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Executive skills in selected agricultural professions

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The University of Arizona, 1987

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EXECUTIVE SKILLS
IN
SELECTED AGRICULTURAL PROFESSIONS

by
Andrea Louise Edmundson

A Thesis Submitted to the Faculty of the
DEPARTMENT OF AGRICULTURAL EDUCATION
In Partial Fulfillment of the Requirements
For the Degree of
MASTER OF SCIENCE
In the Graduate College
THE UNIVERSITY OF ARIZONA

1987

STATEMENT BY THE AUTHOR

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12/7/87

Date

DEDICATION

This study is dedicated to my parents,
Clarence and Delores Edmundson,
who have always supported me with enthusiasm
in whatever I have chosen to do.
This is one of the few opportunities
I have had to tell them how much
they are loved and appreciated.

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ABSTRACT

The purpose of this study was to identify the executive skills employed by County Extension Directors (CEDs), Trade Association Directors (TADs) and Team Leaders/Chiefs-of-party (TL/COPs), to determine which frequently used executive skills were common to all three positions and to identify the major source of executive skill acquisition.

Analysis of the executive skills employed by CEDs and TL/COPs (the TADs were excluded from this analysis for statistical reasons) revealed 34 frequently used executive skills common to both groups. These were in the areas of problem-solving, group dynamics, decision-making, coordinating, communication and organization. Most respondents acquired their executive skills on the job, but 85% held Bachelor's degrees and over half of those were in agricultural disciplines.

Study results indicated an opportunity for Colleges of Agriculture to develop executive skill curricula in addition to technical curricula at the undergraduate level. Internships and experiential classroom activities were recommended to facilitate executive skill development.

CHAPTER ONE

INTRODUCTION

Based upon the volumes of texts, journals and research reports on business and management, organizations are interested in efficiency: That is, they focus upon employing qualified staff to produce goods and services at the lowest cost for the highest profits or greatest benefits. When executive positions are occupied by qualified staff, the functions of planning, organizing and delegating, directing, controlling and staffing of subordinate personnel will more likely be executed effectively. The recruitment of qualified executive staff, and the consequent maximization of staff performance and effectiveness through training, will serve to ensure maximum desirable organizational efficiency. Therefore, a priority concern of organizations should be to engage qualified executive staff. Continued staff effectiveness will be assured by providing for training needs.

An administrator, the "one who directs the activities of other people and assumes responsibility for achieving objectives through those efforts," (Katz, 1966, p. 210), if effective, would be the most influential

element in the success of an organization, business or project. Katz identified the successful administrator as one who has a composite of technical, human and conceptual skills. Technical skill is the ability to effectively use practical knowledge that is based upon scientific principles. The human skills reflect an administrator's ability to interact effectively as part of a group and, as its leader, to initiate a cooperative effort within the group. Finally, the conceptual skill, whether intuitive or learned, allows the administrator to orchestrate human and technical skills to the eventual benefit of employees and the organization. However, Katz believed that good administrators are not born but developed, and that selection, training and promotion of executives can be facilitated by identifying the skills needed at different levels of responsibility.

Roman (1986, p. 439) stated that, "Too often...technically proven professionals are thrown into the managerial arena with little or no applicable experience." It was his opinion that it is essential to educate technically-skilled people for management and he suggested that this be accomplished through staff development; university education, employee self-development and in-service-training sponsored by the organization.

Bingham (as paraphrased by Renfrew, 1977) summarized the key to successful administration:

Administrative ability seems to be a compilation of many talents, not just a single attribute. Administrative ability such as knowledge, judgment, common sense and habits of thinking and of action, characteristic of capable administration, must be learned. These assets may be partially achieved during early childhood and adolescence, but to accelerate further acquisition, individuals must give careful thought to administration as a future, arrange their educative experiences in that direction, and learn how to accept responsibility to to the limit of their abilities. (p. 6)

The responsibility for the development of effective executives is divided three ways. Organizations must be able to identify their own administrative/managerial needs, recruit staff to meet those needs, and be responsible for the staff's continual professional development and maturation. Students and employees must be aware of their career needs and plan their educational programs accordingly. Universities can assist by identifying the needs of organizations and individuals and by providing educative experiences which will fulfill the needs and expectations of both organizations and individuals.

Yet, as Roman (1986) pointed out, university learning opportunities in administrative/managerial skills, (together labelled 'executive skills' for the purposes of this study), rarely go beyond the theoretical course work which is offered almost uniquely in the schools of business, economics and government. Hahn (1985) stated that, "...attitudes on campus and opinions in business often do not coincide. Corporate in-house training programs are often seen as compensation for deficiencies in undergraduate education" (p. 3). Hahn continues; "Because such training programs address affective rather than cognitive objectives, the educational goals (of businesses) are quite different from those of colleges and universities" (p. 3).

The questions arise: Are universities and other institutions providing educative experiences in executive skills which will fulfill organizational and individual needs? Are technically skilled graduates prepared for executive positions?

Training in agricultural sciences produces a variety of technically skilled professionals who are employed with agricultural organizations, businesses and projects. A proportion of individuals from these agricultural professionals will aspire to executive positions. However, possessing technical skills alone is inadequate

for the demands of an executive position. A large proportion of the skills necessary to perform effectively in an executive capacity are not technical, but rather those which, as discussed earlier, are more appropriately defined as executive skills.

An examination of the executive skills utilized by professionals in varying agricultural executive positions will reveal which skills are essential for effective performance in those positions. It will also indicate if professionals acquire the majority of their executive skills in a formal education environment, an informal setting, or through in-service training. The three agricultural executive positions selected for study are County Extension Directors, Trade Association Directors and Team Leaders/Chiefs-of-party for agricultural development projects. These executive positions were chosen for several reasons. Firstly, they all require some level of executive skill use and they represent a melange technical disciplines, both agricultural and non-agricultural. For instance, County Extension Directors often possess skills in a particular agricultural science and/or education. It can be surmised that Trade Association Directors possess skills in a particular agricultural science and/or business. Team Leaders/Chiefs-of-party of agricultural development projects could possess

a variety of skills in agricultural sciences, education, business, or other non-agricultural disciplines. Additionally, these three agricultural executive positions each represented somewhat different structural arrangements; organizations, businesses and projects, each of which may require different executive skills. Finally, although it was probable that all three of the positions had some tie to agriculture and that the chosen positions involved some level of executive skills, no other commonalities between them had been explored. If the executive skill requirements were found to be similar enough, or if a 'core' of skill requirements could be identified, it would be feasible to develop a singular curriculum to accommodate several agricultural professionals in their preparation for executive level positions.

Referring to executive skills, Buford (1980) felt that, "Within Extension, there is no more important--and no more neglected--area of activity" (p. 1). Furthermore, "It follows that staffing the management job must be done right if the Extension organization is to survive and prosper" (p. 58). Roman (1986) expressed the sentiment that university coursework fails to identify and structure the problems encountered in such endeavors as project management. Hahn and Mohrmann (1985) found that:

It was not about specific technical skills that business executives complained, but rather about unsatisfactory intellectual and conceptual abilities and general work competencies...The generic competencies that industry seeks in its managers...are clearly distinguishable from the traditional general learning goals of collegiate education. (p. 4)

Hahn and Mohrman's research results suggested "a significant dichotomy between the goals of colleges and universities and the needs of business" (p. 5). Judging from the sentiments of these authors, it appears that technical professionals hired for or promoted to executive status gain the majority of their professional executive expertise from either direct (on-the-job) experience, in-service-training or through mentor guidance, rather than from pre-professional institutional sources, such as universities.

Need for the Study

Agricultural organizations, businesses and international development projects are not exceptions to the premise that efficiency is highly desirable and attainable by hiring qualified executive staff which can effectively perform both technical skills and executive skills as well. These executive skills include;

planning, organizing and delegating, directing, controlling, staffing and maintaining professionalism. Responsibility for the development of effective executive staff lies with organizations, individuals and educational institutions. However, primary responsibility should rest with universities, since they train not only technical personnel, but have the additional responsibility of interpreting the needs of and bridging the gap between organizational and individual executive skills.

However, concern is expressed that universities and other educational institutions are not providing educative experiences which facilitate the acquisition of executive skills, and that technically skilled individuals are ill-prepared for the executive positions for which they strive or are appointed.

Study, then, need not be focused upon technical skills, except to provide information as to their relative importance to total duties performed in each position and because technical skill enhances the use of executive skills (i.e., an effective planning decision cannot be made for an agricultural development project without the team leader/chief-of-party having some prior knowledge of the discipline involved). Thus, primary study must be focused on executive skills in order that educational institutions can begin to close the gap

between organizational and individual executive skill needs. The questions have arisen; Are these executive skills being neglected in educational institutions? What executive skills are important to the effectiveness of an executive? Which executive skills are important enough to warrant treatment by universities? Furthermore, if no substantial differences exist between the different agricultural executive positions, could a singular "executive skill development program," expressly designed for agricultural professionals, adequately close the gap between organizational and individual needs?

Although it would have been very difficult to examine all agricultural executive positions, it was anticipated that the examination of the three professions selected for this study would provide students, educators and employers with some guidelines to better provide executive skill training and to identify deficiencies which may exist in the preparation of effective agricultural executives.

Statement of the Problem

The purpose of this study was to identify the executive skills employed by County Extension Directors, Trade Association Directors and Team Leaders/Chiefs-of-party, to determine which frequently used executive

skills were common to all three positions and to identify the source from which these professionals acquired the majority of their executive skills.

Research Questions

The answers to the following research questions provided the information necessary to solve the problem stated above.

1. Which executive skills are employed by County Extension Directors, Trade Association Directors, and Team Leaders/Chiefs-of-party in the performance of their jobs and how frequently are they employed?
2. Which of the frequently-employed executive skills are common to all three positions?
3. From what source did County Extension Directors, Trade Association Directors, and Team Leaders/-Chiefs-of-party acquire the majority of their training in executive skills?

Assumptions

The following assumptions were made for the investigation because they are generally accepted in the field and were not tested:

1. It was assumed that the nature of the executive functions were similar in the three organizations selected for study, although;
 - a. fundamental differences exist between public organizations and private businesses, with reference to objectives, values and contributions to society.
 - b. the proportion of executive functions, relative to other functions performed, will vary at different levels of employment within organizations, businesses and projects.
2. It was assumed that in the three professions under investigation, executive functions and technical functions were not separated or delegated to two separate people.
3. It was assumed that the executives who responded to the survey were or had been active in their positions and not symbolic.
4. It was assumed that respondents answered questions honestly, with no attempt to respond as a 'good manager' would.

Delimitations

The delimitations to the study, those factors which determine to what extent the research findings can be inferred beyond the scope of the study, were as follows:

1. Due to restrictions on time and resources, the populations of interest was circumscribed to a more accessible population: Arizona County Extension Directors, Team Leaders/Chiefs-of-Party for international agricultural development projects sponsored by the University of Arizona, and Directors of Trade Associations which were members of the Arizona Agribusiness Council. Thus, no generalizations can be made beyond these three positions, with their prescribed restrictions, to any other agricultural executive position in the United States.
2. Because of the possibility that some Team Leaders/Chiefs-of-party may have been Arizona Trade Association or Extension personnel serving as consultants, careful attention was given to purge mailing lists of duplications before proceeding with the study.

Limitations

The limitations to this study, those factors which influence the internal validity of the study, were as follows:

1. This study was limited by the number of respondents. All attempts were made to insure as high of a response rate as possible.
2. The instrument's validity and reliability were verified before commencement of data collection:
 - a.) The questionnaire was reviewed by a panel of experts to insure the thoroughness of the instrument to include the executive skills relevant to the three agricultural executive positions under study.
 - b.) Field testing contributed to the elimination of factors which may have been threats to the reliability or face validity of the instrument.
3. Because respondents' perceptions of a 'good manager' could have created a reactive arrangement, an objective response mode of the researchers design was used in place of the more subjective response modes commonly found in the literature.

4. The instrument's reliability and validity were verified before beginning data collection, in order to eliminate the hazard that respondents' perceptions of a 'good manager' could have interfered with the reporting of actual executive skills utilized.

