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# A STUDY OF PROFESSIONAL ROLE PERCEPTIONS HELD BY TWO SELECTED GROUPS OF VOCATIONAL-AGRICULTURE TEACHERS IN MICHIGAN

*Michigan State University* PH.D. 1985

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# A STUDY OF PROFESSIONAL ROLE PERCEPTIONS HELD BY TWO SELECTED GROUPS OF VOCATIONAL-AGRICULTURE TEACHERS IN MICHIGAN

By

Larry D. Powers

A DISSERTATION

Submitted to
Michigan State University
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ABSTRACT

A STUDY OF PROFESSIONAL ROLE PERCEPTIONS HELD BY TWO SELECTED GROUPS OF VOCATIONAL-AGRICULTURE TEACHERS IN MICHIGAN

By

Larry D. Powers

The purposes of this study were (1) to identify and analyze the role perceptions held by production-agriculture and ornamental-horticulture teachers, (2) to determine if there were differences between the two groups of teachers concerning the execution of selected role activities, (3) to determine if there were differences between the two groups of teachers concerning time allocated to each program area, and (4) to determine if the two groups of teachers differed concerning the importance they attached to each program area.

A review of literature and the selection of a jury were used to validate 80 role activities that identified the role responsibilities of the vocational-agriculture teacher. These 80 role activities made up an instrument that was mailed to production-agriculture and ornamental-horticulture teachers in Michigan. The population comprised all production-agriculture and ornamental-horticulture teachers in Michigan receiving added cost funding. The sample comprised a (1) 40 percent random sample of production males (48), (2) 100 percent of

production females (11), and (3) 100 percent of the ornamental horticulture teachers (37). A total of 74 teachers responded to the mailed instrument (78 percent).

Data were collected concerning role perception, role execution, time allocation, and the importance teachers attached to each program area. The data indicated that production teachers differed from horticulture teachers concerning role perception, role execution, time allocation, and the importance they attached to each program area. A significant effect was found for teacher characteristics (sex, age, degree earned, teaching experience) and school characteristics (student enrollment, type school, school community classification) with respect to role perception, role execution, and time allocated to each program area. It was concluded that:

1. Horticulture teachers held low perceptions for advising youth organizations and consequently did not allocate as much time for this activity as production teachers did.

2. Horticulture and production teachers agreed with activities associated with school, secondary students, and teaching.

3. Horticulture and production teachers held low perceptions for activities associated with the community and allocated little time for these activities.

4. Horticulture and production teachers did not accept adult education activities as part of their role.

## ACKNOWLEDGMENTS

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Sincere appreciation is expressed to the vocational-agriculture teachers of Michigan and those individuals serving on the jury.

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# CHAPTER I

## INTRODUCTION

On February 23, 1917, the United States Congress passed the National Vocational Education Act, better known as the Smith-Hughes Act. The major purpose of this act was to provide federal funding for vocational-education programs that might otherwise not be established. The act included provisions for agriculture, trades and industries, and homemaking. This act was the foundation for federal-state cooperation in agricultural education at the secondary-school level.[1]

Since the passage of this act, there have been many technological and structural innovations in education at the secondary level. Agricultural education at the secondary level has evolved from teaching farm boys how to produce crops and livestock to teaching both girls and boys about agricultural technology and its application in an aggressive and changing society.

In light of these changes, the role of the teacher of agriculture needs to be clearly defined so that the students may benefit from a well-organized and well-planned program.

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[1]Lloyd J. Phipps, Handbook of Agricultural Education in Public Schools, 4th ed. (Danville, Ill.: The Interstate Printers and Publishers, Inc., 1980), p. 13).

> If vocational agriculture programs are to meet adequately the changing demands for education in agriculture, the role of the teacher of vocational agriculture must be clearly identified and understood by himself as well as by the persons giving him direction in his professional activities.[1]

Because of the structure of the programs at the local level, it is extremely important that the role of the agriculture teacher be defined and understood by the teacher. Teachers responsible for providing local programs have tremendous latitude in how they will structure, develop, and deliver their programs. "The job of the teacher of agriculture is a complex one, and each part echoes the philosophy of what the teacher believes his role to be."[2]

## Statement of the Problem

Teaching vocational agriculture in secondary schools is becoming more difficult because of technological innovations, structural changes, local/state demands, and community-involvement concepts. Considering all of the different factors that impinge on determining the role of the teacher of agriculture, it seems important to understand how the teacher perceives this role. This study is concerned with identifying and clarifying the perceived role of two groups of vocational-agriculture teachers in Michigan. In the literature, it is suggested that there are increasing and changing demands on teachers

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[1]William E. Drake, "Perceptions of the Vocational Agriculture Teachers' Professional Role in Michigan" (Ph.D. dissertation, Michigan State University, 1962), p. 1.

[2]V. R. Cardozier, ed., Teacher Education in Agriculture (Danville, Ill.: The Interstate Printers and Publishers, Inc., 1967), p. 65).

that make it imperative that the role of the vocational-agriculture teacher be understood from the teacher's perspective. Policy makers, supervisory personnel, and teachers should be aware of the teacher's perception because it is very important in terms of program continuity, program planning, and program delivery.

Agriculture is not taught in a vacuum. It is, or should be, an integral part of the school system in which it exists. "If agricultural education is to have a permanent place in public schools, it must contribute to the basic purposes for which public schools were created and for which they are maintained."[1]

Lamberth found that the third most frequently stated reason for vocational-agriculture teachers' leaving the profession was a lack of understanding of their role by school administrators. Based on this information, there seems to be a very close relationship between program stability/quality and administrators' understanding the role of the teacher.[2]

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[1]Herbert M. Hamlin, Public School Education in Agriculture: A Guide to Policy and Policy Making (Danville, Ill.: The Interstate Printers and Publishers, Inc., 1962), p. 14.

[2]Edwin E. Lamberth, "Why Teachers of Vocational Agriculture Leave the Profession," Agriculture Education Magazine 31 (February 1959): 174.

## Purposes of the Study

The purposes of this study are as follows:

1. To identify the roles of production-agriculture and ornamental-horticulture teachers as they are perceived by each group.

2. To analyze and compare the role perceptions of the production-agriculture with those of the ornamental-horticulture teacher.

3. To analyze and compare frequency of role execution and time allocated to each program area.

4. To determine the level of importance attached to each program area.

Specific objectives are as follows:

1. To determine if production-agriculture teachers differ from ornamental-horticulture teachers concerning perceptions of selected roles.

2. To determine if teacher characteristics and/or school characteristics influence the perceptions of selected roles of production-agriculture and ornamental-horticulture teachers.

3. To determine if production-agriculture teachers differ from ornamental-horticulture teachers concerning the execution of selected role activities.

4. To determine if teacher characteristics and/or school characteristics influence the execution of selected roles of production-agriculture and ornamental-horticulture teachers.

5. To determine if production-agriculture teachers differ from ornamental-horticulture teachers concerning the allocation of time to each program area.

6. To determine if teacher characteristics and/or school characteristics influence the time production-agriculture and ornamental-horticulture teachers allocate for selected program areas.

7. To determine if differences exist between production-agriculture and ornamental horticulture teachers concerning the importance they attach to the selected program areas.

The following roles were identified and selected as a result of the review of literature and consultation with committee members: (1) planning and implementing instructional program for secondary students, (2) advising youth organization, (3) supervising occupational experience programs, (4) guidance and counseling, (5) planning and implementing the adult instructional program, (6) working as an educational leader in the community, (7) working as a member of a professional staff, and (8) working as a member of the profession.

## Hypotheses

The hypotheses of the study are as follows and are stated in the null (Ho) form.

Ho 1: There is no difference between ornamental-horticulture and production-agriculture teachers concerning role perceptions held for the vocational-agriculture teacher.

Teacher Characteristics

Ho 2: There is no difference in the role perceptions held between production-agriculture and ornamental-horticulture teachers based on sex.

Ho 3: There is no difference in the role perceptions held between production-agriculture and ornamental-horticulture teachers based on age.

Ho 4: There is no difference in the role perceptions held between ornamental-horticulture and production-agriculture teachers based on degree earned.

Ho 5: There is no difference in the role perceptions held between ornamental-horticulture and production-agriculture teachers based on years of teaching experience.

School Characteristics

Ho 6: There is no difference in the role perceptions held between ornamental-horticulture and production-agriculture teachers based on student enrollment.

Ho 7: There is no difference in the role perceptions held between ornamental-horticulture and production-agriculture teachers based on type school.

Ho 8: There is no difference in the role perceptions held between ornamental-horticulture and production-agriculture teachers based on school community classification.

Ho 9: There is no difference between ornamental-horticulture and production-agriculture teachers concerning the execution of role activities for the position of the vocational agriculture teacher.

Teacher Characteristics

Ho 10: There is no difference in the execution of role activities between ornamental-horticulture and production-agriculture teachers based on sex.

Ho 11: There is no difference in the execution of role activities between ornamental-horticulture and production-agriculture teachers based on age.

Ho 12: There is no difference in the execution of role activities between ornamental-horticulture and production-agriculture teachers based on degree earned.

Ho 13: There is no difference in the execution of role activities between ornamental-horticulture and production-agriculture teachers based on years of teaching experience.

School Characteristics

Ho 14: There is no difference in the execution of role activities between production-agriculture and ornamental-horticulture teachers based on student enrollment.

Ho 15: There is no difference in the execution of role activities between production-agriculture and ornamental-horticulture teachers based on type school.

Ho 16: There is no difference in the execution of role activities between production-agriculture and ornamental-horticulture teachers based on school community classification.

Ho 17: There is no difference between ornamental-horticulture and production-agriculture teachers concerning the time allocated to each program area.

Teacher Characteristics

Ho 18: There is no difference in the time allocated to each program area between ornamental-horticulture and production-agriculture teachers based on sex.

Ho 19: There is no difference in the time allocated to each program area between ornamental-horticulture and production-agriculture teachers based on age.

Ho 20: There is no difference in the time allocated to each program area between ornamental-horticulture and production-agriculture teachers based on degree earned.

Ho 21: There is no difference in the time allocated to each program area between ornamental-horticulture and production-agriculture teachers based on years of teaching experience.

School Characteristics

Ho 22: There is no difference in the time allocated to each program area between ornamental-horticulture and production-agriculture teachers based on student enrollment.

Ho 23: There is no difference in the time allocated to each program area between ornamental-horticulture and production-agriculture teachers based on type school.

Ho 24: There is no difference in the time allocated to each program area between ornamental-horticulture and production-agriculture teachers based on school community classification.

Ho 25: There is no difference between ornamental-horticulture and production-agriculture teachers concerning the importance they attach to each program area.

## Importance of the Study

This study will provide useful information for (1) decision making concerning agricultural programming, (2) career preparation for teachers of agriculture, and (3) curriculum implications for teacher-education programs.

Today's agricultural-education programs have to compete with other educational programs for funding. Often administrators put agricultural programs at a lower priority. It appears that decision makers have neither general nor specific knowledge and perceptions of the professional role or responsibilities of either the production-agriculture or the ornamental-horticulture teacher. There has been great fluctuation in the number of school systems offering both types of agricultural programs. Current information indicates that the number of programs is decreasing.

In a study conducted in 1980-81, Meaders found the following:

1. In the school year 1973-74, 149 institutions offered programs in production agriculture, and 60 institutions offered programs in ornamental agriculture.

2. In 1980-81, 143 institutions offered programs in production agriculture, whereas 33 institutions offered programs in ornamental horticulture.[1]

In an interview in fall 1983, Richard Karelse, the state supervisor of agricultural education in Michigan, identified 134 production-agriculture programs and 37 ornamental-horticulture programs for the 1983-84 school year.

This study will serve as a valuable resource for those preparing to become teachers of agriculture. Because the role of the teacher of agriculture is varied, this investigation will provide students with information that will help them to plan the experiences that will enable them to be competent teachers. On the other hand, this investigation will provide some students with information that may aid them in deciding that agricultural education is not the career they want.

Teacher education is an important element of the agricultural program. Teacher educators have their perceptions and expectations of the role of the teacher of agriculture. Usually, they try to communicate these role expectations to the students by way of formal classes

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[1]O. D. Meaders, "Reimbursed Vocational Agribusiness and Natural Resources Program in Michigan" (East Lansing: Department of Agriculture and Extension Education, Michigan State University, 1982), p. 2.

and informal experiences and counseling. This study will provide teacher educators with valuable information for evaluating programs. This type of information will also have important implications for curriculum development and inservice education for teachers in the local programs.

