would characterize you as an effective agent. Think of a single such incident in which you feel you were particularly effective. Please describe what happened:

1. The circumstances: _____

_____

_____

_____

_____

_____

2. What I did: _____

_____

_____

_____

3. My objective: _____

_____

_____

4. Person(s) involved: _____

_____

_____

5. Results: _____

_____

_____

6. When did this incident take place? _____
Month Year

7. To what extent do you believe this incident is likely to influence your success as an extension agent? Please circle the most appropriate number:

1.	2.	3.	4.	5.	6.	7.
Little Influence			Some Influence			Great Influence

8. How difficult was it for you to do the incident you described above? Please circle the most appropriate number:

1.	2.	3.	4.	5.	6.	7.
Not Difficult			Somewhat Difficult			Very Difficult

CRITICAL INCIDENT REPORT FORM

Once again, think back over your experience as an extension agent in Michigan. You probably did some things which you would now judge as being very ineffective. Of course, these things may not be typical of your normal performance, but rather are things you did on the job which you now judge as being particularly ineffective. Please describe what happened:

1. The circumstances: _____

2. What I did: _____

3. My objective: _____

4. Person(s) involved: _____

5. Results: _____

6. When did this incident take place? _____
Month Year

7. To what extent do you believe this incident is likely to influence your success as an extension agent? Please circle the most appropriate number:

1.	2.	3.	4.	5.	6.	7.
Little Influence			Some Influence			Great Influence

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1.	2.	3.	4.	5.	6.	7.
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Think back over your experience as an extension agent in Michigan. You probably have done many things in your job which you would now judge as being very effective - things that would characterize you as an effective agent. Think of a single such incident in which you feel you were particularly effective. Please describe what happened:

1. The circumstances: _____

2. What I did: _____

3. My objective: _____

4. Person(s) involved: _____

5. Results: _____

6. When did this incident take place? _____
Month Year

7. To what extent do you believe this incident is likely to influence your success as an extension agent? Please circle the most appropriate number:

1.	2.	3.	4.	5.	6.	7.
Little Influence			Some Influence			Great Influence

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Once again, think back over your experience as an extension agent in Michigan. You probably did some things which you would now judge as being very ineffective. Of course, these things may not be typical of your normal performance, but rather are things you did on the job which you now judge as being particularly ineffective. Please describe what happened:

1. The circumstances: _____

2. What I did: _____

3. My objective: _____

4. Person(s) involved: _____

5. Results: _____

6. When did this incident take place? _____
Month Year

7. To what extent do you believe this incident is likely to influence your success as an extension agent? Please circle the most appropriate number:

1.	2.	3.	4.	5.	6.	7.
Little Influence			Some Influence			Great Influence

8. How difficult was it for you to do the incident you described above? Please circle the most appropriate number:

1.	2.	3.	4.	5.	6.	7.
Not Difficult			Somewhat Difficult			Very Difficult

CRITICAL INCIDENT REPORT FORM

Think back over your experience as an extension agent in Michigan. You probably have done many things in your job which you would now judge as being very effective - things that would characterize you as an effective agent. Think of a single such incident in which you feel you were particularly effective. Please describe what happened:

1. The circumstances: _____

2. What I did: _____

3. My objective: _____

4. Person(s) involved: _____

5. Results: _____

6. When did this incident take place? _____
Month Year

7. To what extent do you believe this incident is likely to influence your success as an extension agent? Please circle the most appropriate number:

1.	2.	3.	4.	5.	6.	7.
Little Influence			Some Influence			Great Influence

8. How difficult was it for you to do the incident you described above? Please circle the most appropriate number:

1.	2.	3.	4.	5.	6.	7.
Not Difficult			Somewhat Difficult			Very Difficult

CRITICAL INCIDENT REPORT FORM

Once again, think back over your experience as an extension agent in Michigan. You probably did some things which you would now judge as being very ineffective. Of course, these things may not be typical of your normal performance, but rather are things you did on the job which you now judge as being particularly ineffective. Please describe what happened:

1. The circumstances: _____

2. What I did: _____

3. My objective: _____

4. Person(s) involved: _____

5. Results: _____

6. When did this incident take place? _____
Month Year

7. To what extent do you believe this incident is likely to influence your success as an extension agent? Please circle the most appropriate number:

1.	2.	3.	4.	5.	6.	7.
Little Influence			Some Influence			Great Influence

8. How difficult was it for you to do the incident you described above? Please circle the most appropriate number:

1.	2.	3.	4.	5.	6.	7.
Not Difficult			Somewhat Difficult			Very Difficult

APPENDIX B

CLASSIFICATION SYSTEM FOR CRITICAL INCIDENTS

This system consists of six critical performance categories with attendant definitions for classifying critical incidents reported by the agent-subjects. The categories appear to be six functional groups of agent job behaviors. They are hypothesized to be critical in the sense that they are associated with definitely effective or ineffective job performance by field extension agents.

Typical behaviors subsumed under each performance category are not necessarily exhaustive of all possible behaviors. The subcategories are generalized descriptions of behaviors primarily derived from some 200 items used in research instruments by other researchers. The intent is to use the itemized behaviors as guides or examples of appropriate content for that subcategory.

Each incident is to be classified in one, and only one, category and subcategory. Examination of the definition of each critical performance category and attendant subcategory examples, will reveal possible confusion as to the most appropriate classification for a given incident. This occurs in spite of efforts to formulate each category as a discrete entity. Therefore, an incident will first be classified on the basis of the description of what the agent did.

If classification in a single category is not then possible, additional evidence will be sought sequentially from the description of the incident which follows:

1. The objective being pursued
2. The circumstances leading to the incident
3. The results of the incident

I. TEACHING AND COMMUNICATING

This category includes agent behaviors of communicating with clientele and using the educational process. The emphasis is upon reaching and teaching people. It includes sending and receiving messages. Relevant behaviors pertain to both the learning and the communication process. The basic concern is with process rather than the content taught or communicated.

Typical Behaviors

a. Using appropriate method of communicating and/or teaching to achieve desired goal through:

   (1) Written media such as personal and circular letters, news releases, reports, bulletins, etc.
   (2) Speaking engagements before groups, on the radio, and on television.
   (3) Personal contacts for counseling in office calls, telephone calls, and personal visits.
   (4) Demonstrations, tours, discussion meetings, training shops, sensitivity training, etc.

b. Motivating the clientele:

(1) Preparing, stimulating, and challenging the clientele to participate in learning experience.
(2) Creating an awareness of the need for learning.
(3) Acting in behalf of own welfare.

c. Adapting communication and teaching to individual differences:

(1) Using shared experiences and involvement.
(2) Acknowledging conflicting viewpoints.
(3) Pacing communication and teaching to participants' interest, need, aptitude, maturation level, etc.

d. Analyzing communication patterns and/or organizing messages to reach people:

(1) In publications (i.e. bulletins, special reports, project guides, etc.)
(2) In mass and "mail" media.
(3) In person-to-person relationships.

e. Establishing a feedback system:

(1) Identifying and listening to key informants.
(2) Determining audience perception of the message.

II. ORGANIZING

This category is considered to include behaviors of implementing programs through social systems. Incidents might involve organizing individuals into groups and organizing groups for social action. Other potential behaviors are identifying early adopters and leaders; analyzing the power structure; and using groups to achieve program objectives. Such behaviors are considered to be instrumental

actions which enable an agent to conduct programs within the social system in which the extension service functions.

Typical Behaviors

a. Identifying and/or using early adopters or leaders in extension programs:

   (1) According to talents and competencies.
   (2) According to functions to be performed.
   (3) For program execution.
   (4) As demonstrators.

b. Analyzing the power structure membership to:

   (1) Attain program goals.
   (2) Elicit financial resources for programs.
   (3) Identify pressure groups.

c. Using existing groups and/or interrelating parts of the social system to:

   (1) Stimulate interaction and participation.
   (2) Coordinate programs of mutual interest.
   (3) Secure understanding of extension goals.
   (4) Achieve extension goals.

d. Organizing groups to achieve program objectives:

   (1) Organizing people around shared needs.
   (2) Involving members in organizing and managing their own groups.
   (3) Organizing planning groups.

e. Maintaining consideration of the values, attitudes, needs and goals of self and others:

   (1) Maintaining confidences.
   (2) Discussing controversial issues objectively.
   (3) Maintaining positive interpersonal relationships.

f. Developing rapport with the clientele.