Definitions of Terms

The following terms were defined for this study:

1. Staff Development: a conglomerate of learning experiences/activities devised to benefit individuals and organizations with respect to the goals of both. Staff development is divided into four categories;
 - a. Formal Education/Training; university or other formal education intended to prepare someone for employment, often within a technical discipline.
 - b. In-service training; learning experiences available to employees of an organization, usually in the form of workshops or seminars, intended to further both personal career goals and the goals of the organization.

- c. On-the-job training; an informal learning experience, either guided or unstructured, which facilitates development of an employee's occupational skills.
 - d. Mentor guidance; a guided learning experience provided by an accomplished member or co-worker within an organization.
2. Function/task: the appropriate or assigned duties, responsibilities and missions of an individual, office or organization.
 3. Competency: an individual's demonstrated capacity to perform; possession of knowledge, skills and personal characteristics needed to satisfy the special demands of a particular situation.
 4. Duties: obligatory tasks, conduct, service or functions that arise from one's position.
 5. Skill: the ability to use one's knowledge effectively and readily in the execution or performance of one's duties.
 6. Executive: one who holds a position of administrative or managerial responsibility; having the ability or aptitude for planning, organizing and delegating, directing,

controlling, staffing and maintaining professionalism.

7. Executive Skill: for the purposes of this study, there was no attempt to separate "administrative" skills from "managerial" skills, the philosophy being that the term 'executive skill' implies both are essential and complementary in an executive position; the competencies - knowledge, skills and attitudes - necessary for the execution of all activities essential to determining and accomplishing the objectives of an organization; planning, organizing, staffing, directing, controlling, accounting, financing, budgeting, purchasing, records management, and office and space management.
8. Technical Skills: the ability to use one's practical knowledge which is based on scientific principles.
9. Manager/Director: one who assumes the responsibility of management and administration, and has the power to give orders and direct others.
10. County Extension Director: an executive employed by the United States Cooperative

Extension Service at the county level in the State of Arizona.

11. Trade Association Director: an executive employed by a trade organization or association in Arizona interested in promoting an agricultural commodity.
12. Team Leader/Chief-of-Party: the terminology used in the field of international agricultural development for the overseas, on-site manager/director of an agricultural development project, specifically sponsored either currently or in the past by the University of Arizona.

CHAPTER TWO

LITERATURE REVIEW

Introduction

A review of the literature indicated that the competency of executive personnel was considered to be vital to the success of organizations, businesses and projects. It was generally believed that executives must be trained and developed. Executive skills are not inherent. Additionally, proven expertise in a given technical field did not guarantee success in an executive role. However, the consensus was that executive skills can be learned and educative experiences can be provided which will evoke behavioral changes appropriate to the executive role (Buford, 1979; Hodgetts, 1975; Katz, 1966; Roman, 1986; Weber, 1979).

The responsibility for the development of skills in executive professionals lies with the individuals themselves, learning/training institutions which prepare professionals for the job market and organizations which hire professionals and are expected to provide for their continued competence within the organization. However, for any one of these three entities to fulfill its responsibilities in the development of executive profes-

sionals, the executive skill requirements must be identified, especially those which are required for immediate performance on the job, and to determine how, when and where the executive skills are best acquired.

A literature review revealed previous attempts to identify executive skill needs and some of the common weaknesses in executive skill preparation for the three professions under study. With the exception of the Cooperative Extension Service, little attempt has been made to identify the executive skills perceived to be important in agricultural professions. No studies identified executive skills actually employed. Professionals in these positions were frequently hired based upon their technical skills rather than executive skills. Specific training in executive skills, in the form of in-service-training, seminars and workshops, was usually provided after the professionals were hired, indicating a remedial or compensatory rather than preparatory function. Numerous authors in the literature encouraged re-evaluation of skills considered essential by universities versus those actually required in the position in order to better develop pre-service, experiential training for professionals serving in executive roles. Thus, the creation of well-prepared executive staff would contri-

bute to the overall efficiency and success of the organization, business or project.

Skill Identification and Training Needs
of County Extension Directors

Interest in extension management and administration is not recent. Several studies conducted as early as the 1950's and 1960's strove to identify the competencies (skills, knowledge and attitudes) essential for effective job performance. Frequently, the studies recommended how such competencies could or should be acquired.

Early studies designed to identify competencies needed by entry-level extension agents included reference to management and administrative skills (hereafter, jointly referred to as executive skills). This indicated that the Cooperative Extension Service recognized that all positions require a proportion of executive skills, even if they are not explicitly stated in job descriptions. Buford (1979) recognized that:

The mix of work that Extension managers perform varies according to the level of the manager. The director and other members of top management spend relatively large amounts of time in performing managerial [italics added] functions. A first level manager, for example a county chairman, would carry

out a much greater proportion of non-managerial activities. (p. 6)

Itulya (1973) sought to identify professional competencies essential to beginning Agricultural and Home Economics Agents in Arizona. Four general areas were identified from the literature, of which two were directly related to executive skills. Within the general area of "Administration or Organization", he identified 13 essential competencies and under "Facilitating, Program Planning and Evaluation," he identified 15 essential competencies. Itulya recommended, based upon the findings of the study, that "a definite training program should be designed to provide professional competencies identified as essential in this study..." (p. 81).

Gonzales (1982) identified and verified the professional competencies needed by extension agents in Pennsylvania. He labeled 'professional competencies' as "...skills, knowledge and attitudes extension agents should possess to effectively perform roles as extension educators, exclusive of technical subject-matter competence." He categorized those competencies into 8 areas; Administration, Program Planning, Program Execution, Teaching, Communication, Evaluation, Understanding Human Behavior, 4-H Youth and Maintenance of Professionalism.

The majority of these are executive skills which have been identified in traditional management literature (Webber, 1979; Hodgetts, 1975; Buford, 1979). Since he found no differences in competency needs as perceived by either extension agents or administrators, he concluded that it is possible to satisfactorily prepare agents to meet both personal and organizational needs with pre-service training, graduate work and in-service training. He suggested use of competency lists to prepare agents and that Departments of Extension and Agricultural Education should assume leadership in developing these programs.

Studies which refer directly to the competency needs and roles of County Extension Directors are numerous. Nanjundappa (1963) found that County Extension Directors, in an increasing majority of states, were assigned all or most of the 14 administrative-supervisory skills which were identified in his study. These 14 skills ranged from the more mundane, such as managing office space, equipment and supplies, to the more demanding responsibility of planning the overall county extension program. Fawzi (1964) analyzed the administrative role of County Extension Directors in California, based upon the California Extension staff's perceptions of the position. From his interpretation of the data, he recommended that the County Extension Director's role and responsibilities

be clearly defined and recognized by the Cooperative Extension Service by being outlined in job descriptions. Additionally, County Extension Directors should complete graduate training programs in human relations and extension administration and participate in in-service training sessions on Extension Administration in order to enhance their administrative effectiveness. Fawzi also asked respondents where they felt the competencies should be learned. Their responses, which contrasted with the recommendations of numerous researchers, indicated that they felt almost all administrative competencies (planning, execution and evaluation of programs and maintenance of professionalism), excepting time management, should be learned on the job or through in-service training. Fawzi expressed the opinion that it is the extension organization's responsibility to assure that in-service training needs are met.

Sanders (1981) enumerated a detailed list of supervisory and personnel management tasks and studied perceptions of their importance and who should be assigned such tasks in the Texas Agricultural Extension Service. Her break-down of executive skill areas into specific tasks performed revealed more precisely what Cooperative Extension Service staff actually does to carry out the executive functions.

An analysis of the County Extension Director's administrative role in Michigan (Harrison, 1984) ranked eight functions as the most important amongst all administrative processes: "business management and finance," "educational leadership," "organization and policy", "direction and coordination", "planning and programming," "administrative relations," "personnel management" and "supervision." He also found that persons assigned to the County Extension Director position generally possessed technical expertise versus administrative skill and at least 52% of the County Extension Directors spent more time on administrative duties than was actually assigned or recognized by the state administration which wrote the job descriptions. Harrison recommended graduate study programs and in-service training to improve administrative skills, not only for present County Extension Directors who desire such training, but also for women and minorities who may seek such positions.

In Management in Extension, Buford (1979) discussed the general principles of management which have long been espoused by the "management profession" as they are relevant to the Cooperative Extension Service. He states that, "How well managers do their jobs depends largely on whether or not extension objectives are met. It follows,

then, that staffing the management job is extremely important" (p. 55).

Buford maintains that the important factors in selection of staff are those competencies which can be applied to immediate performance on the job. Yet, as positions increase in responsibility and importance, it accordingly becomes increasingly difficult to identify and measure selection criteria for the positions. Quantifying the executive skills of planning, organizing, staffing, controlling and directing is extremely elusive. Intuitively, the Cooperative Extension Service selects personnel on the basis of academic degree and technical expertise, a practice which is not totally unfounded since formal university education in any discipline is associated with success. However, Buford states that "Developing a manager is an educational process analogous to that of developing an agronomist or home economist. Yet in Extension, the need for management training is rarely recognized" (p. 54). But to establish and maintain a staff development program, it is necessary to determine training needs, motivate staff to increase their capabilities, choose appropriate training methods and evaluate the results of training.

Black's purpose in his study (1969) was two-fold: Firstly, to examine a particular administrative behavior

in County Extension Directors which he terms "professional leadership behavior" - a role which stresses a County Extension Director's "obligation to improve the quality of staff performance" (pg. 2) and secondly to identify such professional leadership behaviors to better select County Extension Directors and provide for their training needs. Black, recognizing that County Extension Directors are formal leaders and executives in a professional organization, found that an administrator's effective performance of professional leadership behavior role contributed directly to both the staff's individual needs as professionals and to the accomplishment of organizational goals. His findings led him to state that research in County Extension Director's preparation, including academic education, job experience and in-service training, "could provide clues for the development of more effective organizational leadership" (p. 124) and that, "A special curriculum for administrators through training conferences or short academic sessions should be considered to enhance professional leadership behavior and organizational effectiveness" (p. 122).

Boyle (1983) presented similar conclusions. In his paper entitled, "Extension Faculty Development Through Graduate Level Education," he saw a need to develop new patterns of behavior in the potential administrator. He

argues that management and administration concepts such as decision-making, leadership, communications, authority and group structure, etc., can be learned through graduate education. While some would argue that such skills can only be developed through life experiences, he feels that graduate education would allow students to learn concepts, skills and values which would provide a framework which can be used in both old and new job situations. The challenge, he declares, is to develop such a curriculum.

Finally, the importance of such executive skills and leadership abilities have been recognized at the national level of the Cooperative Extension Service. In 1985, a study which employed the Delphi technique was conducted to determine the foremost concerns of Cooperative Extension Service administrators. The primary concerns of Cooperative Extension administrators evolved around staffing strategies, leadership and leadership development, training and skills needed to perform executive roles in Extension and the effectiveness of Extension managers.

In summary, numerous researchers have identified executive skills required for effective performance as both extension agents and as County Extension Directors. These skills, although modified to fit the needs of the

Cooperative Extension Service, are similar to the generic skills identified in management literature.

It is generally believed by researchers that extension organizations function best with quality staff who possess executive skills which permit them to effectively pursue both personal and organizational goals. Additionally, executive competencies and professional leadership behavior can be learned. The nature of executive skills, however, makes them difficult to learn 'affectively' versus 'cognitively.' The challenge is to develop experiential, competency-based graduate work and in-service training. The responsibility lies with the organization (the Cooperative Extension Service), the Departments of Agricultural Extension and Education (universities), and County Extension Directors (individuals).

Skill Identification and Training Needs of Team Leaders/Chiefs-of-Party

The practice of identifying essential competencies for Team Leaders/Chiefs-of-party is uncommon. Traditionally, such individuals are chosen for their technical expertise rather than executive competency, perhaps more frequently than occurs in selection of County Extension Directors. Therefore, training programs for Team

Leaders/Chiefs-of-party tend to be compensatory versus preparatory. However, the need for executive preparation is recognized and more organizations, programs and projects are addressing this need.