## Definition of Terms

The following terms and their definitions are pertinent to this study.

Actor: An individual who carries out the roles designated by an institution.

Expectancy: The normative or minimum behavior standard accepted by an institution.

Institution: The different subunits that make society and that consist of certain roles and expectations that fulfill the goals and objectives of the system.[1]

Organization: Part of an institution/social system for the purpose of achieving specific goals.

Ornamental-horticulture teacher: A teacher at the secondary level who teaches students how to propagate, maintain, buy, and sell ornamental plants for career purposes. This teacher would also provide students with leadership, personal-development activities, and supervised occupational experiences.

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[1]J. W. Getzels and E. G. Guba, "Social Behavior and the Administrative Process," School Reviews 65 (Winter 1957): 424-30.

Production-agriculture teacher: A teacher at the secondary level who teaches students how to produce, maintain, buy, and sell agricultural products for career purposes. This teacher would also provide students with leadership, personal-development activities, and supervised occupational experiences.

Regular classroom teacher: Nonvocational teacher basically concerned with core curriculum courses.

Role: All those behaviors that are designated by a specific institution that will enable the institution to attain its goals.[1]

Role conflict: "Mutual interference of parts, actions, and reactions in the social system."[2]

Role consensus: Role behavior that has mutual agreement among two persons or more.

Responsibility: The legal basis for requiring an individual to carry out certain duties in conjunction with his/her job.

Role perception: Those behaviors that the actor views as necessary to achieve personal and institutional goals.

## Limitations of the Study

1. This study was concerned with production-agriculture and ornamental-horticulture teachers in Michigan.

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[1]Ibid., p. 425.

[2]Jacob W. Getzels, James M. Lipham, and Ronald F. Campbell, Educational Administration as a Social Process: Theory, Research, Practice (New York: Harper & Row, 1968), p. 108.

2. The study was concerned with the professional roles of these teachers.

3. The study was limited to the role perceptions of practitioners and to those activities appearing on the instrument.

4. This study did not address special-needs students.

5. The basic focus of this study was on the regular academic year.

## Dissertation Organization

Chapter I dealt with the statement of the problem, research objectives/hypotheses, significance of the study, definitions of terms, and limitations of the study.

Chapter II presents a review of the literature. The literature review is divided into three parts: (1) role theory, (2) role of the regular classroom teacher, and (3) studies related to the problem under investigation.

Chapter III discusses the methods and procedures used for planning and conducting the study, i.e., population, sample selection, instrument development, securing responses, and analysis of data.

Chapter IV presents the findings of the study. It provides relevant statistics, descriptive and inferential, used for hypotheses testing.

Chapter V presents and discusses the summary, conclusions, and recommendations.

# CHAPTER II

## REVIEW OF THE LITERATURE

The review of the literature is divided into three parts: (1) studies of role theory, (2) studies related to the role of the regular classroom teacher, and (3) studies that address the problem under investigation. A manual search and an electronic search were conducted. The sources of information included books, journals, research reports, interviews, and other relevant materials. The electronic data bases included ERIC and Dissertation Abstracts. The manual search included Resources in Education, Education Index, and other relevant sources.

This study involved an analysis of the role of the vocational-agriculture teacher in Michigan. To develop a frame of reference for this study, it is essential that theories relative to "role" be discussed.

### Role Theory

Webster's Collegiate Dictionary defines "theory" as

> the analysis of a set of facts in their relation to one another . . . the general or abstract principles of a body of facts, a

> science, or an art . . . a plausible or scientifically acceptable general principle or body of principles offered to explain phenomena.[1]

The Pocket Oxford defines "theory" as:

> [a] supposition or system of ideas explaining something, esp. one based on general principles independent of particular things to be explained . . . sphere of abstract knowledge or speculative thought . . . exposition of principles of a science etc.[2]

Role theory in this context will be used to discuss the role of the vocational agriculture teacher.

It is essential to understand that the behavior of an individual cannot be studied in a vacuum. Individual behavior is better understood when it is studied in the context of its relationship and interaction with groups and the environment.

Guba and Getzels suggested that the individual functions in a social system made of institutions (i.e., governing, educating, etc.) designed to carry out specific functions in society.[3] They indicated that "role" is the most important subunit of the institution and is defined by role expectation. Guba and Getzels proposed that individual behavior is derived from the interaction with the environment which is

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[1] Webster's Ninth New Collegiate Dictionary, College Edition (Springfield, Mass.: Merriam-Webster, Inc., 1984), p. 1223.

[2] The Pocket Oxford, New Edition (Oxford: Clarendon Press, 1984), p. 780.

[3] J. W. Getzels and E. G. Guba, "Social Behavior and the Administrative Process," School Review 65 (Winter 1957): 429.

composed of the nomothetic and idiographic dimensions of social behavior. The proposed model has an upper and a lower axis. The upper axis represents the external forces acting on the individual, which includes the institution, role, and role expectation. The lower axis represents the internal composition of the individual, which includes the individual, personality, and needs dispositions. (See Figure 1.)

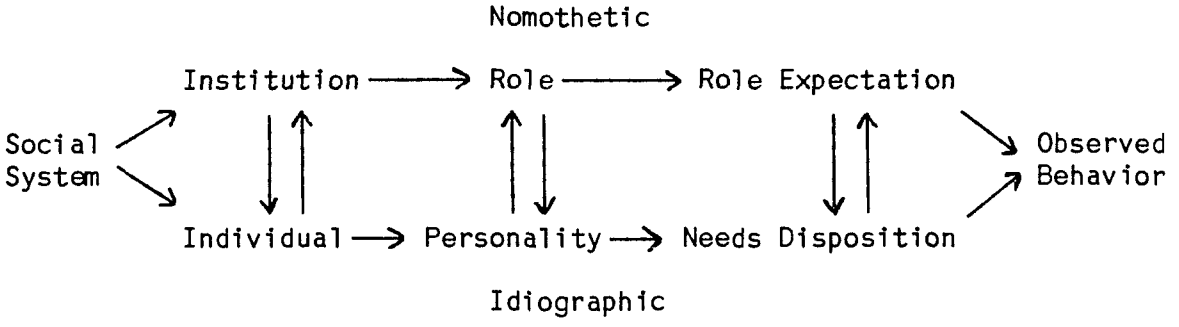


Figure 1.--Nomothetic and idiographic dimensions of social behavior. (From J. W. Getzels and E. G. Guba, "Social Behavior and the Administrative Process," School Review 65 (Winter 1957): 429.

Parsons and Shils indicated that the "individual" actor is not the most important concrete unit in a social system but that the role itself is the most important unit in the social system.[1] They pointed out that the primary ingredient of role is role expectation and that the role of one individual is connected to and interdependent of the roles of others who are a part of the group with which he/she is associated. The social system itself has a built-in mechanism

[1]Talcott Parsons and Edward Shils, eds., Toward a General Theory of Action (Cambridge, Mass.: Harvard University Press, 1962), pp. 190-196.

to promote conformity for normative roles. This is expressed by sanctions in the system, called rewards and punishments. The extent of conformity to a particular role will depend on the degree of institutionalization and individual internalization. Roles in society vary in this respect.

Role is basically defined in terms of role expectation and the interrelationship of other roles. Roles are complementary and reciprocal to each other when examined in terms of the goals and objectives of a particular group.

Katz and Kahn divided these roles into subsystems called organizations. Each organization is a subsystem of the social system and has specific functions and goals. These functions then define the role of each individual who is a member. Katz and Kahn proposed three criteria that account for the organization's existence: "(1) interdependence with respect to task accomplishment, (2) shared norms and values, and (3) rule enforcement."[1] When any of these criteria are in conflict with the needs disposition of the individual, role conflict is encountered. Organizations usually encounter a certain amount of role conflict. Usually this is caused by conflicting values, roles internalized as being contrary to individual needs or role misinterpretation. This has its greatest effect on the organization if it prohibits achievement of organizational goals.

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[1]Ibid., p. 76.

Merton claimed that individuals have multiple roles in groups and organizations and that individuals organize their behavior around these roles. He also indicated that the culture in which the individual exists tends to define, control, and regulate acceptable behavior.[1]

Merton discussed "role" in the context of the world of work.

> The assignment of roles occurs on the basis of technical qualifications which are ascertained through formalized, impersonal procedures (e.g., examinations). Within the structure of hierarchically arranged authority, the activities of "trained and salaried experts" are governed by general abstract, clearly defined rules which preclude the necessity for the issuance of specific instructions for each specific case. The generality of the rules requires the constant use of categorization, whereby individual problems and cases are classified on the basis of designated criteria and are treated accordingly.[2]

Merton also discussed some key points associated with the "needs disposition" of the individual. He emphasized that it is important that the organization meet the needs and goals of the individual if organizational goals are to be achieved.

> The function of security of tenure, pensions, incremental salaries and regularized procedures for promotion is to ensure the devoted performance of official duties without regard for extraneous pressures. The chief merit of bureaucracy is its technical efficiency, with a premium placed on precision, speed, expert control, continuity, discretion, and optional returns on inputs. The structure is one which approaches the complete elimination of personalized relationships and nonrational considerations (hostility, anxiety, affectual involvement, etc.)[3]

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[1]Robert L. Merton, Social Theory and Social Structure (New York: The Free Press, 1968), pp. 110, 126.

[2]Ibid., p. 152.

[3]Ibid.

Merton proposed that "role" in its purest sense is devoid of personality.

The preceding theories basically discussed norm development by the "social system" (group, organizations, and institutions comprising the social system) and role conformity/expectation of the individual. It is obvious that role conformity has means and extremes. Basically, society is not concerned with extreme conformity but with extreme nonconformity. Davis indicated that a certain amount of nonconformity is not only good but necessary. He stated:

> Norms have evolved through milennia of imperfect obedience and consequently are so adapted as to compensate for the tendency toward nonconformity. A society in which everyone suddenly conformed strictly to the norms would not only be utterly static and incapable of adjusting itself to changing circumstances, but it would make impossible demands on the individuals composing it. The norms are formulated in such a way as to give a certain stress or pull that would create incompatibilities and distortions if carried out to the letter. . . . Certain distortions must be present in the normative system in order to achieve functionally adequate behavior from the members.[1]

A certain level of nonconformity is expected by organizations and accepted to the point that it does not prevent the organization from achieving its goals and objectives. When this occurs, role conflict is experienced. Getzels, Lipham, and Campbell defined role conflict as "mutual interference of parts, actions, and reactions in the social system."[2] They proposed five sources of role conflict:

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[1]Kingsley Davis, Human Society (New York: Macmillan, 1949), p. 246.

[2]Jacob W. Getzels, James M. Lipham, and Ronald F. Campbell, Educational Administration as a Social Process: Theory, Research, Practice (New York: Harper & Row, Publishers, 1968), p. 108.

1. conflict between cultural values and institutional expectations
2. conflict between role expectation and personality disposition
3. conflict between roles and within roles
4. conflict derived from personality disorders
5. conflict in the perception of role expectation[1]

Getzels et al. discussed what they called "mechanisms of integration." Mechanisms of integration involve an individual adapting to the role set in terms of his/her performances and at the same time the individual is achieving his/her needs disposition (actualization).

Bates and Harvey discussed role conflict in the context of role expectations that are inconsistent or in conflict with personal needs and values. They explained role conflict as an internal stress-elimination process where the individual seeks to find ways to eliminate the stress factor by developing or creating his/her personal norms not shared by anyone else.[3] Bates and Harvey projected the individual as one experiencing internal disarray as a result of environmental or external forces. The individual seeks relief from the situation and attempts to escape by creating his/her own norms.

Lewin stated that the level of social tension of a group is one of the most influential factors that determine group conflict or emotional instability of the group and its members. Lewin pointed to four conditions that nurture the possibility of conflict between members of a group:

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[1]Ibid., pp. 110-19.

[2]Ibid., p. 111.

[3]Frederick L. Bates and Clyde C. Harvey, The Structure of the Social System (New York: Gardner Press, Inc., 1975), p. 217.

1. needs disposition of the individual
2. space availability and freedom of movement
3. barriers; tensions cause one individual to want to leave the situation--when this is not possible, tensions become higher
4. the extent to which the goals of the members contradict each other[1]

Lewin also discussed the variety of social sets to which an individual may belong. He stated that membership in a group or organization requires an individual to give up a certain amount of freedom. Lewin further stated that the group should establish what basis will be the balance between the individual and the group.[2] This is a very important point--that the group and its members understand where group needs and individual needs conflict.