III. CONDUCTING PROGRAMS

This category is intended to reflect the understanding, knowledge, and abilities of an agent to provide experiences which improve the state of human, economic, and other natural resources. Component behaviors relate to developing leadership and stimulating self-improvement actions and providing information which allows the recipient to achieve a goal. Behavior is interpreted to include the act of knowing. The outcomes of the use of knowledge are stressed rather than the process of imparting knowledge.

Typical Behaviors

a. Developing leadership abilities:

   (1) In self:

      (a) through professional activities.
      (b) through formal and informal studies.

   (2) In others:

      (a) providing information and stimulating participation.
      (b) delegating responsibilities.

b. Developing insight into and/or exciting people about the potential for human, economic, and other resource development:

   (1) Speaking knowledgeably.
   (2) Anticipating behaviors and acting accordingly.
   (3) Anticipating economic trends and acting accordingly.
   (4) Understanding human motivation.

c. Interpreting the impact of change and trends upon the clientele due to:

(1) New technology.
(2) Social, economic, and political change.

d. Providing technical information which permits the recipient to solve a problem or achieve a goal from such sources as:

(1) Personal knowledge.
(2) Specialists or other resource persons.
(3) Published materials.

e. Learning technical information:

(1) Through personal study.
(2) From resource person(s).

IV. ADMINISTERING

This category primarily consists of intraorganizational administrative behaviors which permit the agent to carry out other functions of his job. Such behaviors as managing, coordinating, and maintaining support for personnel and programs are included.

Typical Behaviors

a. Managing work consistent with organizational resources:

(1) Delegating appropriate duties to secretary or others.
(2) Organizing work and materials to fit office conditions and procedures.
(3) Using office file system.
(4) Securing supplies, etc., according to the budget.
(5) Managing own time effectively.
(6) Managing and directing the work of employees.

b. Making decisions consistent with extension policies:

(1) Completing required internal reports.
(2) Maintaining professional standards in work and appearance.
(3) Handling funds, mailing lists, etc., within policies.
(4) Using appropriate channels for matters concerning salary adjustments, staff benefits, etc.
(5) Implementing programs consistent with Extension goals.
(6) Participating in required meetings.

c. Coordinating work with other extension workers:

(1) Avoiding duplication of programs.
(2) Using talents of other extension workers in program execution.
(3) Coordinating workload with coworkers.
(4) Coordinating use of equipment, facilities, etc.

d. Using knowledge of the structure, function, policies, and programs of the cooperative extension service to:

(1) Explain them to others.
(2) Explain the general role of extension workers.
(3) Meet the minimum role expectations of relevant others:

(a) Extension administrators and/or specialists.
(b) Clientele.
(c) Peers.

(4) Explain own role to others.
(5) Learn role expectations from others.

e. Obtaining support for extension programs:

(1) General public support for extension goals.
(2) Financial support from public and private sources.

V. PROGRAM PLANNING

This category encompasses behaviors related to the process of planning and developing extension programs. Component behaviors are analyzing impinging situations, assessing available resources, using human resources in planning and developing programs, and formulating an explicit plan of action for conducting extension programs. Teaching during the planning process and the actual conduct of the planned programs are relegated to other categories.

Typical Behaviors

a. Analyzing the situation influencing the clientele according to social, political, and economic factors as a basis for:

   (1) The identification of the need for extension programs.
   (2) The priority for the content of programs.
   (3) The objectives of programs.
   (4) The timing of programs.

b. Determining the resources available for program development.

   (1) Determining the availability of human resources.
   (2) Determining the availability of economic resources.

c. Using human resources in program development.

   (1) Involving "lay" people.
   (2) Involving extension specialists and other extension workers.
   (3) Involving other resource persons.

d. Developing a written program plan previous to its execution and integrated with:

   (1) State extension plans.