Carter (1983) discussed the inadequacies present in the performance of those in agricultural/extension development work. He defined rural development workers (RDW) as, "professionals who function with the intent of enabling those with whom they work to achieve their own goals or aspirations more adequately" (p. 1). The purpose of his paper was to discuss the nature of rural development workers' jobs, the functions required in those jobs, the nature of the usual preparation of rural development workers, how the competencies required might be conceptualized and the most pressing needs with respect to the competency of rural development workers.

Carter felt that RDWs need to function more as educators and problem-solvers than as technicians. Responding to technical requests was relatively easy, compared to developing and maintaining public relations. Yet, little attempt has been made to characterize such functions. Additionally, there is no guidance as to how to prepare for this role other than possibly through on-the-job training or mentor guidance. He also points out that the functions envisioned by the organization are not

always synonymous with those performed by RDWs, indicating a dichotomy between perceived and actual training needs.

Pre-service training of RDWs characteristically consists of developing technical area skills and variable research skills, with little or no "role model" exposure or experiential learning. In-service training traditionally promotes better transfer of technical knowledge.

Carter sees the challenge, beyond identifying the competency requirements, "to organize and arrange concepts into the kinds of activities that will enable the extension worker to develop them and at the same time, perceive their possible connection to functioning as an extension educator" (p. 19). He identifies five competency areas which, if mastered, will provide "...a framework for diagnosing the problematic situation, in formulating modes of response and in responding; Coping With the Work Environment, Systematic Inquiry, Programming and Planning, Human Behavior, and Focusing on the Professional" (p. 19). From Carter's standpoint, professionalism is a competency area which allows the development worker to progress from an 'individual' status (student) to that of a productive practitioner within an organization (employee). It requires the ability to

relate to the organization and its components, to colleagues and clientele.

He concludes that although there are two components to the job of the rural development worker - technical and behavioral - rural development workers need to develop a method of systematic inquiry and to go beyond being technological information-givers to "the development of intentional, premeditated efforts to enable others to learn" (p. 32).

Another study, Kang (1984), identified the need for "group skills," which promote involvement and interaction amongst agricultural development and extension agencies. He felt that in order to develop a broader vision of objectives, processes and tasks, it is wise to encourage knowledge of other agencies, mutual understanding among personnel across agricultural development agencies and interagency coordination. These would require long-term planning and effort.

As mentioned, little literature was found in which competencies in project management were identified. However, much material is available on training for management of agricultural development projects. There are several approaches to preparation and training for agricultural development project management.

In the Oxfam Field Directors Handbook (1981), the editors point out that "despite being trained in development or technical matters, many field workers lack comparative experience..." (p. 110). The chapter on 'Field Methodologies' puts forth a smattering of guidelines on certain aspects of project management. Yet, the underlying assumption is that whoever has been assigned the position of field director already possesses the talent to pursue the management of the project. This assumption of pre-existing executive expertise is typical of many agricultural development agencies, projects and programs.

Another approach to the management of agricultural development projects is exemplified by Development Associates' 1982 'project orientation'. Intended to serve as a guideline for overseas technical assistance staff, primarily from universities, the orientation exposes the technical staff to cultural, social, political and economic conditions in the project country, anticipates problems, and verses staff on the United States Agency for International Development (USAID) methods of operation. In the orientation materials, Development Associates suggests that the technical team participate in Iowa State University's "Team Building for Development" workshop to familiarize itself with group

dynamics. The sole reference to actual management of the project is under the section for Team Leader preparation. In addition to the aforementioned five-day orientation session, Development Associates recognizes that the Team Leader "needs training in the administration and management of development projects and people, if background is insufficient" (p. 11). An additional five and a half days are allowed for special training in 'institution building', technical transfer, contracts administration, lines of authority, host country responsibilities, language and management.

Smith (1984) stated that "Management technologies are vital to the development process, but are often overlooked or treated as exogenous to the development process. Nowhere has this management gap been more evident than in the planning and implementation of agricultural and rural development policies, programs and projects" (p. i). His response to this need was to encourage attendance at an Oregon State University workshop, developed in conjunction with the International Development Management Center in Maryland (IDMC) and the International Program Development Office in Washington, D.C. (IPDO) to improve the management of agricultural and rural development projects.

Thus far, all of these approaches to management training for development have been non-participatory and non-needs-based. They tend to primarily serve as orientation for technical staff to the project purposes and environment versus developing project management talent.

New training programs are responding to these deficiencies. In 1986 and 1987, the Tennessee Valley Authority (TVA) presented its "Agricultural Development Management Course." It was designed to "complement the academic studies of foreign senior and graduate students who have not had practical management experience, but who will most likely be placed in an administrative position within a few years of returning home" (cover letter, 1986). The course focuses on management of agricultural research, technology transfer and special agricultural resource development projects. The TVA espouses using practicums and field work in this ten-day course to encourage interagency cooperation, farmer involvement and multi-disciplinary team approach to project design. This is an example of an attempt to incorporate real experiences into management training.

A new approach to management training for agricultural development projects is discussed by Hondale and Hannah (1982). They surmise that one of the weaknesses

of traditional training is that it is usually based on 'experts' ideas of what competencies make effective managers. It emphasizes teaching the skills that the trainer knows, rather than determining management needs or building upon knowledge already possessed by trainees. Also, trainees are left to infer their knowledge to their particular situations. Their actual performance and skills are not examined. Training for management traditionally is treated as a discrete event, involving only one management level and is not geared to any particular organization. This imposition of a 'standard skill package' assumes that these skills are easily transferable across projects, organizations, sections and cultures. To remedy these short-comings, Hondale and Hannah promote "Action-oriented Training," (more often referred to as Action Training). Action Training's origins were founded upon USAID's experiences since 1978 with organization and administration of integrated rural development on 23 projects in 18 countries.

Action Training is executed, as often as possible, 'on location', within the organization, involving all levels of management, and dealing with real problems and situations unique to that particular organization, group or project. There is a blend of activities utilizing work-groups designed to emphasize decisions, committ-

ments, and examination of incentives or discentives to behavioral change amongst the participants. It should be noted that such an organization or project-specific approach diminishes the need for working from generic competency lists. All activities focus upon real problems and situations within a particular organization.

A major prerequisite to using this training approach is that the trainer must study the organization's goals, issues and priorities to put them into a training framework. It appears that this training strategy could eliminate several or all weaknesses of traditional training approaches. It also eliminates the frustration felt by trainees who return to their work environment, overflowing with new ideas, to confront uncaring colleagues.

Schmidt and Kettering (1984) supported the emerging concept of Action Training "because without effective management, projects will certainly fail; with sound management, they have a chance to succeed" (p. i). They recommended that Action Training is most effective when used with a team approach, especially when it is necessary to make the transition from project planning to project implementation, which often involves two separate teams. Such 'transitional' workshops usually have a duration of as few as three days.

Kettering (1985), in work for the Development Program Management Center (DPMC), grew stronger in his support of the concept of Action Training. DPMC states its objective as being to "expand the appropriate use of performance based and results-oriented management concepts, processes and techniques in the implementation and management of development policies, programs and projects" (p. 2). Kettering explains that the Action Trainer is a 'facilitator' who employs the experiential learning cycle. The approach is purported to lead to better defined purposes, processes, roles and responsibilities in a context unique to that particular organization, project, country or culture, etc. In actuality, it is the 'systems' approach to management training. Kettering finds Action Training to be "useful in any situation where multiple actors must reach and act on common understandings of purposes, context, assignment, roles, interdependence and time frames" (p. 3). To pursue its goals, DPMC provides project training consultation and assistance and retains a document center.

A World Bank paper (1985) referring to management training for public administration in developing countries, presented comments which are applicable to agricultural development work. "The impact of project-related training by donor agencies has been less than

optimal because in many cases a short-term view of training was adopted and adequate care was not taken to plan and monitor this activity" (p. 2). The paper recommends that organizations and projects develop formal training policies. It specifically refers to the Action Training strategy in rural development as promising, but as yet untested as to its potential effectiveness and impact.

In summary, literature on the identification of skills essential to the management of agricultural development projects is rare, although there are numerous citations on the lack of management skills and their value to the success of such projects. A single study was found that discussed the competencies needed by Rural Development Workers. Another study identified the need for "group skills" to promote the success of agricultural development projects. Most studies adhere to traditional management functions and apply them to agricultural development project management. Selection of Team Leaders/Chiefs-of-party is rarely based upon proven management expertise. However, a new training philosophy, "Action Training," could eliminate the need for skill identification, since it is specific to each organization's unique environment, staff resources and set of circumstances. The Action Training approach is

untested as to its effectiveness and most training for Team Leaders/Chiefs-of-party continues to consist of short workshops, seminars and orientation sessions.

Skill Identification and Training Needs
for Trade Association Directors

An extensive search for literature on skills identification and training for trade association directors produced few studies, especially with regards to agricultural trade associations. A single study was found which referred to the management tasks performed in agribusinesses, one study on management training programs for corporations and two references were found which dealt with university training in association management.

Burnett and McCracken (1983) examined the tasks and functions performed in four different occupations in 12 agricultural businesses. They then attempted to characterize each of these tasks as either skilled, technical, or managerial and for each occupation, they identified which proportion of the tasks were skilled, technical or managerial. The results showed that in management-level positions, 60% of the tasks performed were managerial in nature, 17% technical and 13% skilled. Technical-level positions required at least 33% managerial tasks and at

the skilled level, only 6% of the tasks performed would be considered as managerial. These findings coincide with the observations of Buford (1979), Hodgetts (1975) and Webber (1979) that all positions require executive skills, but that the proportion of executive skills varies according to the level of importance and responsibility of the position.

Burnett and McCracken also felt that training programs in agricultural industries are developed without systematic effort to identify and classify the tasks required and that educational preparation for agribusinesses needs to be based upon such lists. Thus, they encouraged more coordination between such businesses and educational institutions in determining and meeting these needs.

The importance of Burnett and McCracken's study lies in the fact that common characteristics exist between the position of a trade association director and that of a manager of an agribusiness: both require adequate executive skills for the successful running of an agricultural business. Burnett and McCracken's recommendations could pertain to management positions in agricultural trade associations; It is necessary to assess present training programs regularly for their relevance and to use task analyses for curriculum development.

Hahn and Mohrmann (1985) discussed the needs of corporate managers, both from the managers' point of view and from the corporations' view. Their study, based upon the in-service programs provided by organizations and those chosen by participants, indicated that management competencies were in high demand. However, the priority goals of management training programs did not closely coincide with goals pursued by institutions of higher education, thus creating a 'gap' in the preparation of corporate executives. Management training programs focused upon affective skills versus the cognitive management skills 'taught' by educational institutions.

There exists in the United States at the moment at least two university-level programs for trade association management. One is the Master of Business Administration program at DePaul University located in Chicago, Illinois, which offers a 'Concentration in Association Management'. Quoted from their brochure (1987); "Individuals come to association work with a wide variety of backgrounds, but once they are an 'association executive,' their needs are virtually the same as their counterparts in other business arenas. They need to know about finance, decision-making, interpersonal relationships, law, negotiations and organizational structure."

The Master's Degree of Association Management at George Washington University in Washington, D.C. strives to "prepare students to take or advance careers in non-profit, trade, public interest, membership and other special interest associations..." (1987).

Both these programs seem to offer very similar, generic skills packages which were designed to prepare executives for positions in a multitude of associations. Neither is specific for agricultural associations and neither offers opportunities for experiential learning nor incorporates the 'human skills' often cited as essential in any organization which requires team effort.

Summary

The review of the literature revealed the strengths and weaknesses in executive training for the three agricultural positions under study.

The perceived critical executive skill requirements for Cooperative Extension Directors have been regularly identified in the literature. Despite repeated recommendations to the contrary, Extension Directors are still frequently chosen for their technical versus executive expertise, the former being more easily quantified. Training in executive skills, which according to the literature occurred most frequently during in-service

training, was characteristically theoretical and extraneous to an individual's position within the organization. Trainees lacked experiential learning opportunities and role models. Competencies acquired tended to be cognitive instead of affective. The challenge then, is to identify executive skills actually employed in the Cooperative Extension Director position, not just those perceived as important, and to develop a timely curriculum or training program to prepare employees for immediate performance on the job.