Maslow claimed that the needs of the individual are a very strong and influential force motivating behavior of individuals. His theory is called the "hierarchy of needs."[3] Maslow divided the needs of the individual into two categories, physiological and psychological. Maslow's theoretical model takes on a pyramidal shape. (See Figure 2.) He maintained that needs are prioritized and that needs progress from physiological to psychological.

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[1]Kurt Lewin, Resolving Social Conflict (New York: Harper & Brothers Publishers, 1948), pp. 89-90.

[2]Ibid., p. 102.

[3]Abraham H. Maslow, Motivation and Personality (New York: Harper & Brothers, 1954), p. 91.

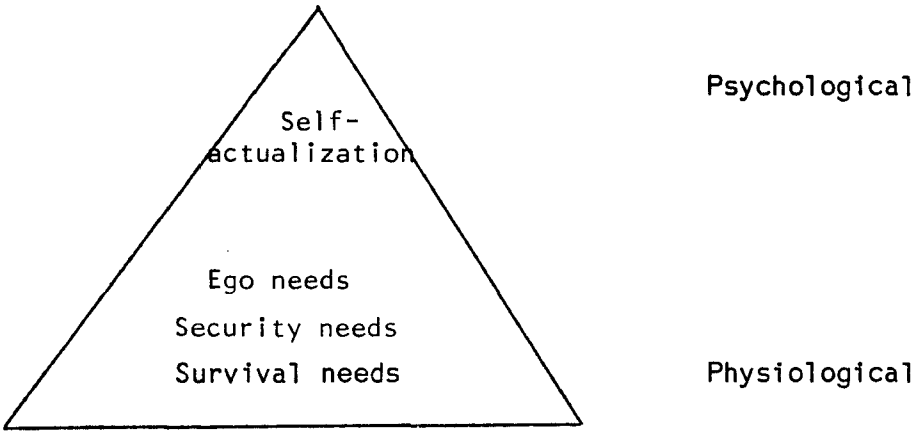


Figure 2.--Maslow's hierarchy of needs. (From Abraham H. Maslow, Motivation and Personality (New York: Harper & Brothers, 1954), p. 91.

McGregor further elaborated on Maslow's theory by developing Theory X and Theory Y. Theory X contends that people are generally lazy, have no initiative, and need to be told what to do. Theory Y is the opposite of X. Theory Y proposes that people have initiative, are creative, and want to have input regarding decisions that affect them.[1] According to Griffith, McGregor's Theory X rests on Maslow's lower order of needs, and Theory Y rests on his higher order of needs. Needs of the individual are a strong force affecting behavior.[2]

When discussing the role of the vocational-agriculture teacher, it is necessary that a theoretical framework be developed to explain

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[1]Douglas McGregor, The Human Side of Enterprise (New York: McGraw-Hill, 1960), pp. 45-50.

[2]Francis Griffith, Administrative Theory in Education: Text and Readings (Midland, Mich.: Pandell Publishing Co., 1979), p. 74.

such phenomena as role expectation, institution/organization, needs disposition of the individual, and individuals and how they relate to groups.

## Role of the Regular Classroom Teacher

### Background of Teacher Role

The role of the vocational-agriculture teacher cannot be clarified nor understood when it is viewed independently of the role of the regular classroom teacher and the goals and purposes of the general education system. This section of Chapter II identifies the role of the regular classroom teacher and briefly discusses the general education system.

The Constitution of the United States provides for public education by specifically stating that education for the public shall be a state responsibility. Each state has the responsibility for developing an educational system designed to serve the public. Today a wide diversity of educational systems exists in each state. Although systems are different among the states, there are common goals, purposes and objectives.

Goodlad conducted a study in the United States to determine what the different school districts within the different states wanted to achieve. He accomplished this by studying the goals of a selected sample of schools. Goodlad identified four goals for schools: "academic goals, vocational goals, social, clinic, and cultural goals;

[and] personal goals.[1] Under each goal he identified specific types of objectives that should be met in order to achieve each goal.

Hamlin echoed the findings of Goodlad in his comments about the purposes of public education:

> We can get clues as to the purposes public education should serve by examining the reasons for establishing it in the United States. From 1820 to 1860, when the great debate regarding the establishment of public schools was under way, the principal reasons given for establishing them appear to have been (1) to hold together a nation loosely bound that had recently attained its independence and might lose it unless more internal cohesion were attained, (2) to help in preparing a special kind of citizen for a special kind of country, and (3) to aid every American in becoming all that he may become.[2]

The role of the individual teacher is part of a larger whole, and it is defined by role expectation. Bidwell discussed the role of the teacher and how it relates to the social system and other roles:

> A school system is a social system, i.e., an integrated system of roles organizing the activities of its members toward common goals. The administrative organization of the school is a sub-system, within the larger system, in which the roles of teacher and administrator are in relationship of subordination and superordination. . . . Thus the role-expectations organize the need dispositions of a number of individuals into a systematic whole so that social ends are maximized. . . . The school administrator and the teachers may be seen as participating in a system of reciprocal role-expectations.[3]

There are many groups that define role expectations of the teacher. One of the most influential groups is the persons residing

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[1]John I. Goodlad, A Place Called School: Prospect for the Future (New York: McGraw-Hill Book Co., 1984), pp. 50-56.

[2]Herbert M. Hamlin, The Public and Its Education (Danville, Ill.: The Interstate Printers and Publishers, 1955), p. 9.

[3]Charles E. Bidwell, "The Administrative Role and Satisfaction in Teaching," The Journal of Educational Sociology (September 1955): 41.

in the community in which the teacher works. Stiles indicated that the expectations and feelings of individuals in the community have a tremendous effect on teacher behaviors. Often times, administrators will evaluate teachers on their community appeal rather than their ability to teach. According to Stiles, teachers could receive high ratings from administrators and actually be poor teachers.[1]

Getzels and Guba were in agreement with Stiles. They stated. "There are more constraints and demands upon the teacher than upon almost any other member of the community." Getzels and Guba conducted an in-depth investigation of the role of the teacher. They indicated that the community may place restrictions on teachers that include tobacco use and religious and political affiliation.

Role Identification

Foskett conducted a study to determine the level of role consensus among a group of elementary school teachers. He identified four role areas: (1) roles associated with student interactions, (2) roles associated with interactions with colleagues, (3) roles associated with interaction with parents, and (4) roles associated with interactions with community persons in general. Foskett found that

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[1]Lindley J. Stiles, ed., The Teacher's Role in American Society (New York: Harper Brothers, Publishers, 1957), p. 80.

[2]J. W. Getzels and E. G. Guba, "The Structure of Roles and Role Conflict in the Teaching Situation," The Journal of Educational Sociology (September 1955): 30.

there was a high level of consensus between and within the groups studied.[1]

Crocker conducted a study of second- and fifth-grade classrooms to determine the classroom behaviors of teachers. As a means of collecting the desired information, he recorded the amount of time teachers allocated to the teaching task. He identified two categories of teacher behavior: instructional and noninstructional. Instructional included all those behaviors associated with classroom teaching, and noninstructional was basically concerned with out-of-classroom activities such as supervisory, extracurricular, planning, and preparation of homework.[2] Crocker's study basically dealt with the activities associated with school students and not with community and overall school functions. His identification of the teaching role was consistent with that of Foskett and Stiles.

Green acknowledged three separate acts that describe the job of the teacher: (1) logical acts, (2) strategic acts, and (3) institutional acts. Logical acts are those behaviors that directly involve teaching. Strategic acts involve those behaviors that help facilitate teaching, i.e., motivating, counseling, planning, disciplining, and evaluating. Institutional acts involve those activities not directly

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[1]John M. Foskett, Role Consensus: The Case of the Elementary School Teacher (Eugene, Ore.: The Center for the Advanced Study of Educational Administration, 1969), pp. 10-15.

[2]Robert K. Crocker et al., "The Use of Classroom Time: A Descriptive Analysis" (Newfoundland: The Institute for Educational Research and Development, Memorial University of Newfoundland, n.d.), pp. 79-80.

involving teaching, i.e., consulting parents, chaperoning, keeping reports, and patrolling halls.[1] Green claimed that all of the behaviors of teachers can be placed in one of these categories.

Robert Hatfield, a prominent teacher educator at Michigan State University, developed what he calls the "General Functions and Tasks" of teachers. These general functions are:

1. Formulate curriculum content and goals
2. Provide for educational needs of individual students
3. Develop and organize instructional systems
4. Execute the teaching-learning process
5. Assess and report student learning and growth
6. General institutional and professional responsibilities[2]

The list of teacher activities developed by Hatfield covers a wide range of teacher activities. Basically, Hatfield's list is like that of Green, but it is more comprehensive. One unique feature of Hatfield's functions is that he addresses the teacher role in professional development/inquiry and the teacher's role as a member of the profession.

Johnson and Shearron identified six generic teacher performance areas essential for good teaching:

1. provides direct instruction
2. engages in program planning
3. interacts socially with others
4. demonstrates acceptable personal characteristics

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[1]Thomas F. Green, The Activities of Teaching (New York: McGraw-Hill Book Co., 1971), pp. 4-5.

[2]Robert Hatfield, "General Functions and Tasks" (East Lansing: College of Education, Michigan State University, n.d.). (Mimeographed.)

5. promotes professional ethics
6. performs technical skills which facilitate professional performance[1]

Johnson and Shearron directed attention to skills and their execution to perform the roles of the teacher. Their list of generic teaching performance is very similar to that of Crocker; they addressed behaviors associated with teaching students.

Oliva and Henson also used the skill-development and application approach to identify the activities and/or areas that the teacher should perform to be competent. Oliva and Henson indicated that, in Florida, 23 generic competencies necessary for good instruction in the classroom had been identified. The 23 generic competencies were classified into five categories: (1) communication skills, (2) basic knowledge, (3) technical skills, (4) administrative skills, and (5) interpersonal skills.[2] Each of these competencies was subdivided into specific skills that identify the behaviors that are necessary for good instruction.

It is evident that the role of a good teacher includes a comprehensive list of behaviors and activities that involve expectations of peers, self, community, and administrators.

Stiles provided a comprehensive view of the role of the teacher. He stated that a comprehensive list that includes all the

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[1]C. E. Johnson and G. F. Shearron, "Generic Teacher Performance Essential to Professional Competence" (Athens, Ga.: Competency Based Educational Center, College of Education, University of Georgia, 1973). (Mimeographed.)

[2]Peter F. Oliva and Kenneth Henson, "What Are Essential Generic Teaching Competencies?" Theory Into Practice 19 (Spring 1980): 117-20.

roles of a good teacher can be categorized into two areas: (1) teacher as director of learning and (2) teacher as mediator of the culture--referred to as the social function. The category "director of learning" includes the following roles:

1. teacher as a judge of achievement
2. teacher as a person who knows
3. teacher as one who keeps discipline
4. teacher as one who gives advice, receives confidences
5. teacher as creator of a moral atmosphere
6. teacher as a member of an institution[1]

The parents and the community will determine which classroom roles are accepted or rejected by the teacher. The different roles listed allow a tremendous amount of flexibility as each incumbent brings different experiences to roles already defined.

The teacher as mediator of the culture concerns the following roles of the teacher:

1. teacher as a member of the middle class
2. teacher as a model for the young
3. teacher as an idealist
4. teacher as a pioneer in the world of ideas--the teacher as radical
5. teacher as a person of culture
6. teacher as a participant in community affairs
7. teacher as a stranger in the community
8. teacher as the person in route
9. teacher as a public servant[2]

Stiles provided a basic and relatively comprehensive view of the roles of the teacher. His statements of teacher roles are very consistent with those of Hatfield; they cover those role activities

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[1]Lindley J. Stiles, ed., The Teacher Role in American Society (New York: Harper Brothers, Publishers, 1957), pp. 73-80.

[2]Ibid., pp. 80-85.

generally accepted by administrators, parents, community, and peer teachers.

This section of Chapter II concludes with comments by Terrien on the occupational role of teachers.