(2) Other field extension efforts.
(3) Other agency efforts.

VI. EVALUATING

Typical component behaviors are those intended to assess the results of extension programs, to conduct research trials, and to solve work related problems. Creative thinking, innovation, and logical reasoning are included. Such behaviors as writing and disseminating reports of results, and conducting either result or method demonstrations are relegated to other categories.

Typical Behaviors

a. Measuring the results of extension program(s):

(1) Seeking assistance from authorities in evaluation.
(2) Designing an evaluation instrument.
(3) Conducting an evaluation project.

b. Conducting applied research with pilot program projects or research trials and plots in:

(1) Cooperation with research authorities.
(2) The behavioral sciences.
(3) The natural sciences.

c. Using the problem solving approach:

(1) In own work.
(2) In assisting clientele to solve problems.

d. Thinking creatively or reasoning logically to improve:

(1) Own performance.
(2) Own work satisfaction.

(3) Extension effectiveness and/or efficiency.
(4) Client welfare.

e. Conducting opinion surveys.

APPENDIX C

COOPERATIVE EXTENSION SERVICE

MICHIGAN STATE UNIVERSITY • EAST LANSING • MICHIGAN 48823

Office of the Director

AND U.S. DEPARTMENT OF AGRICULTURE COOPERATING

December 1, 1967

Dear Colleague:

Some research is being planned at Michigan State University which involves a number of Michigan Extension Agents. This study is being conducted by Fred Peabody to provide information so we can help agents be even more successful. This research should provide evidence to help answer some important questions about induction and orientation training for Extension workers.

The purpose of this letter is to invite your participation in this study. The location of the agents being asked to participate is shown on the enclosed map. Your name, and that of other participating agents are listed by counties on the attached sheet.

You will be asked to attend a meeting in your own county or area with two to eight other agents. You should be able to supply all the information needed in a single two-hour meeting.

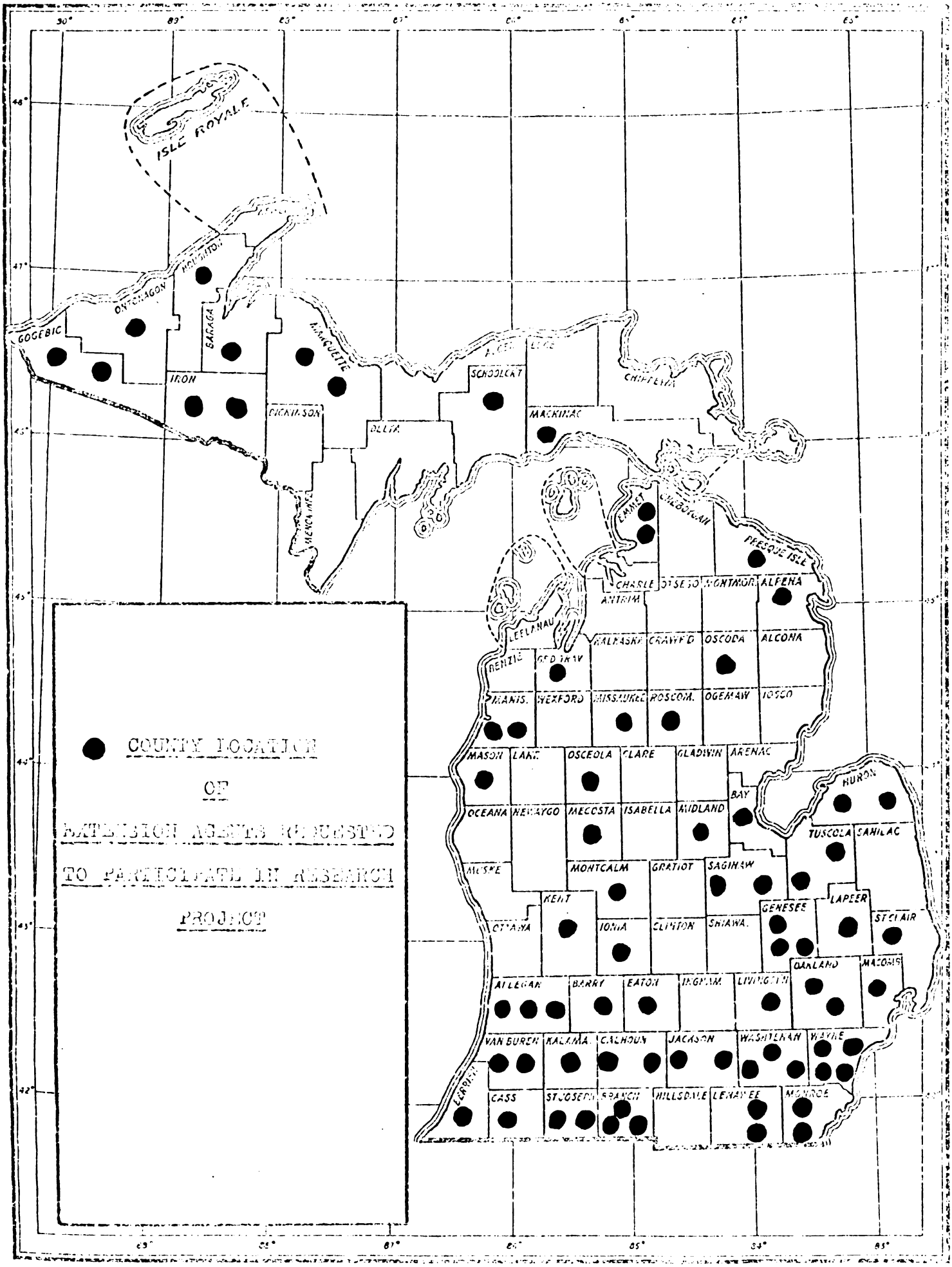
Fred will contact you soon and give you more details. I hope you will find time in your busy schedule to cooperate in this research effort.