The executive skill needs of Team Leaders/Chiefs-of-party are less reliably identified in the literature and tend to emulate generic skills identified in management literature. Several authors cited a need for management versus technical training, yet hiring continues to be based upon technical skills. An individual's executive talent is either assumed or developed ex post facto through in-service training. Thus, the greatest need in executive skill training for Team Leaders/Chiefs-of-party is to identify executive skill needs relevant to the position and to develop a more competency-based training program. A new approach to training, "Action Training" could compensate for current weaknesses in training programs. Action Training is organization and/or project specific, builds upon team skills, is totally affective

in the orientation of training techniques and it strives for immediate resolutions, problem solving and decision-making.

Amongst the three groups under study, the least is known about the executive skill needs of Trade Association Directors. Managerial skill needs have been identified for some agribusiness positions. Corporations have noted that their management needs were not being met by traditional learning priorities of educational institutions. New curriculums in Trade Association Management are based upon generic management literature. Thus, there is an urgent need in this profession to identify executive skills, to determine how frequently they are used and which skills can be acquired pre-service to facilitate immediate integration into an executive employment position.

Therefore, in order to keep abreast of the executive skill needs of individuals and organizations, educational institutions need to identify the executive skills used in agricultural executive positions. Skills which are used frequently would be those best suited for pre-service executive preparation, as they would prepare employees for immediate performance on the job. If a large proportion of these identified skills are common to a range of executive agricultural positions, then a

common curriculum would fulfill the needs of several individuals and organizations. The challenge is to develop curriculums which are affective versus cognitive in nature, involve experiential learning processes, provide exposure to role models and develop behavior modes which facilitate decision-making and the execution of all managerial and administrative functions.

CHAPTER THREE

METHODOLOGY

This chapter addresses the procedures and methods used to identify the executive skills employed in selected agricultural professions, the frequently used executive skills which are common to those professions and to determine how the majority of these skills were acquired by the respondents. Survey research methods were employed to generate data required for the analysis of the three positions under study.

The procedures are presented in four sub-sections: (a) population and sample; (b) instrumentation; (c) data collection; and (d) data analysis.

Population and Sample

The target population of this study was all County Extension Directors of the United States Cooperative Extension Service, Directors of Agricultural Trade Associations in the United States and Team Leaders/-Chiefs-of-party for agricultural development projects sponsored by the United States in developing countries. Due to restrictions of time and expense, a more accessible population was delineated to three agricultural

executive positions within the State of Arizona. The survey instrument was sent to the 15 County Extension Directors of the Cooperative Extension Service of the State of Arizona, 18 Trade Association Directors who were members of the Arizona Agribusiness Council, and the 15 Team Leaders/Chiefs-of-party who have served or were currently serving on overseas agricultural development projects sponsored by the University of Arizona at the time this study was conducted.

An attempt was made to secure responses from all 48 subjects, thus a 100% response rate would have reflected a census of the accessible population. However, due to a less than 100% response rate, the data were analyzed statistically as if the respondents were a sampling of the accessible population. This procedure was recommended by a consultant at the University of Arizona's Center for Computing and Information Technology.

Instrumentation

The survey instrument was designed to incorporate executive skills which were most likely to be applicable to the three professions under study. A review of the literature revealed numerous questionnaires designed to identify managerial and administrative competencies (executive skills) for agricultural extension agents and

County Extension Directors (Fawzi, 1964; Gonzales, 1982; Harrison, 1984; Itulya, 1973; Nanjundappa, 1963; Sanders, 1981; VanMeter, 1969). No studies or survey instruments were found in a search of the literature which were designed to identify the executive skill needs of Team Leaders/Chiefs-of-party. A single study was found which attempted to identify competencies needed by rural development workers (Carter, 1983). However, the survey instrument was not presented by the author. Furthermore, no studies or survey instruments were found in the literature which are designed to identify executive skills needed by Directors of agricultural trade associations. One study was located which identified managerial, technical and skilled tasks performed by selected agribusiness employees and what proportion of such tasks were included in each level of those positions. However, the survey instrument was not included with the report of study findings. A study by VanShelhamer and Bishop (1985) on "Personal Characteristics Which Make People More Employable In Agribusiness" contained an instrument which provided some insight on personal development and maintaining professionalism in agribusiness.

Thus, it was the author's decision to compile and edit the available instruments on identifying competencies for extension agents and County Directors to develop

the questionnaire for this study. Obvious duplications or redundancies were eliminated. Questions were kept generic in nature so as to be as pertinent as possible to all three positions under study. Upon reviewing the studies on competency needs of rural development workers and agribusiness employees, the author interpreted the competency lists to attempt to derive the questions which were most probably asked in the original survey instruments. It was found that such competencies were similar not only to those identified in the studies on agricultural extension agents and Directors of County Extension offices, but also to those identified in general management literature (Buford, 1979; Hodgetts, 1975; Weber, 1979). The resulting competency list of over 150 executive skills was edited to 120 and again to 93 before being presented to panel of experts in positions similar to those under study for detection of unsuitable, unclear or redundant questions. The final version of the executive competency list, edited several times, consisted of 93 executive skills considered by the panel to be inclusive of the majority of executive skills pertinent to the professions under study.

For clarity and legibility, the 93 executive skill items included in the questionnaire were grouped into six general executive competency areas representative of

those identified in the general management literature: Planning, Organizing and Delegating, Directing, Controlling, Staffing and Personal Development/Maintaining Professionalism. Operational definitions of these general competencies were included in the instrument to guide participants in its completion. A second section of the instrument was included, "General Information," to obtain biographic and demographic data and to answer the third research question.

It must be noted that the author employed a response mode in the survey instrument which is uncommon in the literature reviewed for this study, but mentioned in educational research texts. The majority of the survey instruments in the literature dealt with respondents' perceptions of the importance of various competencies. For example, a response scale labeled 'unimportant', 'somewhat important', 'important', and 'very important,' or 'critical' versus 'not critical,' were common in the literature. Due to the nature of this study, it was anticipated that respondents would respond to items as they perceived "good managers" would. The intention of the author was to determine which competencies were actually employed in the three positions under study, not those which respondents perceived a "good manager" would or should employ. In an attempt to overcome this

response bias, participants were asked only to indicate for each executive skill presented in the questionnaire whether they used a particular skill or not, and if so, how frequently. The responses provided were; 'never/not applicable', 'yearly', 'monthly', or 'daily/weekly'. It was the author's intention that the revised, unbiased response mode permitted a more accurate portrayal of executive skills which were actually employed in the selected professions versus those with which respondents were aware or familiar. If educators genuinely desire to meet the educational needs of future agricultural executives, such an unbiased list should provide the best guideline as to what students actually need to know and be able to perform immediately upon entry into their positions.

The question arose as to whether it was necessary or desirable to relate frequency of skill use to importance. It was the author's contention that an executive skill identified as being employed significantly on a daily basis is important to that individual's functioning in his/her position on a daily basis and is one which should be included in training. Buford (1979) has stated that the skills most desirable in employees are those which "are required for immediate performance on the job" (p. 47). Thus, while one may argue, for instance, that

'evaluating staff performance' is an important skill with respect to its influence on the future of other staff members and the organization, it is not as immediate to the daily functioning of a manager as 'coordinating staff activities.' Carter (1983) noted, also, that there is a high correlation between the frequency of skill use and its perceived importance. His study identified time spent on functional duty areas used by rural development workers and their perceptions of importance of those skills. The skills ranked as highest in importance as perceived by the rural development workers were those used most frequently; often, on a daily to weekly basis. How much time they spent performing certain functions, as judged by a trained observer, was approximately equal to the agents perception of the importance of that function.

The final draft of the instrument was reviewed for face and content validity by individuals who have served in positions similar to those under study, but who were not included in the survey population. They were instructed to identify inappropriate or redundant questions, typing errors, etc. Their comments were noted and suggested modifications were made.

On the advice of experienced printers and graphic artists, a professional-appearing survey instrument was designed in an attempt to secure as high a response rate

as possible. A packet consisting of the questionnaire, cover letter and a stamped, self-addressed return envelope were mailed to participants.

Data Collection

Forty-eight survey packets were sent to members of the accessible population. Each packet contained an explanatory cover letter and survey instrument (see Appendices A and B) and a postage-paid return envelope. Packets were mailed June 19, 1987. Six weeks were allowed for responses due to the large number of overseas mailings. The author attempted to expedite all international mail through appropriate university departments whenever possible to avoid the sporadic quality of mail service in developing countries.

All survey packets were completely anonymous. Therefore, a follow-up survey packet was sent to all members of the accessible population at the end of six weeks, except those who could be identified by unique postmarks. This second mailing, containing a new cover letter (Appendix C), took place August 4, 1987. All efforts to recoup survey instruments ceased 6 weeks after the follow-up procedure, on September 15, 1987. A sampling of non-respondents was interviewed by telephone to determine if their responses were different from the

those of the respondents who completed the mailed questionnaire.

Data Analysis

The data were coded, then analyzed using a computerized Statistical Package for the Social Sciences (SPSS-X, 1986). The statistical procedures performed were frequencies, measures of central tendency, cross-tabulation, chi-square and one-way analysis of variance (ANOVA), depending on the nature of the research questions and other information requested.

CHAPTER FOUR

PRESENTATION AND INTERPRETATION OF DATA

The purpose of this study was to identify the executive skills employed in the three agricultural professions under study, to determine which frequently used skills were common to all three position and to identify the source from which these professionals acquired the majority of their executive skills; through formal education, in-service training, on the job, or through mentor guidance. Demographic and general information was also solicited. The purpose of this chapter is to present and interpret the data collected in an attempt to answer the research questions and to describe some of the characteristics of the accessible populations under study.

The beginning of this chapter is dedicated to logistical matters; the recoding of data, reporting of response rate and explaining the usefulness of the chi-square statistic in analyzing executive skill use. The combining of categories of the response mode and the reasons for the eventual elimination of the Trade Association Director group from the analysis of executive skill use is explained. The remaining part of the

chapter is devoted to the presentation and interpretation of the data.

Recoding of the Response Mode

The response mode employed to identify executive skills used and the frequency of their use was recoded, as shown in Table 1, to facilitate computer analysis and subsequent interpretation of study results.

TABLE 1. Recoded Response Mode From Questionnaire.

<u>Frequency of Skill Use</u>	<u>Original Code</u>	<u>Recoded</u>
Never/Not Applicable	0	0
Daily/Weekly	1	3
Monthly	2	2
Yearly	3	1

Although the original code served its purpose in being a numerical representation for the frequencies of skill use, recoding of responses was suggested merely to facilitate the reader's interpretation of the data. The logic to the recoding was that since zero represented a never used skill, it was logical that the skill used most frequently, on a daily/weekly basis in this case, should be assigned the highest value of three. The recoded

response mode more clearly represented the increasing frequency of skill use.

Response Rate

The questionnaire was sent to the 48 members of the accessible population; 18 Trade Association Directors, 15 Cooperative Extension Directors and 15 Team Leaders/-Chiefs-of-party. However, one member of the Trade Association population declared his position to be defunct and eliminated himself from the study. Two Team Leaders/Chiefs-of-party wrote to state that they did not feel qualified to participate in the study. Another Team Leader/Chief-of-party could not be located after repeated efforts. Thus, the original accessible population of 48 was reduced to 44. These response rates are presented in Table 2 below. For the remainder of the tables in the study, the Trade Association Director group will be referred to as TAD. The County Extension Director group and the Team Leader/Chief-of-party group will be referred to as CED and TL/COP, respectively. A sampling of non-respondents (5 of 8) interviewed by telephone established that no differences existed between respondents and non-respondents who were Directors of active trade associations. Two of the five interviewees indicated, however, that the reason they did not respond initially

was that their positions were honorary only and therefore they did not find the majority of the survey questions to be pertinent to their roles.

TABLE 2. Response Rates.