> While the role of teachers is fairly well established--tied in, as it is, with their important function--it is painfully clear that their status, or "position with relation to the total of society," remains unresolved. Because of their important role, they are the carriers of "certain supermundane values." The status of teachers is somewhere on a continuum. At one end they are the cultural surrogates, and as such, have "power" in the primitive sense of the word. They operate in the realm of thought, where they cannot be controlled--hence they are to be suspected and feared. At the other end of the continuum they are the housewives of the culture--the ones concerned with maintenance and continuity, and hence the conservators. They have the role often assigned in primitive societies to old men, the aged and the infirm--that of trainers of children. But most of all, they are the sanctioning agents for the young, the guardians of morals, the arbiters of conduct, and it is in this status that they are remembered by all adults from their own childhood. In truth, teachers constitute a kind of conscience in society, and their status is that of the conscience--recognized as fundamentally important, but neglected as much as possible.
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> Clearly, there is no single course of action which will alter the occupational role of teachers, but it is evident from the shortage of persons to fill teaching jobs that it is not an attractive role. The general impression which arises from the replies to the extensive survey here reported in part is that teachers conceive of themselves as loyal, non-aggressive, somewhat martyred public servants. They appear to differ from the average American in that they lack a really positive conception of self. Their future, they believe, depends upon the public conscience, and their own actions. This is hardly in keeping with either their needs as individuals, or the needs of society.[1]

## Role Identification of the Vocational Agriculture Teacher

For clarity and organization, this section of the report is divided into two parts: (1) studies identifying the role of the

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[1]Frederic W. Terrien, "The Occupational Roles of Teachers," The Journal of Educational Sociology (September 1955): 20.

vocational agriculture teacher and (2) studies indicating areas of role consensus and studies indicating areas lacking role consensus.

As a basis for identifying the role of the vocational agriculture teacher, it is necessary to identify the components of the vocational agriculture program. The Michigan Association of Teachers of Vocational Agriculture has identified four program areas: (1) classroom-laboratory instruction, (2) student organizations, (3) supervised occupational experience, and (4) adult education.[1] Phipps, a prominent author and teacher educator in agriculture, has consistently identified three program areas: (1) instructional program, (2) supervised occupational experience, and (3) leadership development (school-sponsored organizations such as FFA and young farmers).[2] Teacher educators generally recognize the instructional program, supervised occupational experience, and some form of leadership development (school-sponsored organization) as the principal components of a vocational agriculture program. It is from these three areas that the role of the vocational agriculture teacher is developed.

In 1962, Drake conducted a study to determine the perceptions of the vocational agriculture teacher's professional role in Michigan. He identified eight role areas:

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[1]Michigan Association of Teachers of Vocational Agriculture, "Position Paper on Vocational Education in Agriculture" (Lansing: Michigan Association of Teachers of Vocational Agriculture, 1983), p. 4.

[2]Lloyd J. Phipps, Handbook on Agricultural Education in Public Schools, 4th ed. (Danville, Ill.: The Interstate Printers and Publishers, 1981), pp. 6-149.

1. Directing the learning of high school students
2. Guidance and counseling
3. Improving the environment of rural people
4. Working as an educational leader in the community
5. Participating in the professional work of the school
6. Working as a member of the profession
7. Directing the program of adult-farmer education
8. Directing the program of young-farmer education[1]

Drake identified 102 role activities associated with the eight role areas.

Schumann conducted a study in 1972 to ascertain if there were conceptual variations concerning the role of the teacher of vocational agriculture as perceived by vocational agriculture teachers and high school principals. Schumann identified eight role areas:

1. Purposes of the program
2. Policies of the program
3. Adult education
4. FFA activities
5. Community relationships
6. School responsibilities

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[1]William E. Drake, "Perceptions of the Vocational Agriculture Teacher's Professional Role in Michigan" (Ph.D. dissertation, Michigan State University, 1962), p. 112.

7. Instructional program in agriculture

8. Professional responsibilities[1]

The eight roles identified by Schumann appear to be reflected in those identified by Drake.

Bible and McComas conducted a study to determine role consensus and teacher effectiveness in Ohio. They attempted to determine if there was a relationship between role consensus and the effectiveness of the teacher. A list of criteria items developed by the state supervisors of vocational agriculture was used to measure teacher effectiveness. The criteria used to evaluate the teachers consisted of 11 items: (1) cooperation with school administrators and faculty in planning, (2) classroom teaching, (3) short- and long-term objective development, (4) supervision of farming programs, (5) FFA adviser, (6) guidance and counseling, (7) adult and young farmer program, (8) use of physical facilities, (9) community and public relations, (10) professional improvement, and (11) summer program. These criteria were used to develop 70 role activities that the vocational agriculture teacher should perform.[2]

Rogers identified seven areas of responsibility that were used to develop role activities of the vocational agriculture teacher:

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[1]Herbert B. Schumann, "Conceptual Variations Concerning the Role of the Vocational Agriculture Teacher as Perceived by Vocational Agriculture Teachers and High School Principals" (Ph.D. dissertation, Texas A & M University, 1972), p. 23.

[2]B. L. Bible and J. D. McComas, "Role Consensus and Teacher Effectiveness," Social Forces 42 (December 1963): 225-33.

(1) instruction, (2) supervision, (3) curriculum, (4) administration, (5) evaluation, (6) public relations, and (7) professional activities.[1] The seven role areas were used to develop 70 role statements that the vocational agriculture teacher should perform.

Although the role areas listed by Rogers appear to be different, they cover the same role activities as Drake, Bible and McComas, and Schumann. The literature indicates that no two authors have used the same role categories but generally have used the same role-definition items stated in a different way.

McComas identified nine role categories for the vocational agriculture teacher:

1. Instructing high school students
2. Liaison between school and state department
3. Faculty membership responsibilities
4. Supervising students' farming programs
5. Improving agriculture in the community
6. Guidance and counseling
7. Advising Future Farmers of America
8. Young- and adult-farmer programs
9. Community and public relations[2]

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[1]Richard A. Rogers, "Perceptions of the Importance of Selected Occupational Activities of the Vocational Agriculture Teachers as Perceived by California Principals and Teachers" (Ph.D. dissertation, Iowa State University, 1978), p. 34.

[2]James D. McComas, "Role of the Teacher of Vocational Agriculture as Perceived by Selected Ohio Teachers and Their Administrators" (Ph.D. dissertation, The Ohio State University, 1962), pp. 66-73.

McComas used these nine role areas and developed an interview format. Teachers selected for this study were considered to be most and least effective. This enabled McComas to ascertain if teacher effectiveness was related to role internalization of the position.

The Department of Agricultural and Extension Education at Michigan State University prepared a student teacher handbook indicating those activities in which a student teacher should engage. This handbook was edited by Roger Steele and had input of vocational agriculture teachers, teacher educators, and graduate and undergraduate students in the department. This group identified ten ability areas that the student teacher should be able to perform. These ability areas are:

1. Ability to plan instruction and teach all groups
2. Ability to administer, supervise, and coordinate the activities of the local department
3. Ability to develop and supervise occupational experience programs
4. Ability to establish and maintain relationships
5. Ability to determine community and individual needs
6. Ability to develop and improve the quality of a local program of vocational agriculture
7. Ability to organize and use advisory committees
8. Ability to plan, manage, and maintain instructional facilities

9. Ability to advise the local FFA chapter

10. Ability to provide guidance, placement, and follow-up[1]

The literature and/or research prepared by teacher educators is congruent in terms of the identification of role categories and the specific role activities that should be performed by the vocational agriculture teacher. The literature is incongruent in terms of role consensus and lack of consensus among the teachers of vocational agriculture. The next section of this chapter will focus on the specific areas and/or role activities in which consensus and lack of consensus exist.

## Role Consensus and Lack of Consensus

The literature in its present state suggests common areas of role consensus and lack of consensus but also indicates some isolated areas in certain studies. These isolated areas seem to be attributed to the different independent variables used in the studies and the location of the study. Vocational agriculture programs differ from state to state and within each state. Although there are basic and common elements to all vocational agriculture programs, local program autonomy is considered to be a major strength of the vocational agriculture program.

Drake concluded that there was a consensus in certain role areas and a lack of consensus in others. He found that the vocational agriculture teachers indicated a consensus in the area of "Directing

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[1]Roger Steele, ed., Student Teacher Manual (East Lansing: Michigan State University, 1984), pp. 19-29.

the learning of high school students and working as a member of the profession." He found a lack of consensus in the role areas "Guiding and counseling" and "Improving the environment of farm people." He also found that the role area "Directing the learning of adult farmers" was the area that indicated the greatest amount of disagreement between the groups. Drake indicated that there were differences among the vocational agriculture teachers associated with selected background variables. He concluded that although he found differences within the groups, these differences were not so great that they threatened the administrative structure or quality of the program.[1]

McComas studied a group of vocational agriculture teachers categorized as most and least effective teachers. He found that the most effective teachers spent 60 percent or more of their time on classroom instruction and other activities related to teaching high school students. Examples of related activities included lesson preparation and field trips. McComas also found that teachers were in general agreement concerning Future Farmers of America (hereafter referred to as FFA) activities but were in disagreement about whether class time should be used for contest preparation. He found slightly more than one-half of all teachers were in agreement with guidance and counseling activities and held separate classes for adult groups. McComas concluded that most effective teachers were leaders in the community, devoted more time to out-of-school activities, and

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[1]William E. Drake, "Perceptions," pp. 173-80.

functioned as an integral part of the overall school staff. He also concluded that teacher effectiveness was related to job satisfaction.[1]

Lighari studied the competencies needed by vocational agriculture teachers. These competencies reflect the role of the vocational agriculture teacher. His study identified and validated 209 competencies deemed essential for the vocational agriculture teacher to possess. He measured differences within the teacher group with selected demographic variables. Lighari concluded that:

> The teacher's perceptions of the importance of professional education competencies are influenced by the number of students enrolled in grades 9-12; teacher's enrollment in vocational agriculture; years of teaching experience; age of the teacher; number of students taught per day; and level of education. The only demographic characteristic where groups of teachers did not have a significant difference was type of school.[2]

Lighari's study was in agreement with the Drake study. Selected demographic variables tend to influence teacher perception of role internalization.

Much of the research on role perception seems to be based on one underlying principle: Role perception directly affects role performance. In an attempt to get at procedures for improving role performance, it is essential that we understand the cause-and-effect relationship between role perception and role performance. The research indicated that role perception is the precursor to role performance. Bible and McComas stated:

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[1]McComas, "Role of the Teacher," pp. 84-100, 152.

[2]Abdul L. Lighari, "Professional Competencies Needed by Teachers of Vocational Agriculture in Missouri" (Ph.D. dissertation, University of Missouri-Columbia, 1979), pp. 79-90.

> The most satisfied person is the one who wants a great deal and gets it. The effective teachers, as implied by their perception of obligation for role expectations, wanted to perform well in all segments of their role. Thus their effectiveness as a teacher was undoubtedly a satisfaction to them. Job effectiveness and job satisfaction as they relate to role consensus seem to indicate the utility of consensus on role perception as a variable.[1]

Some researchers have attempted to analyze role perception by studying time allocation in relation to specific role activities of the vocational agriculture teacher. Dillon conducted a time-analysis study of Nebraska vocational agriculture teachers. He found that: (1) 31 percent of the teachers' time was used for planning and teaching high school students, (2) 11 percent was used to advise the FFA, (3) 8 percent was used for curriculum planning, (4) 6 percent was used for supervising occupational experience programs of high school students, and (5) the remaining 44 percent was devoted to community activities, adult teaching, and activities associated with the maintenance and operation of the department. He concluded that:

> Marital status was not a factor in the amount of total hours worked, except that single teachers devoted more time to public relations activities than married teachers. The teacher's age did make a difference; teachers aged 20-30, 36-40, and 51-55 worked more hours than other age groups. Also, the older teacher tended to spend more time in community activities and responsibilities. Those teachers with Master's degrees spent more time in community activities, professional organizations, and completing reports.[2]

Brown conducted a study in 1962 regarding teacher attitudes and opinions of selected areas of the vocational agriculture program. He

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[1]Bible and McComas, "Role Consensus," p. 232.

[2]Roy Dillon, "Teacher Time--Factors Related to Its Use," Agricultural Education (November 1976): 110-11.

concluded that: (1) teachers were so diversified in certain program areas that a need for inservice education was indicated; (2) teachers were highly conservative and less accepting of innovation in the program; (3) teachers were more concerned with the success and operation of their program than they were with the overall education program of the school; and (4) teachers will continue to assume an effective leadership role in adult-farmer education in the community.[1]

It is apparent that the findings and conclusions from different studies have revealed different areas of consensus and lack of consensus. It appears that these differences can be attributed to the location of the study. While some locations have a general consensus in some areas, others are in complete disagreement with the findings of other studies in the same area. Rogers conducted a study to measure the perceptions of vocational agriculture teachers on selected occupational activities. While Brown found a continued and expanded role in adult-farmer education, Rogers's findings were opposite. He concluded that teaching efforts should be confined to secondary students and that adult-farmer education should be conducted by post-secondary institutions. Although adult-farmer education has received mixed reviews from the researchers, Rogers is one of the few who has concluded that it should be discontinued by secondary vocational agriculture teachers. He also concluded that:

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[1]Herman D. Brown, "An Investigation of Attitudes and Opinions Held by Teachers of Vocational Agriculture and Their Administrators Regarding Selected Areas of the Vocational Agriculture Program" (Ph.D. dissertation, Texas A & M University, 1962), pp. 88-90.