Very truly yours,

Richard W. Bell
Assistant Extension Director - Agriculture

RWB:mas

cc: G. S. McIntyre
Field Operations
F. J. Peabody
D. A. Caul


ISLE ROYALE
GOGEBIC
ONTONAGON
HOUGHTON
BARAGA
MARQUETTE
IRON
DICKINSON
DELTA
SCHOOLCRAFT
MACKINAC
CHIPPEWA
EMMET
CHEBOYGAN
PRESQUE ISLE
CHARLEVOIX
ANTRIM
LEELANAU
BENZIE
KALKASKA
CRAWFORD
OSCODA
ALCONA
MANISTEE
WEXFORD
MISSAUKEE
ROSCOMMON
OGEMAW
IOSCO
MASON
LAKE
OSCEOLA
CLARE
GLADWIN
ARENAC
OCEANA
NEWAYGO
MECOSTA
ISABELLA
MIDLAND
BAY
HURON
TUSCOLA
SANILAC
MONTCALM
GRATIOT
SAGINAW
GENESEE
LAPEER
ST CLAIR
KENT
IONIA
CLINTON
SHIAWASSEE
OAKLAND
MACOMB
ALLEGAN
BARRY
EATON
INGHAM
LIVINGSTON
VAN BUREN
KALAMAZOO
CALHOUN
JACKSON
WASHTENAW
WAYNE
CASS
ST JOSEPH
BRANCH
HILLSDALE
LENAWEE
MONROE
BERRIEN
COUNTY LOCATION
OF
BATTELLE AGENTS REQUESTED
TO PARTICIPATE IN RESEARCH
PROJECT

COOPERATIVE EXTENSION SERVICE

MICHIGAN STATE UNIVERSITY • EAST LANSING • MICHIGAN 48823

Office of the Director

AND U.S. DEPARTMENT OF AGRICULTURE COOPERATING

December 4, 1967

Dear Co-Worker:

You recently received a letter from your Program Director telling you about some research I want to do with Extension agents. You were selected because you are in a unique position to contribute to this study.