Group	N of Original Accessible Population	N of Reduced Accessible Population	Total Responses	% Response Rate By Group
TAD	18	17	8	47
CED	15	15	15	100
TL/COP	15	12	11	92

Responses were obtained from 8 of 17 Trade Association Directors (47%), 15 of 15 County Extension Directors (100%) and 11 of 12 Team Leaders/Chiefs-of-party (92%). This resulted in an overall response rate of 34 out of 44 (77%). In later analysis of the data, the Trade Association Directors were eliminated for reasons which will be explained under "Elimination of the Trade Association Director Group." When the Trade Association Director group was eliminated, the response rate was considered to be 96%; 26 out of 27 members of the combined groups of County Extension Directors and Team Leaders/Chiefs-of-party.

The Chi-Square Statistic

Using the Statistical Package for the Social Sciences (SPSS-X, 1986), crosstabulations were performed and chi-square statistics calculated for each of the 93 executive skills by group in order to identify the frequency of executive skill use and to detect differences in responses between groups. The chi-square statistic was chosen for analysis of the executive skills used by group because of the qualitative nature of the data. Parametric procedures were inadvisable due to the ordinal (versus interval or ratio) nature of the data. The distribution-free chi-square statistic was desirable because it was an inferential statistic, not merely descriptive. Thus, differences between responses of groups could be detected. One limitation to the usefulness of the chi-square statistic is that a significant chi-square value, at a pre-determined alpha-level of .05, merely indicates that differences do exist between the responses of the groups, but does not describe how the groups differ from each other, especially when there are greater than two groups.

However, because of a small number of cases (N=34), the first set of computed chi-square tables contained a large proportion of expected frequencies with values of less than 5. Statistician Dinham (1976) stated that:

When degrees of freedom is >1 , the chi-square may only be used if fewer than 20% of the cells have expected frequencies of <5 and no cell has an expected frequency of <1.00 . If these requirements are not met by the data in their original form, categories of the dependent variable should be combined until the data meet the requirements. (p. 133)

Ignoring these recommended criteria could result in a larger Type I error than indicated by the chi-square value. The data for this study, in their original form, met none of the minimum recommended criteria. With $df=6$, cells with expected frequencies of <5 occurred in 70-90% of the cells and an unacceptable proportion of those had values of <1.00 . Combining groups or responses would result in some loss of information, but the new chi-square calculations would be free from the error associated with an overestimated chi-square value. With this in mind, the procedure of combining groups was explored by the researcher with a statistician.

Combining Response Categories

The first step in the analysis of the 93 skills by group was to conduct chi-square analyses by groups across the four possible responses. For 97% of the 93 skills,

the chi-square tables contained an average of 85% of the cells with expected frequencies of less than five, with several as low as .188. Thus, although 22 of the 93 chi-square values were significant in the first analysis, (df=6, alpha=.05), the significance had to be discounted because the data did not meet the minimum criteria. Significance was most likely due to a small number of cases which were causing small expected frequencies and significantly high chi-square values.

In an attempt to remedy the small number of cases problem, a further step was performed at the suggestion of a statistician at the Center for Computing and Information Technology at the University of Arizona. The original data for the 34 respondents was replicated by computer to create 68 cases, in effect doubling the number of cases to determine if true significance was present or if significant chi-square values had been obtained in the first analysis because of the suspected small number of cases. Although the newly calculated chi-squares values (N=68) verified the significance of the 22 original chi-square calculations (N=34), the results still could not be trusted because the problem of small expected frequencies remained. The largest contributor to this persistent problem was the Trade Association Director group; the expected cellular

frequencies would always be too low as a result of the small number of cases (n=8) in this group.

In order to increase the expected frequencies in the cells, either groups, response categories or both had to be combined. Since the differences between the three groups were of interest to the author, there was no logic to combining the Trade Association Director group with either of the other two. Thus, the decision was made to combine categories of responses. Since the author was interested primarily in the executive skills used most frequently, two new response categories were created by grouping the original categories as follows;

INFREQUENTLY = Never/Not Applicable + Yearly

FREQUENTLY = Monthly + Daily/Weekly

Elimination of the Trade Association Director Group

Calculation of new chi-square values using combined response groups (2 x 3 chi-square, 2 df) did not succeed in eliminating the small expected frequency problem. The problem was exacerbated by the poor quality of responses within the Trade Association Directors group, such as a preponderance of unanswered questions, incorrectly answered questions and multiple responses. These aberrations often resulted in fewer than eight responses

available for analysis. Rather than sacrifice valuable information on the Cooperative Extension Director group or the Team Leader/Chief-of-party group for the sake of the Trade Association Director group by employing marginally valuable statistics, a decision was made to completely eliminate the Trade Association Directors from the chi-square analysis of the 93 executive skills by group. Their responses, however, were included in demographic and general information data.

The decision to eliminate the Trade Association Directors group had several beneficial consequences. Firstly, a 2 x 2 chi-square analysis, using the Yate's correction for continuity, would meet all the recommended criteria for a valid chi-square analysis. Secondly, since only two groups would be involved in analysis, any significant differences would obviously be between those two groups and the differences would not be complicated by the presence of a third group. Thus, a 2 x 2 chi-square would provide more information than was previously available.

Statistical and Analytical Procedures

The statistical procedures for identifying executive skills and the frequency of their use are discussed below.

The chi-square statistic was calculated for all 93 executive skills by group (two groups and two response categories). The underlying hypothesis tested by each chi-square statistic was that there was no difference between the frequencies of responses of the two groups. The critical chi-square value was 3.841 (df=1, alpha=.05). Since the author was interested in all executive skills common to the two groups, any executive skill with a chi-square value > 3.841 was eliminated from the list of 93 executive skills. The seven statistically significant skills which were isolated from the original 93 are shown in Table 3.

It appeared that seven skills were significantly different due to innate characteristics of the two positions. For example, County Extension Directors were much more involved with mass media and volunteers than were Team Leaders/Chiefs-of-party. Team Leaders/Chiefs-of-party more frequently established objectives and priorities for programs/projects than did Cooperative Extension Directors, which could be attributed to the nature of their position; The nature of their job requires that they move frequently from one program/-project to another, usually on a contractual basis, and would be expected to employ such skills more frequently.

For the remaining 86 executive skills, the chi-square values indicated no significant differences between the groups. Therefore, subsequent analytical procedures utilized for detection of frequently used skills treated the County Extension Directors and the Team Leaders/Chiefs-of-party as one group (N=26).

TABLE 3. Executive Skills With Statistically Significant Differences In Frequency of Use Between County Extension Directors and Team Leaders/Chiefs-of-party.

Skill Category and Individual Skill	Chi-Square Value	CED		TL/COP		Percent Use By Both Groups	
		Infreq.	Freq.	Infreq.	Freq.	Infreq.	Freq.
PLANNING							
8. Establish objectives of programs/projects.	*5.673	11	4	2	9	50.0	50.0
9. Establish priorities for programs/projects.	*6.422	10	5	1	10	42.3	57.7
DIRECTING							
14. Establish channels of communication with local mass media.	*6.027	1	14	6	4	28.0	72.0
16. Prepare news releases.	*6.084	2	13	7	3	36.0	64.0
17. Prepare radio, television or video programs.	*13.004	2	11	10	0	52.2	47.8
18. Use audiovisual materials to facilitate information dissemination.	*4.030	1	14	5	5	24.0	76.0
STAFFING							
8. Recruit and train volunteers.	*5.584	7	8	10	0	68.0	32.0

* Significant at the .05 level

Since frequently and infrequently used skills could not be differentiated statistically, a cut-off point was set at 60%. Of the remaining 86 skills, those which were used infrequently by 60% or more of the respondents were also eliminated from the list. The 31 skills eliminated by this procedure are presented in Table 4. The majority of the infrequently used skills were those in the categories of Planning, Staffing and Personal Development/Maintaining Professionalism.

Another 21 skills were eliminated from the remaining 55 when they could not be identified as being used either frequently or infrequently by the respondents according to the criteria outlined above. These indeterminately used skills are presented in Table 5. Again, many are in the categories of Planning and Staffing.

Skills indicated as being used frequently by greater than 60% of the respondents were retained for a final list of executive skills used frequently by both County Extension Directors and Team Leaders/Chiefs-of-party. The final list, presented in Table 6, contains 34 executive skills which were common to both groups and were used frequently by at least 60% of the respondents. The majority of those skills were in the categories of Organizing and Delegating, Directing and Controlling.

TABLE 4. Executive Skills Used Infrequently By 60% or More of County Extension Directors and Team Leaders/Chiefs-of-party.

Skill Category and Individual Skill	Chi-Square Value	CED		TL/COP		Percent Use By Both Groups	
		Infreq.	Freq.	Infreq.	Freq.	Infreq.	Freq.
PLANNING							
5. Involve outside agencies in program/project planning.	1.945	14	1	7	4	80.8	19.2
10. Establish objectives of the organization.	0.821	13	2	7	4	76.9	23.1
11. Establish organizational policy.	1.073	11	4	5	6	61.5	38.5
18. Prepare programs of work for your area of responsibility.	3.310	13	2	5	6	69.2	30.8
19. Conduct surveys to measure impact of programs/projects.	0.000	9	6	7	4	61.5	38.5
20. Develop evaluation criteria of programs/projects.	0.000	10	5	8	3	69.2	30.8
DIRECTING							
1. Provide recognition for staff achievement.	0.174	8	7	7	3	60.0	40.0
CONTROLLING							
7. Prepare short-term and/or long-term budgets.	1.050	11	3	5	5	66.7	33.3
8. Present budget requests to funding authorities.	0.260	13	2	7	3	80.0	20.0
STAFFING							
1. Coordinate recruitment activities.	0.000	9	4	6	4	65.2	34.8
2. Formulate or write job descriptions.	0.000	10	3	8	2	78.3	21.7
3. Seek employee nominations/applications through advertising.	0.393	7	5	8	2	68.2	31.8

TABLE 4. continued

Skill Category and Individual Skill	Chi-Square Value	CED		TL/COP		Percent Use By Both Groups	
		Infreq.	Freq.	Infreq.	Freq.	Infreq.	Freq.
6. Select and place professional employees.	0.054	10	2	7	3	77.3	22.7
7. Select and place support staff (i.e., clerical).	0.015	7	5	7	3	63.6	36.4
11. Conduct orientation conferences with new employees.	0.004	8	4	5	4	61.9	38.1
12. Explain organizational policies on promotion, benefits, retirement, etc. to employees.	0.000	11	3	7	2	78.3	21.7
14. Determine salary levels or adjustments.	0.142	14	1	8	2	88.0	12.0
15. Counsel employees on in-service educational needs and professional improvement plans.	0.012	12	3	9	1	84.0	16.0
16. Inform employees of professional improvement opportunities.	2.593	7	7	9	1	66.7	33.3
17. Arrange for in-service training for employees.	0.405	12	3	6	4	72.0	28.0
18. Plan training of support staff on office organization, business and public relations.	0.069	11	4	6	4	68.0	32.0
19. Confer with professional trainers on employee needs.	0.030	14	0	9	1	95.8	4.2
20. Conduct performance reviews with employees.	2.343	14	1	6	4	80.0	20.0
21. Score performance of employees on performance review forms.	2.667	15	0	7	3	88.0	12.0

TABLE 4. continued

Skill Category and Individual Skill	Chi-Square Value	CED		TL/COP		Percent Use By Both Groups	
		Infreq.	Freq.	Infreq.	Freq.	Infreq.	Freq.
22. Recommend employee action, i.e., termination, transfer, or promotion.	1.005	14	1	7	3	84.0	16.0
23. Submit appropriate personnel action forms.	0.000	8	5	7	4	62.5	37.5
24. Inform employees of termination.	0.000	10	2	9	2	82.6	17.4
27. Maintain relationships with employee associations.	0.070	10	3	9	1	82.6	17.4
PROFESSIONALISM							
1. Receive counsel on your performance through established channels in the organization.	0.000	11	4	8	3	73.1	26.9
2. Develop a plan for professional self-development.	0.000	13	1	10	1	92.0	8.0
3. Participate in professional organizations and activities.	0.000	9	5	7	4	64.0	36.0

TABLE 5. Executive Skills Used With Indeterminate Frequency By County Extension Directors and Team Leaders/Chiefs-of-party.