1. Teachers believed they were expected to work 47.6 hours per week, while their administrators expected them to work 41.4 per week.
2. Teachers did not perceive extra school duties as part of their role (supervising dances, athletic events, etc.).
3. Teachers perceived FFA as part of their role--Rogers recommended that this role be reevaluated and clarified.[1]

Rogers's findings on time allocation are consistent with the findings of Drake, Dillon, and others. Researchers consistently have indicated that the expectations held by vocational agriculture teachers of themselves are higher than those of significant others.

Smith and Kahler's findings were very similar to those of Rogers regarding adult-farmer education. They studied the perceptions of the adult farmer in Iowa to determine the value the farmer attached to the assistance he/she received from the vocational agriculture teacher. They found that:

1. Two-thirds of the group studied did not participate in classes held by the vocational agriculture teacher, but 90 percent of them had participated in programs sponsored by commercial companies.

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[1]Rogers, "Perceptions of the Importance," pp. 135-39.

2. The vocational agriculture teacher was rated as being of "little or no value" as a source of technical information.[1]

Smith and Kahler recommended that greater care should be taken when planning adult-farmer education and that services and education provided by the vocational agriculture teacher and extension service should be made more visible to farmers.

Kiesling studied the attitudes of vocational agriculture teachers in relation to their adult farmer programs and other duties. He concluded that:

1. All duty items were rated at least moderately favorable.
2. Advising the FFA received the overall highest rating, while supervising off-farm occupational-experience programs received the lowest rating.
3. Engaging in community relations and directing supervised farming programs were rated extremely favorable statewide.
4. Teaching secondary classes rated extremely good, while teacher-improvement activities rated extremely good.[2]

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[1]Keith L. Smith and Alan A. Kahler, "Iowa Adult Farmers' Perceptions of the Value of Educational Programs," The Journal of the American Association of Teacher Educators in Agriculture 23 (November 1982): 43-49.

[2]Leeroy W. Kiesling, "The Relationship Between the Vocational Agriculture Teacher's Attitude Toward Coordinating and Advising the Young Farmer Organization and His Attitude Toward His Other Duties" (Ph.D. dissertation, Oklahoma State University, 1971), pp. 60-65.

Kiesling found that when program areas were rank ordered, coordinating and advising the young-farmer organization ranked low. He concluded that this was a program area never really accepted by the teachers.

Beeman studied perceptions of teachers, administrators, and the lay public concerning the changing role of the vocational agriculture teacher. He prepared a comprehensive list of statements indicating the role of the teacher. Beeman attempted to measure the extent of agreement and/or disagreement within and between the groups. He found that:

1. Teachers were in agreement with the role of advising the FFA, and they agreed that the teacher should not advise other youth organizations.
2. Teachers held the greatest consensus concerning the secondary instructional program.
3. Teachers disagreed with the proposed name change of the FFA.
4. Teachers were in general agreement as to who should be the out-of-school clientele.[1]

Beeman's study is very consistent with many others. Vocational agriculture teachers are very traditional and conservative, as indicated by many studies. Generally, the literature suggested that

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[1]Carl E. Beeman, "Perceptions of School Administrators, Vocational Agriculture Teachers, and Members of the Lay Public Concerning the Changing Role of Vocational Agriculture in Mississippi" (Ph.D. dissertation, Cornell University, 1967), pp. 55-83.

vocational agriculture teachers are basically concerned with the success of their individual program.

Byler's findings were generally in agreement with those of Beeman. Byler studied the role of the vocational agriculture teacher as a community leader of agriculture. One objective of the study was to analyze factors inhibiting or enhancing this role. Byler concluded that:

1. Teachers' responses suggested that the vocational agriculture instructor has a role as community leader in agriculture, and resources and time should be allocated to perform this role.
2. Teachers should assist in making the community a better place to live and place a high priority on community involvement.
3. Teachers' role as a community leader is inhibited if assigned classes other than vocational agriculture, have more than four class preparations per day, or have more than 60 students enrolled in the program.
4. The most important variable perceived to enhance this role was community support; therefore, the teacher must develop good public relations for the program.[1]

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[1]Ben L. Byler, "The Role of the Vocational Agriculture Instructor as a Community Leader in Agriculture," The Journal of the American Association of Teacher Educators in Agriculture 23 (November 1982): 64-65.

Byler's conclusions seem to indicate that there is a need for the vocational agriculture teacher to become deeply involved with all aspects of his/her program. However, he did not imply that the teacher should not be concerned with the total educational program being implemented at the institution at which he/she is employed.

## The Role of Women as Agriculture Teachers

The role of women in vocational agriculture has received a tremendous amount of attention in the last several years. The original Smith-Hughes Act specifically stated that farm boys were to be the secondary clientele, and the term "male teachers" was not specifically stated but was a foregone conclusion. Later legislation such as the Vocational Education Amendments of 1968 and 1976 clarified and expanded the program of vocational agriculture. The Amendment of 1976 specifically stated that the vocational programs should eliminate sex discrimination and sex stereotyping and provide opportunities for women in vocational education. The literature suggests that vocational agriculture teachers are traditional and generally resist change. This seems to be true at all levels of the vocational agriculture program. More recently, female students and teachers have become involved in the vocational agriculture program on a limited scale.

Ries and McCracken studied the relationship between perceived sex bias and women's decision to teach production agriculture. They surveyed three groups of females: secondary vocational agriculture

students, university vocational agriculture students, and production agriculture teachers. The conclusions of this study indicated that the decision of females at the secondary and university levels to teach may be influenced by their perceived sex bias/sex stereotyping by students and community, and in general. Females currently teaching indicated that job satisfaction was influenced by their perceived sex bias by students, community, teachers, and administrators. When female teachers were asked to indicate factors that cause the low number of female production agriculture teachers, they cited:

1. Lack of encouragement from teachers and counselors
2. Competition from industry
3. Lack of acceptance from the community
4. Lack of farming experience[1]

Although females are involved in the vocational agriculture program, Ries and McCracken indicated that barriers exist that prohibit their involvement on a larger scale. These barriers seem to be operating at different levels. The perceptions that females hold concerning role expectations of significant groups (i.e., community, students, administrators, teachers, and others) and the actual sex biases exhibited by these groups interact to form the current status of role perception of the teacher.

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[1]Ann E. Ries and J. David McCracken, Relationship of Perceived Sex Bias and the Decision of Women to Teach Production Agriculture (Columbus: The Ohio State University) (Bethesda, Md.: ERIC Document Reproduction Service, ED 187 950, 1980), pp. 10-12.

A similar study was conducted in Kansas. The purpose of this study was to determine if barriers exist that prohibit females from entering and advancing in the vocational agriculture program. The opinions of agriculture teachers, school administrators, and parents of vocational agriculture students were sought to determine if barriers exist for women as teachers and workers in agriculture. The conclusions of this study were:

1. Vocational agriculture teachers tend to be of the opinion that vocational agriculture teachers do not encourage both male and female students to enroll in vocational agriculture.
2. Agriculture students exhibit a slight tendency to be of the opinion that administrators do not encourage both males and females to enroll in vocational agriculture.
3. Vocational agriculture programs and vocational agriculture students tend to be of the opinion that students do not encourage both male and female students to enroll in vocational agriculture.
4. Vocational agriculture teachers exhibit a slight tendency to be of the opinion that parents do not encourage both male and female students to enroll in vocational agriculture.
5. All groups tend to exhibit support of employment opportunities for females when considered as a concept.
6. All investigated groups exhibit support for female enrollment in vocational agriculture courses.
7. All investigated groups exhibit a preference for male workers in agricultural occupations.
8. Students tend to exhibit the opinion of being opposed to females teaching vocational agriculture.[1]

The conclusions of this study confirmed those of Ries and McCracken. Significant groups supported the concept of equity of females in the vocational agriculture program but failed to express

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[1]John D. Parmley, Richard F. Welton, and Michelle Bender, Opinions of Agriculture Teachers, School Administrators, Students, and Parents Concerning Females as Agriculture Students, Teachers, and Workers in Agriculture (Manhattan: Kansas State University) (Bethesda, Md.: ERIC Document Reproduction Service, ED 209 488, 1980), p. 35-37.

their support in role performance. If we give credence to Bible and McComas, then we can say that the concept is not fully accepted. They suggested that role perception and role performance are directly related.

Kluckman conducted a study of the nontraditional and traditional role selection of males and females. She stated that government has never legally restricted career choice, but society has in relation to sex. The conclusions of Kluckman's study were basically consistent with many others. Her conclusions provide a model for program development that will assist in the elimination of sex discrimination in the vocational agriculture program. Her conclusions were:

1. Recruitment programs for vocational agriculture teachers need to have a dual focus because of the similarities and differences identified as influential factors for traditional and nontraditional career role teachers. One focus could concentrate on developing materials and programs that would be appropriate for potential teachers on the basis of personal interest--a positive influential career choice factor for both male and female vocational agriculture teachers.
2. Address the male and female group separately through programs and materials that were directed toward the influential factors for which there were statistically significant differences, i.e., mother or mother figure and peer of the opposite sex for females, and high school courses, FFA, and vocational agriculture teachers for males.[1]

Kluckman's conclusions emphasized a deliberate effort on behalf of administrators, program developers, and teachers to initiate

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[1]Delores Kluckman, "Traditional and Nontraditional Career Role Vocational Agriculture Teacher Perception of Career Choice, Work Satisfaction, and Career Plans" (Ph.D. dissertation, Oregon State University, 1979), pp. 99-100.

activities that are designed to alleviate sex discrimination in the vocational agriculture program. The literature basically confirmed Kluckman's commitment to action because removal of barriers for females by chance does not occur.

Sex discrimination has been thoroughly documented in the literature on the vocational agriculture program. Some studies have attempted to determine its effect on females involved in the vocational agriculture program. Henderson attempted to determine if sex bias was a factor in vocational agriculture teachers' evaluation of the state FFA degree application. She found that although sex bias existed in certain phases of the vocational agriculture program, it is often overemphasized.[1] Henderson's conclusions are very important because, despite barriers in the vocational agriculture programs, may studies have indicated that female teachers do well and experience above-average job satisfaction.

Bass conducted a study to determine the attitudes of agricultural educators toward women as agriculture teachers in Pennsylvania. He concluded that female agriculture teachers perform well as teachers and should be encouraged to enter the profession. A summary of Bass's findings is as follows:

> Most respondents agreed that women could perform well in all areas except large animals (50%) and agricultural machinery (25.7%). The consensus of opinion of the respondents also indicated that women should not be limited to ornamental horticulture. While 95.7% of

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[1]Janet Henderson, "Sex Bias and Teacher Evaluation of State FFA Degree Applications," The Journal of the American Association of Teacher Educators in Agriculture 22 (July 1981): 45.

> the respondents felt that women had good classroom control, only 48.6% felt women could manage shop courses. Results also showed that 81.4% of respondents felt that women agriculture teachers could be accepted in the community.[1]

Barriers exist for females in the vocational agriculture program. The sources of these barriers seem to be: (1) traditionally inherent in the program, (2) role perceptions of expectations held by females for the position, (3) role perceptions held by others as perceived by females, and (4) role expectations of others as expressed in role performance as it relates to female incumbents for the position. Female agriculture teachers generally do well in the position and should be encouraged to enter the profession. One of the most frequently quoted statements seems to indicate that women are not encouraged to enter the profession. This seems to be the single factor most indicating sex bias as documented in the literature.

## Summary

The literature review suggested that there is no general role consensus among vocational agriculture teachers. The literature did indicate that there are some program areas that have greater consensus than others among the teachers. There is a general consensus on the role areas among teachers and educators that make up a total program of vocational agriculture. The instructional program is the area that has the greatest role consensus among the teachers. Adult-farmer education and FFA received mixed reviews from many studies. It is clear that

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[1]Herman M. Bass, "Women Agriculture Teachers," Agricultural Education (June 1977): 281.

these differences and/or consensus areas are related to the autonomous nature of the program, geographical location, and state in which the study was conducted. It is also clear that certain demographic variables such as age, school type, student enrollment, formal education of the teacher, and so on, affect teachers' role perceptions.