The purpose of this research is to try to find what specific actions are necessary for performing the role of an Extension agent. You will be asked to write brief descriptions of things you have done in your job as an Extension agent. Examples are needed of things you feel were particularly effective. In addition, examples are needed of things you have done that you might now judge as ineffective things for an extension worker to do. This is an effort to analyze the job of an agent, not to evaluate you as a person or the work you are doing. I want to assure you that all responses will be treated confidentially.

By meeting in small groups it will be possible to clarify instructions and answer your questions. I will call you in the near future to see if you are willing to participate, and, if so, to schedule a two-hour meeting.

I sincerely hope you will be willing to help in this effort. Your participation is vitally needed.

Very truly yours,

Fred J. Peabody

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APPENDIX E

COOPERATIVE EXTENSION SERVICE

MICHIGAN STATE UNIVERSITY • EAST LANSING • MICHIGAN 48823

Office of the Director

AND U.S. DEPARTMENT OF AGRICULTURE COOPERATING

TO:

I want to confirm our meeting for collecting Extension research data. The meeting is planned for the following:

TIME _____

DATE _____

LOCATION _____

I look forward to seeing you at that time.

Some agents have asked for more details about the kind of information needed in this study. You will remember that we are requesting examples of both effective and ineffective things you have done in your job as an Extension agent. This research method is called the critical incident technique. It has been used in several professions to analyze jobs in those fields.

I am enclosing a couple of examples of critical incidents from other professions. These are provided just to give you an idea of the kind of information needed. You will be asked to write three effective and three ineffective incidents from your own experiences as an Extension agent. This will probably take about two hours.

I really appreciate your willingness to cooperate in this study. I hope the results will provide some answers to questions about what it takes to be a successful Extension agent.

Sincerely,

Fred J. Peabody

EXAMPLE OF AN EFFECTIVE INCIDENT FOR A SOCIAL WORKER

Attendance by mothers receiving Aid to Dependent Children at a series of "Money Management" meetings had been very poor. A teacher, a home economist and I co-operatively planned the meetings with the mothers, but the mothers would not attend. We asked several mothers why they had not participated, but their answers were evasive.

In June of 1967 we asked a social scientist to help us construct a questionnaire so the women could anonymously indicate why they hadn't attended. We found that many were afraid their ADC payments would be cut if they managed their money better. This was an effective incident because we were able to assure the mothers that funds would not be reduced if they participated. As a result about fifty percent of the eligible mothers attended the series when it was repeated.

EXAMPLE OF AN INEFFECTIVE INCIDENT FOR A HIGH SCHOOL PRINCIPAL

The curriculum in our school was geared for college preparatory students, but less than 50% of our students went on to college. Many of our high school graduates were not able to get jobs because they lacked vocational training.

I worked with the teachers, the superintendent, the board of education, and some concerned citizens to organize curriculum study groups. I hoped to initiate a new vocational program, but the cost for implementing it was over a million dollars. This was an ineffective incident because we were not able to get the public enthused about it and the voters rejected the issue in two elections. We still have only the college preparatory curriculum.

EXAMPLE OF AN EFFECTIVE INCIDENT FOR A COLLEGE PROFESSOR

I was asked to act as a consultant to the board of directors of a small marketing firm. This firm was in serious financial difficulty. I carefully studied the situation and recommended several changes in the organization; these included marketing procedures, staff training and corporate structure. My objective was to save the firm from financial ruin. On July 1, 1964 the board reorganized the firm according to the guidlines I had suggested. This was an effective incident because the firm has now developed a sound financial base.

APPENDIX F

EXAMPLE NUMBER 1 OF CRITICAL INCIDENT CLASSIFICATION

The effective critical incident which follows was reported by an Agricultural Extension Agent. Three judges agreed with the category and subcategory classification of this incident by the researcher.

The circumstances:	One of the farmers with whom I had been working had about 30 acres of muck... and another 30 acres that could be cleared. He was considering planting potatoes on this, however it would have required...a system to pump water out and then later to irrigate the potatoes.
What I did:	I collected information on the kinds and costs of the equipment needed for potatoes (and) how many acres would be necessary to recover costs. Provided information (about) how this enterprise and his present operation would compliment one another.
My objective:	To provide him with economic data regarding the enterprise for him to make a good decision.
Person(s) involved:	Farmer and myself.
Results:	He decided not to enter the potato enterprise and purchased another farm that would compliment his existing operation.