Skill Category and Individual Skill	Chi-Square Value	CED		TL/COP		Percent Use By Both Groups	
		Infreq.	Freq.	Infreq.	Freq.	Infreq.	Freq.
PLANNING							
1. Use economic, demographic or political data.	2.995	9	6	2	9	42.3	57.7
3. Utilize computerized Management Information Systems.	0.000	7	8	6	5	50.0	50.0
4. Involve clientele in program\ project planning.	1.284	10	5	4	7	53.8	46.2
6. Identify influential pressure groups within the community.	1.284	10	5	4	7	53.8	46.2
7. Utilize advisory groups to identify objectives.	0.000	9	6	6	5	57.7	42.3
14. Make the final decision in program/project planning.	2.995	9	6	2	9	42.3	57.7
15. Approve new programs or events into the organization.	0.630	9	6	4	7	50.0	50.0
16. Approve termination of unsuccessful programs or events.	0.000	9	6	6	5	57.7	42.3
21. Provide guidance to employees on program evaluation.	0.000	8	7	6	5	53.8	46.2
DIRECTING							
3. Organize staff committees to pursue special activities.	0.548	8	7	3	7	44.0	56.0
15. Prepare materials for publication (i.e., journal articles).	1.129	9	6	3	7	48.0	52.0

TABLE 5, continued

Skill Category and Individual Skill	Chi-Square Value	CED		TL/COP		Percent Use By Both Groups	
		Infreq.	Freq.	Infreq.	Freq.	Infreq.	Freq.
CONTROLLING							
3. Develop a system of records management.	0.000	8	6	6	4	58.3	41.7
4. Identify problems requiring additional research.	0.314	7	7	3	7	41.7	58.3
6. Analyze data using mini-computers.	0.314	7	7	3	7	41.7	58.3
9. Solicit contributions for programs/projects.	0.000	8	7	6	4	56.0	44.0
STAFFING							
4. Conduct employment interviews with prospective staff.	0.002	6	6	6	4	54.5	45.5
5. Analyze personnel records and/or resumes.	0.365	8	5	4	6	52.2	47.8
10. Establish standards of performance for employees.	0.000	8	7	6	4	56.0	44.0
13. Explain organizational philosophy/objectives to employees.	1.254	10	4	4	6	58.3	41.7
25. Arbitrate clientele complaints/suggestions about employees.	0.518	6	7	7	3	56.5	43.5
26. Arbitrate intra-organizational problems or complaints.	0.000	6	8	5	5	45.8	54.2

TABLE 6. Executive Skills Used Frequently By 60% or More of County Extension Directors and Team Leaders/Chiefs-of-party.

Skill Category and Individual Skill	Chi-Square Value	CED		TL/COP		Percent Use By Both Groups	
		Infreq.	Freq.	Infreq.	Freq.	Infreq.	Freq.
PLANNING							
2. Analyze reports and research data in planning.	3.689	6	9	0	11	23.1	76.9
12. Devise alternate strategies for program/project plans.	0.066	6	9	3	8	34.6	65.4
13. Identify possible conflicts with programs/projects.	0.066	6	9	3	8	34.6	65.4
17. Schedule resource allocation (facilities, equipment and supplies) according to program/project needs.	0.066	6	9	3	8	34.6	65.4
ORGANIZING AND DELEGATING							
1. Utilize a calendar of activities.	0.025	0	15	1	10	3.8	96.2
2. Coordinate programs/projects within and between departments.	0.025	0	15	1	10	3.8	96.2
3. Coordinate staff work schedules.	0.821	2	13	4	7	23.1	76.9
4. Confer with staff regarding coordination and cooperation.	0.000	2	13	2	9	15.4	84.6
5. Delegate responsibility and authority to other employees.	0.949	0	15	2	9	7.7	92.3
6. Forecast and adjust changing staff workloads.	0.821	2	13	4	7	23.1	76.9

TABLE 6, continued

Skill Category and Individual Skill	Chi-Square Value	CED		TL/COP		Percent Use By Both Groups	
		Infreq.	Freq.	Infreq.	Freq.	Infreq.	Freq.
DIRECTING							
2. Inform employees of program/project progress.	0.000	4	11	2	8	24.0	76.0
4. Use a variety of techniques to influence people.	0.043	0	15	1	9	4.0	96.0
5. Use techniques to build group cohesiveness.	0.110	0	15	2	8	8.0	92.0
6. Accept responsibility for decisions made by subordinate employees in the organization.	0.142	1	14	2	8	12.0	88.0
7. Plan agenda for meetings.	0.000	1	14	0	10	4.0	96.0
8. Serve as chairman of group meetings.	*****	0	14	0	10	---	100.0
9. Explain programs/projects to key leaders in the community.	0.000	5	10	3	7	32.0	68.0
10. Interpret research data for clientele.	0.000	2	13	2	8	16.0	84.0
11. Foster relationships with complementary agencies, organizations and individuals.	1.110	0	15	2	8	8.0	92.0
12. Share program/project ideas with organizations.	0.200	6	9	2	7	33.3	66.7
13. Identify public relations or communications barriers.	0.421	2	13	3	6	20.8	79.2
19. Answer correspondence personally.	*****	0	15	0	10	---	100.0

TABLE 6, continued

Skill Category and Individual Skill	Chi-Square Value	CED		TL/COP		Percent Use By Both Groups	
		Infreq.	Freq.	Infreq.	Freq.	Infreq.	Freq.
CONTROLLING							
1. Write periodic reports to superiors.	2.086	1	13	4	6	20.8	79.2
2. Approve reports and other materials prepared by employees.	0.914	2	12	4	6	25.0	75.0
5. Maintain contact with research facilities.	2.344	5	10	0	10	20.0	80.0
10. Make budget category transfers.	0.586	4	11	5	5	36.0	64.0
11. Approve travel expenses, funding and reimbursements for employees.	1.005	1	14	3	7	16.0	84.0
12. Approve purchases and/or purchase orders.	0.142	1	14	2	8	12.0	88.0
13. Identify policies specific to your area(s) of responsibility.	0.472	4	9	1	9	21.7	78.3
14. Monitor civil rights compliance in all program areas.	1.563	4	11	6	4	40.0	60.0
15. Manage office logistics.	1.106	2	13	4	6	24.0	76.0
STAFFING							
9. Assign job responsibilities to professional staff.	0.000	5	9	3	7	33.3	66.7
28. Approve annual, sick, and study leave requests for employees.	3.416	1	14	5	6	23.1	76.9
PROFESSIONALISM							
4. Follow a time-management scheme.	0.000	4	11	3	8	26.9	73.1

**** Chi-square analysis was not performed because respondents unanimously indicated that the skill was frequently used.

Source of Executive Skill Training

Study participants were asked to indicate where they acquired the majority of their executive skill training. Their responses, presented in Table 7, indicated that 'on the job' training was the major source of executive training for 84.4% of the respondents.

TABLE 7. Major Sources of Executive Skill Training.

Source	Group			Total	Percent
	TAD	CED	TL/COP		
Formal Education	1	0	1.5	2.5	7.6
In-service Training	0	1	0.3	1.3	4.0
On the Job	6	14	7.8	27.8	84.4
Mentor Guidance	0	0	1.3	1.3	4.0
Totals:	7	15	11.0	33.0	100.0

NOTE: The inequities in the TL/COP group were caused by inappropriate response methods by two participants. Instead of indicating the singular major source of executive training as requested, they divided 'major source' evenly across two or three sources.

On the job training was the singular most frequently cited source of executive skill training by the three groups. Formal education took a distant second position as the major source of executive skill training. In-service training and mentor guidance only each served 4%

of the respondents as their major source of executive skill training.

Percentages of
Executive, Technical and Other Skills Used

Participants in the study were asked to describe what percent of the total skills they employed in their positions were comprised of executive, technical or other skills. Analysis of variance (ANOVA) was the statistical procedure utilized to detect differences in responses between the three groups. In the event of a significant F value, Tukey's post-hoc test of honestly significant difference (HSD) was employed to determine which means of the groups were different from the others. A summary of the analysis of variance are presented in Table 8.

TABLE 8. Summary of Significant Differences Between Mean Percentages of Executive, Technical and Other Skills Employed By Each Group.

Skill	Mean % of Skill Use For Each Group			Calculated F-Value	Level of Significance
	TAD	CED	TL/COP		
Executive	79.4	44.3	45.0	6.736	.0037
Technical	20.6	49.7	41.8	3.544	.0411
Other	0.0	2.7	13.2	3.011	.0638
Total:	100.0	96.7	100.0		

The analysis of variance of mean percentages of skills used by group indicated that significant differences existed between the groups with respect to the percent of executive skills employed and the percent of technical skills employed. No significant differences were detected between the percent of other skills used by the three groups. Tukey's post-hoc tests were performed to determine which groups were different. Significant differences are presented in Tables 9 and 10.

TABLE 9. Significant Differences Between Mean Percentages of All Groups For Executive Skills Used.

Mean % of Group	Group		
	TAD	CED	TL/COP
TAD	79.38	*	*
CED	44.33		
TL/COP	45.00		

* Denotes significance at the .05 level.

The analysis reveals that the Trade Association Director group was significantly different from the County Extension Director group and the Team Leader/-Chief-of-party group with respects to the percent of executive skills employed in their position. It appears that the Trade Association Director group used propor

tionally more executive skills (79.4%) in their positions than either of the other two groups.

TABLE 10. Significant Differences Between Mean Percentages of All Groups For Technical Skills Used.

Mean % of Group	Group		
	TAD	CED	TL/COP
TAD	20.63	*	
CED	49.67		
TL/COP	41.82		

* Denotes significance at the .05 level.

The Trade Association Director group was significantly different from the County Extension Director group with respect to the technical skills employed in their position. Technical skills were employed relatively infrequently in the Trade Association Director position (20.6%) compared to frequency of use in the other two groups.

There were no significant differences between the mean percentages of the three groups in use of skills other than executive or technical skills.

Opinions On Need For Technical Skills

When asked for their opinions on the essentiality of technical skills in their positions, 29 of 34 or 85% of

all respondents replied that they felt technical skills were essential to their positions, as shown in Table 12.

TABLE 11. Summary of Respondents Opinions on Essentiality of Technical Skills For Satisfactory Performance In Their Positions.

Opinion	Group			N	Percent
	TAD	CED	TL/COP		
Yes	4	14	11	29	85.3
No	2	1	0	3	8.8
No Opinion	2	0	0	2	5.9
Total:	8	15	11	34	100.0

Again, the Trade Association Director group deviated from the other two groups in that only 50% of the respondents in the group felt that technical skills were essential to satisfactory performance in their positions, compared to 93% and 100% in the County Extension Director and Team Leader/Chief-of-party groups, respectively.

Bachelor's, Master's and Doctoral Degrees

And Fields of Study

Information requested with respect to educational level attained and the areas of studies of professional degrees at the Bachelor's, Master's and doctoral levels is presented in Tables 12, 13, and 14. Specific fields of study identified by respondents in the questionnaire

were placed into general fields of study according to the classification in Appendix D. The general fields of study were then divided into two broad categories; Agricultural and non-agricultural fields of study.

TABLE 12. Summary of Bachelor's Degrees Held By Respondents in All Groups.

Group	<u>Bachelor's Degree</u>		<u>No Degree/ Unspecified</u>		<u>Ag Degree</u>		<u>Non-Ag Degree</u>	
	%	N	N	%	N	%	N	%
TAD (n=8)	6	75	2	25	1	17	5	83
CED (n=15)	14	93	1	7	10	71	4	29
TL/COP (n=11)	9	82	2	18	5	56	4	54

In the Trade Association Director group, 75% of the respondents held Bachelor's degrees; One of those was in an agriculture field and five were non-agricultural. Ninety-three percent of the County Extension Directors held Bachelor's degrees (14 of 15). Of those 14 degrees, 10 were held in agricultural fields and four in non-agricultural fields. Eighty-two percent of Team Leaders-/Chiefs-of-party (9 of 11) held Bachelor's degrees; five agricultural and four non-agricultural.

TABLE 13. Summary of Master's Degrees Held By Respondents in All Groups.