Drake suggested that role consensus is not necessarily good or bad as long as it does not affect the administrative structure and/or quality of the program. Bible and McComas suggested that role performance and job satisfaction are related to the teacher's role perception of the position. If we give credence to the analysis of Bible and McComas and Drake, it would lead one to conclude that role consensus is basically neutral regarding role performance, but an extreme lack of consensus can adversely affect teacher performance, teacher job satisfaction, and overall program quality. To insure quality for the clientele of the agriculture program, teacher perceptions must reach a balance between role consensus and lack of role consensus. This is especially important because, as Guba and Getzels indicated, role activities for a position are established before an actor is placed in the role. If the teacher is in disagreement as the actor, it is likely that this will be reflected in role performance.

The role of women in vocational agriculture is very limited, despite legislation designed to enhance opportunities. Although the current role is limited, it is improving and expanding. Women's performance is perceived to be equal to that of men, with the exception

of certain specified areas. Barriers for women exist, but the overall effect as it is related to performance, employment, advancement, and male-teacher acceptability has received mixed reaction in the literature.

# CHAPTER III

# METHODOLOGY

## Planning the Study

To conduct a study that is valid, reliable, and one that may be duplicated, acceptable research procedures and practices for survey studies should be used. This study was conducted according to accepted research procedures and practices for survey studies.

## Population Identification

The identification of the population was critical for planning this study. The population for this study included all production-agriculture and ornamental-horticulture teachers in Michigan who are receiving added-cost funding. Added-cost funding refers to the amount of money it cost to implement the vocational-agriculture program over and beyond that of a core curriculum course (i.e., math, science, social studies, English, etc.). Theoretically, these programs have salaried personnel, facilities, administrative support (local, state), and resources to conduct a program that will include instruction, supervised occupational experiences, and leadership-development activities as a part of the program. In the school year 1984-85, there were 128 production-agriculture teachers and 37 ornamental-horticulture

teachers in Michigan. There were 117 male (91.4 percent) production-agriculture teachers and 11 female (8.6 percent) production-agriculture teachers. In the same year (1984-85), there were 22 male (59.5 percent) and 15 female (40.5 percent) ornamental-orticulture teachers.

The Michigan Directory of Vocational Agriculture Teachers was used to identify all teachers in Michigan receiving added-cost funding for their programs. Richard Karelse, state supervisor of agricultural education in Michigan, identified 128 production-agriculture teachers and 37 ornamental-horticulture teachers in the teacher directory. He placed a "P" by the names of all production-agriculture teachers and an "H" by all ornamental-horticulture teachers.

Sample Selection

To obtain a more equitable comparison within and between the two groups of teachers, a variety of sampling techniques were used. A stratified sampling procedure and a random sampling technique were used to select the respondents in the production-agriculture group. Sax suggested that the stratified sampling technique be used when the respondents will be subgrouped based on such criteria as age, sex, and socioeconomic status.[1] Because sex is one of the independent variables being studied and the number of female production-agriculture teachers is small, the production teachers were grouped by sex. Sax also indicated that where populations are small and accessible, the total group may be studied. This study included 100 percent of the female (n = 11)

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[1]Gilbert Sax, Principles of Educational Measurement and Evaluation (Belmont, Calif.: Wadsworth Publishing Co., 1974), p. 436.

production-agriculture teachers. The male production-agriculture teachers were the largest group (n = 117); consequently, to obtain a more equitable comparison between the two groups, two-fifths (40 percent) of the production males (n = 48) were selected by systematic sampling. The procedure involved listing all of the production males alphabetically and systematically selecting every first and fourth person appearing on the list. Sax pointed out that selecting individuals by using alphabetical lists involves a small bias because individuals such as sisters, brothers, or individuals with certain names can affect the chances of each person being selected independently. Although this bias could possibly exist, Sax indicated that the usual results of this procedure yield the same outcome as simple random sampling.[1]

Since the ornamental-horticulture teachers were small in number (n = 37) and accessible, a census was studied.

Developing the Instrument

A questionnaire instrument was developed to collect the data for this study. A partial review of the literature provided the theoretical basis for the initial items that were used to start the instrument. There is considerable documentation in the literature citing the role of the teacher of agriculture in the United States. The vocational-agriculture teacher is a "teacher," which makes him/her part of the educational institution, and he/she is also a vocational

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[1]Ibid.

teacher, which qualifies his/her role as a teacher in the educational institution. Two basic principles cited in the literature were used to select the initial items: (1) role activities of the regular classroom teacher as defined by professional educators and (2) role activities deemed to make instruction vocational, as defined by professional vocational educators. Stiles defined the role of the teacher as one that involves activities concerned with directing learning and mediating the culture.[1] Terrien defined the role of the teacher as being the "housewives of the culture" and that of imparting knowledge.[2] Wenrich and Wenrich defined vocational instruction as those activities concerned with the development of manual and mental capacities of the person, as well as the values and attitudes. They proposed that vocational instruction includes the cognitive, the affective, and the psychomotor elements of behavior needed to develop a competent worker.[3] Evans and Herr defined vocational instructions as those concerned with providing education for individuals that will render an individual employable. While these instructions are designed for employment

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[1]Lindley J. Stiles, ed., The Teacher's Role in American Society (New York: Harper & Brothers, Publishers, 1957), pp. 73-80.

[2]Frederic W. Terrien, "The Occupational Roles of Teachers," The Journal of Educational Sociology 29 (September 1955): 20.

[3]Ralph C. Wenrich and J. William Wenrich, Leadership in Administration of Vocational and Technical Education (Columbus, Ohio: Charles E. Merrill Publishing Co., 1974), p. 8.

purposes, they are usually less than a baccalaureate degree and are ultimately interwoven with general education.[1]

A Likert scale was the technique selected to measure the respondents' answers. Borg and Gall stated that "Likert scales are probably the most common type of attitude scales constructed."[2] The scale consisted of five responses. While (1) was used to indicate an activity that "definitely should not be done," a response of (5) would indicate that the activity definitely should be done.

The following procedures were used to improve, clarify, validate, and establish the reliability of the instrument:

1. develop a jury
2. pilot test the instrument
3. Cronbach alpha test for reliability (post hoc)

The purpose of the jury was to validate the role activities and to assist in the improvement of the overall quality of the instrument. The jury consisted of four professional educators. Two of these people were selected from the Department of Teacher Education, Michigan State University, and two were selected from the Department of Agricultural and Extension Education, Michigan State University. The selection was based on the following minimum criteria:

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[1]Rupert N. Evans and Edwin L. Herr Foundations of Vocational Education (Columbus, Ohio: Charles E. Merrill Publishing Co., 1978), p. 3.

[2]Walter R. Borg and Meredith D. Gall, Educational Research: An Introduction, 3rd ed. (New York: Longman, Inc., 1979), p. 299.

1. a minimum of five years' classroom experience (elementary or secondary)
2. a minimum of ten years' experience in teacher education
3. presently an active participant in the profession
4. a minimum of four publications in the area of teacher education in a refereed journal or book

Once these persons were identified, each one was given a cover letter (see Appendix A), a copy of research purposes/objectives, and a copy of the instrument. The investigator visited with each person after he/she had reviewed the instrument and solicited their input. The instrument at this stage was prepared for pilot testing.

Borg and Gall indicated that a questionnaire should be pretested with a group similar to the group one wishes to research. The individuals used in the pretesting should not be a part of the group studied.[1] This posed a slight problem for selecting ornamental-horticulture teachers. Because this group was small (37 teachers), a census was selected for the study. As a result of consultation with committee members, it was decided that four vocational-agriculture teachers would be sufficient for a pretesting group, two production agriculture and two ornamental horticulture. The criteria for selection were as follows:

1. a minimum of three years' classroom experience
2. recommendation from V-TEST coordinator (competent teacher)

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[1]Ibid., p. 301.

Two production teachers were selected after the sample selection, and two ornamental-horticulture teachers were identified with assistance from Richard Karelse, state supervisor of agricultural education. As a result of the pretest, the following changes were made on the instrument:

1. decreased the number of role-activity items from 103 to 80
2. added a part to the instrument to determine the frequency of execution of the role activities
3. added a part to determine percentage of time each teacher allocated to each program area
4. added a part to determine the importance the teachers attached to each role area

The final draft of the instrument consisted of eight parts (Parts A through I). Part A was concerned with collecting demographic data, and Parts B through I were concerned with the role-activity areas and consisted of 80 total role activities. The instrument also provided space for the collection of data concerning (1) frequency of execution of role activities, (2) time allocated for each program area, and (3) importance each teacher attached to each program area (B through I).

A post-hoc reliability testing procedure was carried out using Cronbach's alpha. Reliability coefficients were calculated for each part of the instrument (B through I) for the role-perception responses

and the frequency of execution responses. These coefficients are shown in Table 1.

Table 1.--Post-hoc reliability test results.

| Instrument Category | Program Area | Role Perception | Role Execution |
|---|---|---|---|
| B | Planning and Implementing the Instructional Program for Secondary Students | .80 | .62 |
| C | Advising Youth Organization | .97 | .96 |
| D | Supervising the Occupational Experience Program | .89 | .84 |
| E | Guidance and Counseling | .83 | .71 |
| F | Planning and Implementing the Adult Instructional Program | .90 | .93 |
| G | Working as an Educational Leader in the Community | .87 | .83 |
| H | Working as a Member of a Professional Staff | .87 | .82 |
| I | Working as a Member of the Profession | .88 | .83 |

The reliability coefficients for the different sections were relatively high. All of the reliability coefficients for all sections (B through I) of the instrument were .83 or higher, with the exception of .61 (execution) for planning and implementing the instructional program for secondary students and .71 (execution) for guidance and counseling. The two highest reliability coefficients were .97

(perception) for advising the youth organization and .96 (execution) for advising the youth organization. The reliability coefficient for the overall perceptions section of the instrument was .96, and .93 for the frequency of execution. While Borg and Gall indicated that some studies can be conducted satisfactorily with a reliability of .75,[1] these values were much higher. Borg indicated that attitude scales with a reliability coefficient of .79 are considered to be in the median range, and coefficients of .98 are considered to be high on the attitude scale.[2] Thus, according to Borg and others, the reliability of this instrument is high.

## Conducting the Study

### Securing Responses

Three sets of mailing labels were secured from the Department of Agricultural and Extension Education at Michigan State University. The mailing labels contained all of the names and addresses of vocational-agriculture teachers in Michigan. One set was used for the initial mailing, and the other two were used for thank-you and follow-up purposes. The first set of questionnaires was mailed with a cover letter to all respondents identified in the study (see Appendix A). The cover letter was endorsed by the Chairman of the Department of Agricultural and Extension Education and a prominent teacher educator

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[1]Ibid., p. 228.

[2]Walter Borg, Applying Educational Research: A Practical Guide for Teachers (New York: Longman, Inc., 1981), p. 98.

in the department. All respondents were asked to return the questionnaire in a preaddressed stamped envelope that was included in the initial mailing. To facilitate follow-up, a three-digit number was written on the upper-right-hand corner of each instrument.

The first set of questionnaires was mailed on November 19, 1984. The response to the first mailing was 49 percent. A thank-you/reminder letter was mailed to all respondents on December 4, 1984. The second mailing increased the response rate to 63 percent. On December 11, 1984, the researcher randomly called nonrespondents and mailed a second follow-up letter along with another copy of the instrument. This increased the overall response rate to 80 percent. Two of the instruments were unusable and one was returned incomplete because the teacher indicated he was no longer teaching vocational agriculture. This brought the total rate of usable instruments to 78 percent. This is within the suggested range indicated by experts. Borg indicated that a minimum of 70 percent is needed to place confidence in the findings.[1] Wiersma suggested that a 75 percent response is sufficient to generalize the findings to the population.[2] Kerlinger suggested that a minimum of 80 percent is needed to generalize the findings.[3] Table 2 shows the number of respondents by position group.

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[1]Ibid., p. 86.

[2]William Wiersma, Research Methods in Education (Itasca, Ill.: E. E. Peacock Publishers, Inc., 1975).

[3]Fred N. Kerlinger, Foundations of Behavior Research, 2nd ed. (New York: Holt, Rinehart, and Winston, 1973), p. 414.