Classification of Example Incident Number 1

Classifier:	Category:	Subcategory:
Researcher	Conducting Programs	Providing Technical Information
Judge 1	Conducting Programs	Providing Technical Information
Judge 2	Conducting Programs	Providing Technical Information
Judge 3	Conducting Programs	Providing Technical Information

EXAMPLE NUMBER 2 OF CRITICAL INCIDENT CLASSIFICATION

The effective critical incident which follows was reported by an Extension Home Economist. Two judges agreed with the category classification of this incident by the researcher, but none agreed with the subcategory classification.

The circumstances:	On surplus food pick-up day, in cooperation with the Department of Social Services, I gave an informal demonstration of the use of surplus commodities in making pizza.
What I did:	Besides making the pizza, there were samples available, recipes, and a sign-up bulletin board for sewing classes. Instead of narrating the demonstration, I simply answered questions.
My objective:	...to meet some low income families, to make known the resource material available here, and to get them to meet as a group.
Person(s) involved:	About 90 people of income low enough to qualify for surplus commodities.
Results:	Not only did they clean out my supply of pizza recipes, they shared with me and each other some ideas they had found successful in making better use of surplus food.....

Classification of Example Incident Number 2

Classifier:	Category:	Subcategory:
Researcher	Teaching and Communicating	Using appropriate method to communicate or teach
Judge 1	Conducting Programs	Providing technical information
Judge 2	Teaching and Communicating	Analyzing communication patterns and/or organizing messages
Judge 3	Teaching and Communicating	Motivating the clientele

EXAMPLE NUMBER 3 OF CRITICAL INCIDENT CLASSIFICATION

The effective critical incident which follows was reported by a Natural Resource Agent. One judge agreed with the category and subcategory classification of this incident by the researcher.

The circumstances:	One way of using idle lands in our county is to use them for cow-calf beef farming operations. Many beef producers already existed in the county, but more emphasis was needed to encourage this kind of an enterprise and to improve management on existing farms.
What I did:	I organized a beef producers association to promote beef farming in our county. A meeting was held to determine if there was enough interest and assistance was provided to form the organization.
My objective:	To utilize idle lands and to improve management of existing beef farms.
Person(s) involved:	Beef Producers
Results:	This was an effective incident as several demonstrations on management were held and there was a 100% increase in marketing of cattle through (the) cooperative feeder sale.

Classification of Example Incident Number 3

Classifier:	Category:	Subcategory:
Researcher	Organizing	Organizing groups to achieve program objectives
Judge 1	Program Planning	Analyzing social, political, or economic situation
Judge 2	Organizing	Organizing groups to achieve program objectives
Judge 3	Teaching and Communicating	Motivating the clientele

EXAMPLE NUMBER 4 OF CRITICAL INCIDENT CLASSIFICATION

The ineffective critical incident which follows was reported by a 4-H - Youth Agent. No judge agreed with either the category or subcategory classification of this incident by the researcher.

The circumstances:	A real need existed for jobs for young teens in my area. I made contact with berry growers and the farm labor service to use teens if I could get enough interested...
What I did:	I talked it over with the Ag Agent and got his blessing to put a notice in the paper of the opportunity. I gave our Extension phone number for youth to call if interested. I did not tell our secretaries much about it other than typing the notice.
My objective:	To find youth interested in working in the berry fields and to provide transportation for them.
Person(s) involved:	Myself, a fine office staff, and a total of 182 youth.
Results:	Our office was swamped with calls for about four days. Our secretaries were not prepared by having a list ready, etc. As a result, it disrupted our office and caused rough feelings until I got it straightened out.

Classification of Example Incident Number 4

Classifier:	Category:	Subcategory:
Researcher	Administering	Managing work consistent with resources
Judge 1	Program Planning	Analyzing social, political, or economic situation
Judge 2	Conducting Programs	Developing insight into and/or exciting people about development potential
Judge 3	Teaching and Communicating	Motivating the clientele

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