Group	<u>Master's Degree</u>		<u>No Degree/ Unspecified</u>		<u>Ag Degree</u>		<u>Non-Ag Degree</u>	
	N	%	N	%	N	%	N	%
TAD (n=8)	2	25	6	75	1	50	1	50
CED (n=15)	9	60	6	40	3	33	6	67
TL/COP (n=11)	9	82	2	18	3	33	5	56

While only 25% of the Trade Association Directors held Master's degrees, 60% and 82% of the County Extension Directors and the Team Leaders/Chiefs-of-party held Master's degrees, respectively. One of the two Master's degrees held by the Trade Association Directors was non-agricultural. 67% of the degrees held by County Extension Directors and Team Leaders/Chiefs-of-party were non-agricultural in nature.

TABLE 14. Summary of Doctoral Degrees Held By Respondents in All Groups.

Group	<u>Doctoral Degree</u>		<u>No Degree/ Unspecified</u>		<u>Ag Degree</u>		<u>Non-Ag Degree</u>	
	N	%	N	%	N	%	N	%
TAD (n=8)	0	-	8	100	-	-	-	-
CED (n=15)	1	7	14	93	1	100	-	-
TL/COP (n=11)	9	82	2	18	3	33	6	67

None of the Trade Association Directors held doctoral degrees, only one of 15 of the County Extension Directors held a doctoral degree, which was in an agricultural field of study, and 82% of the Team Leaders/Chiefs-of-party held doctoral degrees, with two-thirds of them being non-agricultural in nature.

Area(s) of Expertise

Study participants were asked what they considered to be their area(s) of expertise, which did not necessarily correspond with their educational degree disciplines. Specific areas of expertise identified by respondents were included in the degree and skill categories, according to the classification in Appendix D, and then categorized as either agricultural or non-agricultural. Responses are summarized in Table 15.

TABLE 15. Summary of Areas of Expertise

Area of Expertise	Group		
	TAD	CED	TL/COP
Agricultural	8%	58%	32%
Non-Agricultural	92%	42%	68%
Areas of Expertise Identified By Group	13	31	19

It can be seen that The Trade Association Directors named 13 areas of expertise, only one of which was agricultural in nature. County Extension Directors listed 31 separate areas of expertise, of which 58% were agricultural in nature and 42% which were not. Team Leaders/Chiefs-of-party named 19 areas of expertise; 32% were agricultural in nature and the remaining 68% were non-agricultural.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The purpose of this chapter is to summarize the research findings with respect to the problem statement and research questions, to draw conclusions from the findings and to present recommendations based upon the findings and conclusions.

Statement of the Problem

The purpose of this study was to identify the executive skills employed by Trade Association Directors, County Extension Directors and Team Leaders/Chiefs-of-party, to determine which frequently used executive skills were common to all three positions and to identify the source from which these professionals in these positions acquired the majority of their executive skills.

Research Questions

The answers to the following research questions provided the information necessary to resolve the problem stated above.

1. Which executive skills are employed by Trade Association Directors, County Extension Directors and Team Leaders/Chiefs-of-party in the performance of their jobs and how frequently are the employed?
2. Which of the frequently employed executive skills are common to all three positions under study?
3. From what source did Trade Association Directors, County Extension Directors and Team Leaders/Chiefs-of-party acquire the majority of their training in executive skills.

Summary of Findings

The findings of this study will be presented in the following sub-sections: (a) elimination of the Trade Association Directors Group; (b) frequently used executive skills common to selected professions; (c) major source of executive skill training; (d) characteristics of the selected professions; (e) and characteristics of the respondents in the selected professions.

Elimination of the Trade Association Directors Group

Preliminary chi-square analysis of the executive skills by group revealed the problem of numerous and unacceptably low expected frequencies in the chi-square tables. Further manipulation of the data, including

collapsing of the original four response modes into only two, did not resolve the low expected frequency problem. It was judged that the Trade Association group was the cause of this persistent problem because of a low initial response rate (8 of 17), compounded with inappropriately answered questions, which resulted in few valid responses available for analysis. Not wanting to sacrifice information on the County Extension Directors group or the Team Leader/Chief-of-party group, a decision was made to eliminate the Trade Association Directors group from further analysis. Hence, all discussion of executive skill analysis by group refers exclusively to County Extension Directors and Team Leaders/Chiefs-of-party. The Trade Association Directors were, however, included in the other analyses in the study.

Frequently Used Executive Skills Common to Selected Professions

The chi-square analysis of frequency of executive skill use by group showed that seven of the 93 executive skills were not common to the County Extension Extension Directors group and the Team Leaders/Chiefs-of-party group. The remaining 86 skills were common to both groups under study, so all further analytical procedures dealt with the two groups as one, with N=26.

Thirty-one of the executive skills common to both groups were determined to be used infrequently by 60% or more of the respondents and were consequently eliminated from the list, leaving 55 skills. Twenty-one skills, not clearly identifiable as being used either frequently or infrequently by the group, were also eliminated.

The remaining 34 executive skills were common to both professions and used frequently by 60% or more of the respondents. All "Organizing and Delegating" skills were used frequently, as were 12 of 19 "Directing" skills and 9 of 15 "Controlling" skill. Only four of 21 "Planning" skills and two of 28 "Staffing" skills were used frequently. One "Personal Development/Maintaining Professionalism" skill was used frequently. The list of frequently used executive skills common to both selected professions answers research questions one and two.

Major Source of Executive Skills

Of 33 respondents, 84.4% indicated that the source of the majority of the their executive skill training was 'on the job' and not formal education, in-service training or mentor guidance. There were no significant differences between the groups. Only 7.6% of the respondents indicated formal education as the major source of executive skill training. In-service-training

and mentor guidance each were responsible for 4% of the respondents' major source of training for executive skills. Thus, for all three groups, on the job training was the major source of acquisition of executive skills. This finding answers the third research question.

Characteristics of the Selected Professions

The mean percent of executive skills used by Trade Association Directors in their positions, 70.4%, was significantly higher than the mean percents of executive skills used in the other two positions. The mean percent of technical skill use for the Trade Association Directors group was also significantly different. Only 20.6% of the skills used were technical, which was significantly lower than the County Extension group with a mean percent of 49.7%, although not from the Team Leader/-Chief-of-party group with a mean percent of 41.8%.

Over 85% of all respondents indicated that they felt technical skills were essential to satisfactory performance of their jobs. However, only 50% of the Trade Association Directors group felt that technical skills were essential to satisfactory performance of their jobs, as compared to 96% of all other respondents.

Characteristics of the Respondents

In the three groups, Trade Association Directors, County Extension Directors and Team Leaders/Chiefs-of-party, respondents holding bachelor's degrees comprised 75%, 93% and 82% of the group, respectively. Most of the degrees held by Trade Association Directors were in non-agricultural fields of study, whereas the degrees held by the other two groups were evenly distributed between agricultural and non-agricultural fields of study.

Holding Master's degrees were 25%, 60% and 82% for Trade Association Directors, County Extension Directors and Team Leaders/Chiefs-of-party, respectively. Of the two Trade Association Directors holding Master's degrees, one was agricultural and one non-agricultural in nature. In the other two groups, the majority of the degrees were non-agricultural in nature; 67% for the County Extension Directors and 56% for the Team Leaders/Chiefs-of-party.

No Trade Association Directors held doctoral degrees, 7% of the County Extension Directors and 82% of the Team Leaders/Chiefs-of-party held doctoral degrees. The one County Extension Director with a doctoral degree had one in an agricultural field of study. Sixty-seven percent of the Team Leaders/Chiefs-of-party held degrees in non-agricultural fields of study.

When asked to name their fields of expertise, which did not have to necessarily be of the same genre as the educational degrees held, the Trade Association Directors named 13 areas of expertise, of which 92% were non-agricultural in nature. In the County Extension Directors group, 58% of the 31 named areas of expertise were agricultural in nature and 42% were non-agricultural. The Team Leaders/Chiefs-of-party named 19 areas of expertise; only 32% were of an agricultural nature and the remaining 68% were non-agricultural.

Conclusions

1. Possession of technical skills alone did not encompass the range of skills essential to satisfactory performance in the selected agricultural positions. The predominance of executive skills employed illustrates that they, too, are an important component of each position. Therefore, strict technical preparation is negligent of individual and organizational needs for efficient performance.
2. Tremendous potential exists to develop executive skills through formal education, in-service-training and mentor guidance as they are currently underutilized as sources of executive skill training.

3. Since the majority of the selected agricultural professionals hold at least a Bachelor's degree, formal education warrants special consideration as a source of executive skill training: A curriculum for executive skill development should be made available at the undergraduate level in order to reach as large a number of agricultural professions as possible.
4. In order to prepare agricultural professionals for immediate performance on the job, educational curricula designed to develop executive skills would focus initially on developing those skills identified as being common to a wide variety agricultural professions and used on a frequent basis, thus building a solid foundation upon which to develop other less frequently used executive skills.
5. Because some executive skills are not common to all agricultural professions or are used infrequently does not necessarily imply they are less important to an individual's total performance in his/her position, but that such skills are not those which are most vital to immediate performance on the job.
6. The fact that the 'areas of expertise' most often identified by study respondents fell into the categories of "Management and Administration" and

"Human Relations" further illustrates that the frequently used executive skills are in the nature of problem-solving, group dynamics, decision-making, coordinating, communication and organizing.

7. The possession of relatively few Bachelor's degrees in agricultural disciplines in the Trade Association Director group indicates that they are currently acquiring executive and technical skills outside of Colleges of Agriculture.

Recommendations

1. As the only pre-service source of executive skill training, formal education institutions and particularly Colleges of Agriculture, have the responsibility of reassessing the experiences and learning opportunities provided for their students in order to better develop curricula which will prepare them for both the technical and executive aspects of their professions.
2. Curricula for developing executive skills should initially be focused upon those skills which are common to many agricultural professions and are employed on a frequent basis - especially skills in the categories of Organizing and Delegating, Directing and Controlling - in order to best prepare

students for immediate performance in their professions and develop a strong foundation for further executive skill development.

3. Once a strong foundation of executive skills has been established, common sense and the experience of educators can be used to determine which infrequently used executive skills must be developed in order to insure thorough and continued executive excellence in potential agricultural professionals.
4. Opportunities for acquiring executive skills should be incorporated into agricultural curricula at least at the undergraduate level in order to expose as many potential agricultural professionals to executive skill development as possible, especially in order to reach those individuals who may not return to seek Master's or doctoral degrees.
5. Curricula for executive skill development must be of an experiential nature in order for students to better grasp the concepts involved: The term "executive skills" implies abilities which come with practice and experience, not merely through knowledge of them. Such practice and experience could be incorporated into both classroom activities and internship opportunities.

6. Further study of agricultural professions will determine if the core executive skills identified in this study would be applicable to a wide spectrum of agricultural professions. Additionally, skills which bordered upon significance or frequent/infrequent use would be more clearly defined.
7. Re-examination of the Trade Association Director group is recommended. If the agricultural colleges of universities could identify the executive skill needs of this group and provide them with relevant, competency-based coursework, they will have succeeded in providing educational opportunities which are not currently widely available in the United States. However, investigators conducting such a study should be aware of the possibly dualistic roles of Trade Association Directors: active and honorary.
8. In-service training opportunities for the development of executive skills should be revamped. A new approach to training, "Action Training," could be useful in developing or ameliorating the executive skills of current members of organizations, associations and projects whose skills are not adequate to meet either their personal needs or the needs of their employers.

APPENDIX A
COVER LETTER - FIRST MAILING



The University of Arizona

College of Agriculture
Department of Agricultural Education
Tucson, Arizona 85721

June 19, 1987

Dr. Roger Fox
6765 E. Nasumpta Dr.
Tucson, AZ 85715

Dear Dr. Fox:

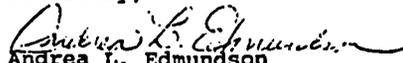
The Department of Agricultural Education at the University of Arizona strives to provide its students with pertinent, competency-based coursework to facilitate their entry into agricultural professions and/or to enhance skills already possessed.

Recent research has indicated a gap between the goals of universities and the needs of the organizations which hire college graduates. It appears that, although agricultural professionals possess adequate technical skills to perform their jobs, they are often lacking in the executive skills of planning, organizing and delegating, controlling, staffing and maintaining professionalism. This is evidenced by the increased use of in-service training, workshops and seminars intended to develop such skills.