Table 2.--Number of respondents by position group.

| Position Group | Unusable | Usable | Surveyed | % Usable |
|---|---|---|---|---|
| Production agriculture | 1 | 37 | 59 | 49% |
| Ornamental horticulture | - | 27 | 37 | 28% |
| Unidentified | 2 | -- | -- | -- |
| Total | 3 | 74 | 96 | 77% |

## Processing the Data

After visually inspecting all of the instruments, it was necessary to make certain changes and additions with two of the demographic variables. Student enrollment was one of the demographic variables that was changed. After inspecting the instruments, it was necessary to combine and enlarge some of the categories (see Appendix A). This made it necessary to seek additional information concerning individual school enrollment. Information concerning high school enrollment was located in the office of the Michigan High School Athletic Association in East Lansing. Information concerning area center enrollment was found at the Michigan Department of Education, Division of Vocational Education. Information concerning school community classification was also added to the instrument and was taken from a document produced by the State Department of Education (see Appendix A).

The data were processed by the Scoring Office at the Michigan State University Computer Center. The data were then analyzed by using the Statistical Package for the Social Sciences (SPSS) computer program.

## Summary

This chapter dealt with the procedures used for planning and conducting this study. Relevant documents pertaining to this chapter have been placed in the appendix. Chapter IV presents the findings of the data analysis.

# CHAPTER IV

## ANALYSIS AND PRESENTATION OF FINDINGS

This chapter presents the analysis of data concerning role perception, role execution, time allocated to each program area, and the importance attached to each area. The data analysis is based on eight program areas consisting of 80 role activities. The position groups (production agriculture and ornamental horticulture) were analyzed and compared on the eight areas and 80 role activities. The groups were compared generally and specifically. They were compared generally to determine if differences existed between them regarding overall responses without any other variables being introduced. They were compared specifically to determine if differences, if they existed, could be attributed to selected independent variables.

### Relevant Research Questions

It seems appropriate at this time to state relevant research questions under consideration by the researcher.

1. Are there differences between production-agriculture and ornamental-horticulture teachers concerning the perceptions held for the position?

2. Are there differences between production-agriculture and ornamental-horticulture teachers concerning the execution of role activities?

3. Are there differences between production-agriculture and ornamental-horticulture teachers concerning time allocated to each program area?

4. Are there differences between production-agriculture and ornamental-horticulture teachers concerning the importance attached to each program area?

5. Are there differences between production-agriculture and ornamental-horticulture teachers concerning role perceptions held that can be attributed to teacher characteristics (i.e., sex, age, degree earned, and teaching experience--hereafter referred to as teacher characteristics)?

6. Are there differences between production-agriculture and ornamental-horticulture teachers concerning role perceptions held that can be attributed to school characteristics (i.e., student enrollment, school type, and school community classification--hereafter referred to as school characteristics)?

7. Are there differences between production-agriculture and ornamental-horticulture teachers concerning role execution that can be attributed to teacher characteristics?

8. Are there differences between production-agriculture and ornamental-horticulture teachers concerning role execution that can be attributed to school characteristics?

9. Are there differences between production-agriculture and ornamental-horticulture teachers concerning time allocated to each program area that can be attributed to teacher characteristics?

10. Are there differences between production-agriculture and ornamental-horticulture teachers concerning time allocated to each program area that can be attributed to school characteristics?

## Characteristics of the Respondents in the Position Groups

The respondents were grouped and are described in the following paragraphs according to the following characteristics: (1) teacher type, (2) sex, (3) age, (4) degree earned, (5) teaching experience, (6) student enrollment, (7) type of school, and (8) school community classification.

The data in Table 3 indicate the teacher type and sex. The ornamental-horticulture teachers made up 36.5 percent of the total group, while 63.5 percent of the total group were production-agriculture teachers. The percentages of male and female horticulture teachers were basically the same, 55.6 and 44.4 percent, respectively. The production males composed 51.4 percent of the total group and 80.9 percent of the production teachers. It was very apparent that the production females made up the smaller group. The female production teachers made up 12.2 percent of the total group and 19.1 percent of the production group. It should be noted that 100 percent of the production females and horticulture teachers were included in this study.

Table 3.--Teacher type and sex.

| | Male | | Female | | Total | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| Ornamental horticulture | 15 | 28.3 | 12 | 57.1 | 27 | 36.5 |
| Production agriculture | 38 | 71.7 | 9 | 42.9 | 47 | 63.5 |
| Total | 53 | 100.0 | 21 | 100.0 | 74 | 100.0 |

The age of the respondents is presented in Table 4. The age distribution of the two groups was varied. There were no horticulture teachers under 25 years of age, while there were six production teachers. Sixty-six and three-tenths percent of the total group were less than 40 years of age. Seventy-four percent of the ornamental-horticulture teachers were less than 40 years of age. Sixty-one and seven-tenths percent of the production teachers were less than 40 years of age. Only 20.3 percent of the total group were 45 years or older. Overall, the group of teachers studied was relatively young.

Table 5 presents data concerning the level of formal education of the teacher groups. This table indicates that 43 percent of the teachers studied held a master's degree. It is interesting that 51.4 percent of the total group had a bachelor's degree. Seventy-one and one-tenth percent of the teachers holding the bachelor's degree were production-agriculture teachers. Three teachers held the education specialists degree, and no teachers held the doctorate degree.

Table 4.--Age and position group.

| Age | Horticulture | | Production | | Total | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| 25 or under | 0 | 0.0 | 6 | 12.8 | 6 | 8.1 |
| 26-29 | 3 | 11.1 | 8 | 17.0 | 11 | 14.9 |
| 30-34 | 12 | 44.4 | 7 | 14.9 | 19 | 25.7 |
| 35-39 | 5 | 18.5 | 8 | 17.0 | 13 | 17.6 |
| 40-44 | 3 | 11.1 | 7 | 14.9 | 10 | 13.5 |
| 45-49 | 1 | 3.7 | 3 | 6.4 | 4 | 5.4 |
| 50-54 | 1 | 3.7 | 3 | 6.4 | 4 | 5.4 |
| 55 and over | 2 | 7.4 | 5 | 10.6 | 7 | 9.5 |
| Total | 27 | 100.0 | 47 | 100.0 | 74 | 100.0 |

Note: Some of the percentage columns were rounded off to the nearest hundredth.

Table 5.--Level of formal education by position group.

| Level of Education | Horticulture | | Production | | Total | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| Less than a bachelor's | 1 | 3.7 | 0 | 0.0 | 1 | 1.4 |
| Bachelor's | 11 | 40.7 | 27 | 57.4 | 38 | 51.4 |
| Master's | 13 | 48.1 | 19 | 40.4 | 32 | 43.2 |
| Ed. Specialist | 2 | 7.4 | 1 | 2.1 | 3 | 4.1 |
| Doctorate | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Total | 27 | 100.0 | 47 | 100.0 | 74 | 100.0 |

Table 6 presents data concerning teaching experience. Thirty-three and eight-tenths percent of the teachers had 15 years or more teaching experience. Fifty-two and seven-tenths percent of the total

group of teachers had less than ten years of teaching experience. Forty-eight and one-tenth percent of the horticulture teachers had five to nine years of teaching experience, which made up the largest category for horticulture teachers. The production teachers were basically evenly distributed throughout all of the categories. When the two groups were compared, it was evident that the production teachers were more experienced.

Table 6.--Years of teaching experience.

| Years of Experience | Horticulture | | Production | | Total | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| 0 years | 0 | 0.0 | 3 | 6.0 | 3 | 4.1 |
| 1-4 years | 4 | 14.8 | 8 | 17.0 | 12 | 16.2 |
| 5-9 years | 13 | 48.1 | 11 | 23.4 | 24 | 32.4 |
| 10-14 years | 6 | 22.2 | 4 | 8.5 | 10 | 13.5 |
| 15-19 years | 1 | 3.7 | 10 | 21.3 | 11 | 14.9 |
| 20 and over | 3 | 11.1 | 11 | 23.4 | 14 | 18.9 |
| Total | 27 | 100.0 | 47 | 100.0 | 74 | 100.0 |

Table 7 presents data concerning student enrollment by position group. The data concerning student enrollment were very interesting when the two position groups were compared. As the researcher expected, most production programs were in smaller schools, and ornamental-horticulture programs were located in larger schools. Sixty-eight percent of the production teachers were found in schools that had 749 or fewer students. It was also interesting that 38

percent of all production teachers were in schools that had fewer than 500 students, while 59.2 percent of all horticulture teachers were employed in schools having 1,000 or more students.

Table 7.--Student enrollment by position group.

| Student Enrollment | Horticulture | | Production | | Total | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| 0- 249 | 0 | 0.0 | 6 | 12.8 | 6 | 8.1 |
| 250- 499 | 0 | 0.0 | 18 | 38.3 | 18 | 24.3 |
| 500- 749 | 4 | 14.8 | 8 | 17.0 | 12 | 16.2 |
| 750- 999 | 7 | 25.9 | 10 | 21.3 | 17 | 23.0 |
| 1,000-1,249 | 6 | 22.2 | 1 | 2.1 | 7 | 9.5 |
| 1,250-1,499 | 2 | 7.4 | 1 | 2.1 | 3 | 4.1 |
| 1,500-1,999 | 3 | 11.1 | 2 | 4.3 | 5 | 6.8 |
| 2,000-2,499 | 4 | 14.8 | 1 | 2.1 | 5 | 6.8 |
| 2,500 or more | 1 | 3.7 | 0 | 0.0 | 1 | 1.4 |
| Total | 27 | 100.0[a] | 47 | 100.0 | 74 | 100.0[a] |

[a]Rounded off to the nearest hundredth.

Table 8 presents data concerning the school type by position group. According to these data, 77.8 percent of all ornamental-horticulture teachers were located in area vocational education centers, and 91.5 percent of all production teachers were located in high schools. There were three teachers who worked at both high schools and area vocational education centers.

Table 9 presents data concerning school community classification by position group. Sixty-five and two-tenths percent of the production teachers were employed in rural communities, while 92.5 percent of all

horticulture teachers were employed in urban areas. There were no production teachers in the metropolitan category, while 37.0 percent of all horticulture teachers were in this category. Only two horticulture teachers (7.4 percent) were employed in the rural category.

Table 8.--School type by position group.

| School Type | Horticulture | | Production | | Total | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| Area center | 21 | 77.8 | 2 | 4.3 | 23 | 31.1 |
| High school | 5 | 18.5 | 43 | 91.5 | 48 | 64.9 |
| Both of above | 1 | 3.7 | 2 | 4.3 | 3 | 4.1 |
| Total | 27 | 100.0 | 47 | 100.0[a] | 74 | 100.0[a] |

[a]Rounded off to nearest hundredth.

Table 9.--Community classification by position group.

| Type of Community | Horticulture | | Production | | Total | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| Metropolitan | 10 | 37.0 | 0 | 0.0 | 10 | 13.7 |
| City | 6 | 22.2 | 2 | 4.3 | 8 | 11.0 |
| Town | 4 | 14.8 | 12 | 26.1 | 16 | 21.9 |
| Urban fringe | 5 | 18.5 | 2 | 4.3 | 7 | 9.6 |
| Rural | 2 | 7.4 | 30 | 65.2 | 32 | 43.8 |
| Total | 27 | 100.0[a] | 46 | 100.0[a] | 73 | 100.0 |

[a]Rounded off to the nearest hundredth.

## Hypothesis Testing

The statistics used for hypothesis testing were multivariate analysis of variance (one-way, two-way), univariate analysis of variance, and means. Hays suggested that multivariate analysis of variance can be used when the researcher would like to analyze more than one dependent variable at one time. He suggested that univariate analysis of variance can be used to analyze several dependent variables by one independent variable. This research involved eight dependent variables. It was deemed appropriate to use multivariate analysis of variance and univariate analysis of variance because the research design called for analysis that involved one independent variable by several dependent variables and one or two independent variables by several dependent variables. Hays also indicated that by using multivariate analysis instead of a series of univariate analyses of variance the researcher decreases the chance of Type I error in hypothesis testing.[1]

Kerlinger suggested that multivariate analysis of variance can be used if the researcher desires to analyze several dependent variables by several independent variables at the same time. He also indicated that this technique is superior to univariate analysis of variance when the researcher has more than one dependent and one independent variable that are to be analyzed simultaneously. Kerlinger also concurred with Hays in that this method (multivariate) decreases

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[1]William L. Hays, Statistics, 3rd ed. (New York: Holt, Rinehart, and Winston, 1981), pp. 430, 531.

the chance of Type I error versus one using a series of univariate analyses.[1] The univariate analysis is employed after each multivariate analysis to detect specific areas of differences.