Therefore, in order to uphold its tradition of excellence, the Department of Agricultural Education has selected professionals with executive responsibilities, such as yourself, to participate in a study. This study will identify the executive skills used in your position and determine where these skills were learned. Our results will guide us in the creation of a course for the development of executive skills in students pursuing agricultural positions.

Your participation moves us a step closer to our aspirations. Kindly complete the enclosed questionnaire and return it to our department by July 31, 1987 in the envelop provided. Your input is crucial to our study, as the accessible population with which we are working is moderately small. Thank you for your time and cooperation.

Sincerely,


Andrea L. Edmundson
Research Assistant

Sincerely,


David Cox
Assistant Professor

Enclosures (2)

APPENDIX B
QUESTIONNAIRE

Executive Skills
in
Selected Agricultural Professions

A Questionnaire
to Identify Executive Skills Employed

SECTION I.**EXECUTIVE SKILLS SURVEY**

The questions in this section are designed to identify the executive skills that you use in your position, and how frequently you use them.

Please bear in mind that the questions are concerned with which executive skills you ACTUALLY USE in your position, NOT what anyone thinks you should use.

DIRECTIONS:

Read and respond to each question by circling the appropriate number, as shown in the example below:

<u>IN YOUR POSITION, DO YOU...</u>	Never/NA	Daily/Weekly	Monthly	Yearly
Counsel employees on professional development?	0	1	2	③
Prepare materials for publication?	0	1	②	3

THE CHOICES OF RESPONSES GIVEN ARE:

- 0 - Never/NA: Never or not applicable indicates that this skill is one which you never use in your position, for whatever reason.
- 1 - Daily/Weekly: You use this skill frequently enough in your position to consider it routine.
- 2 - Monthly: You use this skill in your position on an average of once a month.
- 3 - Yearly: You use this skill in your position as infrequently as once a year.

A. PLANNING: selection among alternative future courses of action for the organization as a whole and for each part of the organization.

IN YOUR POSITION, DO YOU...

	Never/NA	Daily/Weekly	Monthly	Yearly
1. Use economic, demographic or political data?	0	1	2	3
2. Analyze reports and research data in planning?	0	1	2	3
3. Utilize computerized Management Information Systems?	0	1	2	3
4. Involve clientele in program/project planning?	0	1	2	3
5. Involve outside agencies in program/project planning?	0	1	2	3
6. Identify influential pressure groups within the community?	0	1	2	3
7. Utilize advisory groups to identify objectives?	0	1	2	3
8. Establish objectives of programs/projects?	0	1	2	3
9. Establish priorities for program/project?	0	1	2	3
10. Establish objectives of the organization?	0	1	2	3
11. Establish organizational policy?	0	1	2	3
12. Devise alternate strategies for program/project plans?	0	1	2	3
13. Identify possible conflicts with programs/projects?	0	1	2	3
14. Make the final decision in program/project planning?	0	1	2	3
15. Approve new programs or events into the organization?	0	1	2	3
16. Approve termination of unsuccessful programs or events?	0	1	2	3
17. Schedule resource allocation (facilities, equipment and supplies) according to program/project needs?	0	1	2	3
18. Prepare programs of work for your area of responsibility?	0	1	2	3
19. Conduct surveys to measure impact of programs/projects?	0	1	2	3
20. Develop evaluation criteria of programs/projects?	0	1	2	3
21. Provide guidance to employees on program evaluation?	0	1	2	3

B. ORGANIZING AND DELEGATING: the grouping of activities necessary to attain objectives, and the assigning of subordinates to supervise those activities.

IN YOUR POSITION, DO YOU...

	Never/NA	Daily/Weekly	Monthly	Yearly
1. Utilize a calendar of activities?	0	1	2	3
2. Coordinate programs/projects within and between departments?	0	1	2	3
3. Coordinate work schedules of staff?	0	1	2	3
4. Confer with staff regarding coordination and cooperation?	0	1	2	3
5. Delegate responsibility and authority to other employees?	0	1	2	3
6. Forecast and adjust changing staff workloads?	0	1	2	3

C. DIRECTING: encouraging subordinates to work efficiently and produce results, according to objectives.

IN YOUR POSITION: DO YOU...

	Never/N/A	Daily/Weekly	Monthly	Yearly
1. Provide recognition for staff achievement?	0	1	2	3
2. Inform employees of program/project progress?	0	1	2	3
3. Organize staff committees to pursue special activities?	0	1	2	3
4. Use a variety of techniques to influence people?	0	1	2	3
5. Use techniques to build group cohesiveness?	0	1	2	3
6. Accept responsibility for decisions made by subordinate employees in the organization?	0	1	2	3
7. Plan agenda for meetings?	0	1	2	3
8. Serve as chairman of group meetings?	0	1	2	3
9. Explain programs/projects to key leaders in the community?	0	1	2	3
10. Interpret research data for clientele?	0	1	2	3
11. Foster relationships with complementary agencies, organizations and individuals?	0	1	2	3
12. Share program/project ideas with organizations?	0	1	2	3
13. Identify public relations or communications barriers?	0	1	2	3
14. Establish channels of communication with local mass media?	0	1	2	3
15. Prepare materials for publication (i.e., journal articles)?	0	1	2	3
16. Prepare news releases?	0	1	2	3
17. Prepare radio, television or video programs?	0	1	2	3
18. Use audiovisual materials to facilitate information dissemination?	0	1	2	3
19. Answer correspondence personally?	0	1	2	3

D. CONTROLLING: Measuring accomplishments against plans, using budgets, statistics, reports, analyzes, audits, MIS, and observation.

IN YOUR POSITION: DO YOU...

	Never/N/A	Daily/Weekly	Monthly	Yearly
1. Write periodic reports to superiors?	0	1	2	3
2. Approve reports and other materials prepared by employees?	0	1	2	3
3. Develop a system of records management?	0	1	2	3
4. Identify problems requiring additional research?	0	1	2	3
5. Maintain contact with research facilities?	0	1	2	3
6. Analyze data using mini-computers?	0	1	2	3
7. Prepare short-term and/or long-term budgets?	0	1	2	3
8. Present budget requests to funding authorities?	0	1	2	3
9. Solicit contributions for programs/projects?	0	1	2	3
10. Make budget category transfers?	0	1	2	3
11. Approve travel expenses, funding, and reimbursements for employees?	0	1	2	3

12. Approve purchases and/or purchase orders?	0	1	2	3
13. Identify policies specific to your area(s) of responsibility?	0	1	2	3
14. Monitor civil rights compliance in all program areas?	0	1	2	3
15. Manage office logistics?	0	1	2	3

E. STAFFING: the recruitment, selection, appraisal, compensation, training and development of people for an organization or a particular task.

IN YOUR POSITION: DO YOU...

	Never/Nr	Daily/Weekly	Monthly	Yearly
1. Coordinate recruitment activities?	0	1	2	3
2. Formulate or write job descriptions?	0	1	2	3
3. Seek employee nominations/applications through advertising?	0	1	2	3
4. Conduct employment interviews with prospective staff?	0	1	2	3
5. Analyze personnel records and/or resumes?	0	1	2	3
6. Select and place professional employees?	0	1	2	3
7. Select and place support staff (i.e., clerical)?	0	1	2	3
8. Recruit and train volunteers?	0	1	2	3
9. Assign job responsibilities to professional staff?	0	1	2	3
10. Establish standards of performance for employees?	0	1	2	3
11. Conduct orientation conferences with new employees?	0	1	2	3
12. Explain organizational policies on promotion, benefits, retirement, etc. to employees?	0	1	2	3
13. Explain organizational philosophy/objectives to employees?	0	1	2	3
14. Determine salary levels or adjustments?	0	1	2	3
15. Counsel employees on in-service educational needs and professional improvement plans?	0	1	2	3
16. Inform employees of professional improvement opportunities?	0	1	2	3
17. Arrange for in-service training for employees?	0	1	2	3
18. Plan training of support staff on office organization, business and public relations?	0	1	2	3
19. Confer with professional trainers on employee needs?	0	1	2	3
20. Conduct performance reviews with employees?	0	1	2	3
21. Score performance of employees on performance review forms?	0	1	2	3
22. Recommend employee action, i.e., termination, transfer, or promotion?	0	1	2	3

23. Submit appropriate personnel action forms?	0	1	2	3
24. Inform employees of termination?	0	1	2	3
25. Arbitrate clientele complaints/suggestions about employees?	0	1	2	3
26. Arbitrate intra-organizational problems or complaints?	0	1	2	3
27. Maintain relationships with employee associations?	0	1	2	3
28. Approve annual, sick, and study leave requests for employees?	0	1	2	3

F. PERSONAL DEVELOPMENT/MAINTAINING PROFESSIONALISM

IN YOUR POSITION: DO YOU...

	Never/No	Daily/Weekly	Monthly	Yearly
1. Receive counsel on your performance through established channels in the organization?	0	1	2	3
2. Develop a plan for professional self-development?	0	1	2	3
3. Participate in professional organizations and activities?	0	1	2	3
4. Follow a time-management scheme?	0	1	2	3

END OF SECTION I. PLEASE CONTINUE.

APPENDIX C
COVER LETTER - SECOND MAILING

August 4, 1987

A short time ago, you were invited to participate in a study concerning the executive skills required in agricultural professions. We feel this study is very important since it will help us in the Department of Agricultural Education to prepare students for executive positions in agriculture. We want to assure students that we are providing them with the best possible education for their careers. Our goal is to link student aspirations to the needs of agricultural organizations.

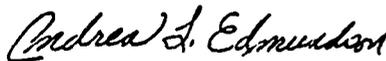
Thus far, we have received responses from 44% of the surveyed population. Many have expressed strong opinions on the value of this study. However, without full support, it will be incomplete.

Please take five minutes of your time to complete the questionnaire, "Executive Skills in Agricultural Professions". If you have already done so, we thank you for your participation and please disregard this reminder. Because participants are completely anonymous, we cannot determine who has already responded.

One final comment: Some of our study participants no longer hold any of the three agricultural positions being studied. If this is your situation, please respond anyway as if you were still in such a position. The importance of your input is not lessened by the fact that you have moved on to other things.

We would appreciate a reply by August 31, 1987. Thank you.

Sincerely,



Andrea L. Edmundson
Research Assistant



David E. Cox
Assistant Professor

Enclosure

APPENDIX D
DEGREE AND SKILL CATEGORIES

DEGREE AND SKILL CATEGORIES**AGRICULTURAL:****1. Agricultural Sciences:**

General Agriculture
Agricultural Production
Home/Family Economics
Entomology

2. Animal Sciences:

Animal Sciences
Animal Industry
Hog Production
Livestock Production

3. Natural Resources:

Natural Resources
Forestry Management
Range Management

4. Plant Sciences:

Agronomy
Crop Production
Horticulture
Landscaping
Plant Breeding
Plant Pathology
Plant Protection
Plant Physiology
Plant Science
Soil Science
Weed Science

NON-AGRICULTURAL:**5. Communciations:**

Agricultural Journalism
Communications
Speech and Communications

6. Economics:

Economics
Agricultural Economics
Economic Development
Development Policy
International Trade

7. Education:

Agricultural Education
Vocational Education
Teaching
General Education
Consumer Education
Environmental Education

8. Government and Politics:

Government Relations
Government Regulations
Political Science
History

9. Management:

Management
Administration
Business Management
Project Management
Hotel/Restaurant Management
Faculty/Staff Supervision

10. Health Sciences:

Nutrition
Medicine

11. **General Sciences:**
 - Biology
 - Chemistry
12. **Miscellaneous:**
 - Geography
 - Remote Sensing
 - Civil Engineering
 - Hydrology
13. **Community Development**
14. **Human Relations:**
 - Human Relations
 - Public Relations
 - People Skills
 - Youth Work
 - 4-H Development
 - Group Dynamics
15. **Communication Skills:**
 - Language Skills
 - Lobbying/Writing/Speaking

NOTE: The categories of degrees and skills listed above represent only those which were identified by the respondents in this study. No deliberate exclusion of any degree or skill area was intended.

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