Blommers, Forsyth, and others agreed that means can be used to measure differences between groups.[2] Means were used in this study to measure differences between the teachers on one part of the data (importance attached to the program).

One-way MANOVA was employed to test Hypotheses 1, 9, and 17. The twenty-fifth hypothesis was tested by establishing a significance level using means. Multivariate analysis of variance (two-way) was used to test the remaining hypotheses.

The dependent variables for this study included all the program areas listed on the survey instrument:

1. Planning and implementing the instructional program for secondary students
2. Advising youth organizations
3. Supervising occupational experience program
4. Guidance and counseling
5. Adult instructional program

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[1]Fred N. Kerlinger, Foundations of Behavioral Research, 2nd ed. (New York: Holt, Rinehart, and Winston, 1973), p. 149.

[2]Paul Blommers and Robert Forsyth, Elementary Statistical Methods (Atlanta: Houghton Mifflin Co., 1977), pp. 104-123.

6. Educational leader in community
7. Member of a professional staff
8. Member of the profession

The independent variables were teacher type, sex, age, degree earned, years of teaching experience, student enrollment, type school, and school community classification. Hypotheses 1, 9, 17, and 25 involved one independent variable (teacher type) tested by eight dependent variables (program areas). The remaining hypotheses involved two independent variables (teacher type x sex, age, etc.) and all eight dependent variables.

To develop a proper system for hypothesis testing, two interviews were conducted with Dr. Houang, professor and statistician at the Michigan State University Computer Center. Dr. Houang indicated that in order to test for the effect of teacher type simultaneously with another independent variable, a procedure should be used to test hypotheses in a specific sequence. He indicated that this type of design involves an interaction effect. Dr. Houang indicated that the interaction effect (teacher type x independent variable) should be tested first. If the interaction effect was significant, the researcher should stop the testing procedure for those two independent variables. If the interaction effect was <u>not</u> significant, the researcher should test for the effect of the independent variable (sex, age, student enrollment, etc.) alone. If the effect of the independent variable was significant, the testing should stop. If the effect of the variable was <u>not</u> significant, the researcher should test the main

effect. The main effect throughout this study was teacher type and was tested last in the testing sequence. This type of procedure was suggested because the cells were not independent and interaction effect may have confounded main effects. This also applied to the effect of the second independent variable as the effect of this variable may also have confounded main effects. This general model was followed throughout this chapter. It should be noted that there were special cases in which the researcher did not follow this model. The following model was used for testing hypotheses using two independent variables by eight dependent variables:

1. Interaction effect (teacher type x independent variable)
2. Main effect for independent variable
3. Main effect for teacher type

Hypotheses concerning role perception were tested first, role execution second, time allocation third, and the importance attached to the program fourth.

## Role Perception

Multivariate analysis of variance (one-way) was performed to determine the effect of teacher type by role perception.

### Primary Hypothesis

Ho 1: There is no difference between ornamental-horticulture and production-agriculture teachers concerning role perceptions held for the position of the vocational-agriculture teacher.

Table 10.--One-way multivariate analysis of variance for the effect of teacher type by role perception.

| Effect | F | df | Signif. of F | Test Name |
|---|---|---|---|---|
| Main (teacher type) | 10.27181 | 8,65 | 0* | Wilks |

*Significant at alpha < .05.

The multivariate analysis of variance test indicated that there was a significant difference between ornamental-horticulture and production-agriculture teachers when tested at alpha < .05. The critical value for the F-distribution was 10.27181 with a probability of 0. Thus, this led to rejection of the null hypothesis. The univariate analysis of variance shown in Table 11 indicated that the specific areas of difference were advising youth organizations and serving as an educational leader in the community. It was concluded that role perceptions held differed by position group.

Table 11.--Univariate F-test for the effect of teacher type by role perception.

| Effect | (MS) Between | (MS) Within | df | F | Signif. of F |
|---|---|---|---|---|---|
| Advising youth organizations | 29.76112 | .62049 | 1,72 | 47.96363 | 0* |
| Educational leader in community | 2.26902 | .53192 | 1,72 | 4.26572 | .04249* |

*Significant at alpha < .05.

Due to the rejection of the null hypothesis, the data were further analyzed by comparing the means of each program area in which differences were found. An examination of the mean scores for advising youth organizations revealed that production teachers had the higher mean (4.48), while horticulture teachers had the lower mean (3.16). The mean for production teachers was 1.32 higher than the mean for horticulture teachers. The means for the teachers' role as educational leader in the community revealed that the production teachers had the higher mean (3.98) while the horticulture teachers had the lower mean (3.61). The mean of the production teachers was .37 higher than the mean for horticulture teachers. (Means for all program areas may be examined in Appendix C.)

Multivariate analysis of variance (two-way) was performed to determine the effect of teacher type by sex with respect to role perceptions. Probability data concerning role perception by sex and all other independent variables may be found in Appendix B.

Secondary Hypothesis (Teacher Characteristic)

Ho 2: There is no difference in the role perceptions held between ornamental-horticulture and production-agriculture teachers based on sex.

Table 12.--Two-way multivariate analysis of variance significance test for the effect of teacher type by sex with respect to role perception.

| Effect | F | df | Signif. of F | Test Name |
|---|---|---|---|---|
| Main (teacher type) | 10.91471 | 8,63 | 0* | Wilks |

*Significant at alpha < .05.

The multivariate analysis of variance (two-way) indicated a significant main effect for teacher type when tested at alpha < .05. The critical value for the F-distribution was 10.91471 with a probability of 0. Thus, this led to the rejection of the null hypothesis. It was concluded that production males differed from horticulture males, and production females differed from horticulture females. The univariate analysis of variance shown in Table 13 indicated that the specific areas that differed were advising youth organizations and serving as an educational leader in the community.

Table 13.--Univariate F-test for the effect of teacher type by sex with respect to role perceptions held, main effect (teacher type).

| Effect | (MS) Between | (MS) Within | df | F | Signif. of F |
|---|---|---|---|---|---|
| Advising youth organizations | 29.76110 | .60580 | 1,70 | 49.12729 | 0* |
| Educational leader in community | 2.26902 | .54323 | 1,70 | 4.17687 | .04474* |

*Significant at alpha < .05.

Since the null hypothesis was rejected, the data for advising youth organizations and serving as educational leader in community were further analyzed by plotting the means (Figures 3 and 4). Production males (4.49) were higher than horticulture males (3.42), and production females (4.44) were higher than horticulture females (2.84). Overall, production teachers had the highest means and horticulture females had the lowest of the four groups. The means for educational leadership were plotted (Figure 4), and production males and females had the highest means. Production teachers had the highest mean (3.99), while horticulture females had the lowest.

Multivariate analysis of variance was performed to determine the effect of teacher type by age with respect to role perceptions held.

Secondary Hypothesis (Teacher Characteristic)

Ho 3: There is no difference in the role perceptions held between ornamental-horticulture and production-agriculture teachers based on age.

Table 14.--Two-way multivariate analysis of variance significance test for the effect of teacher type by age with respect to role perception.

| Effect | F | df | Signif. of F | Test Name |
|---|---|---|---|---|
| Main (teacher type) | 9.92398 | 8,52 | .00029* | Wilks |

*Significant at alpha < .05.

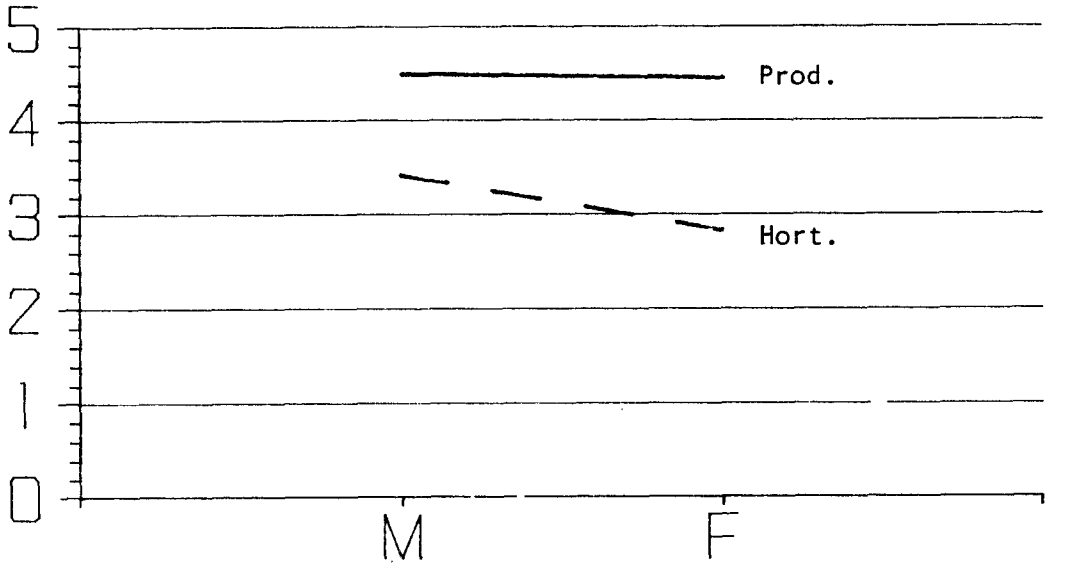



Figure 3.--Role perception: Advising youth organizations, by sex.

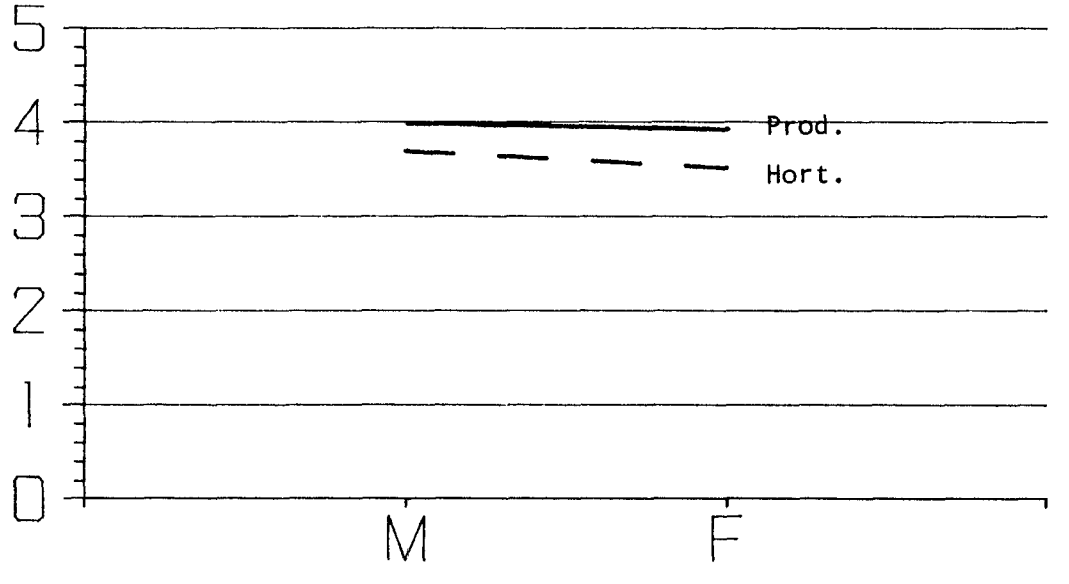



Figure 4.--Role perception: Educational leadership in the community, by sex.

The multivariate analysis of variance (two-way) indicated a significant main effect for teacher type when tested at alpha < .05. The critical value for the F-distribution was 9.92398 with a probability of .00029. The null hypothesis was rejected. It was concluded that teachers of the same age differed by position group. The univariate analysis of variance indicated that the position groups differed on advising youth organizations and serving as an educational leader in the community. These data may be examined in Table 15.

Table 15.--Univariate F-test for the effect of teacher type by age with respect to role perceptions held, main effect (teacher type).

| Effect | (MS) Between | (MS) Within | df | F | Signif. of F |
|---|---|---|---|---|---|
| Advising youth organizations | 29.76112 | .68320 | 1,59 | 43.56139 | .00012* |
| Educational leader in community | 2.26902 | .48676 | 1,59 | 4.66148 | .03492* |

*Significant at alpha < .05.

Due to the rejection of the null hypothesis, the data were further analyzed by plotting the means of each program area where differences were found (Figures 5 and 6). When the means were plotted for advising youth organizations (Figure 5), production teachers overall had the highest means. The production group aged 30-34 had the highest mean (4.78), while the 35-39 group had the lowest mean. The

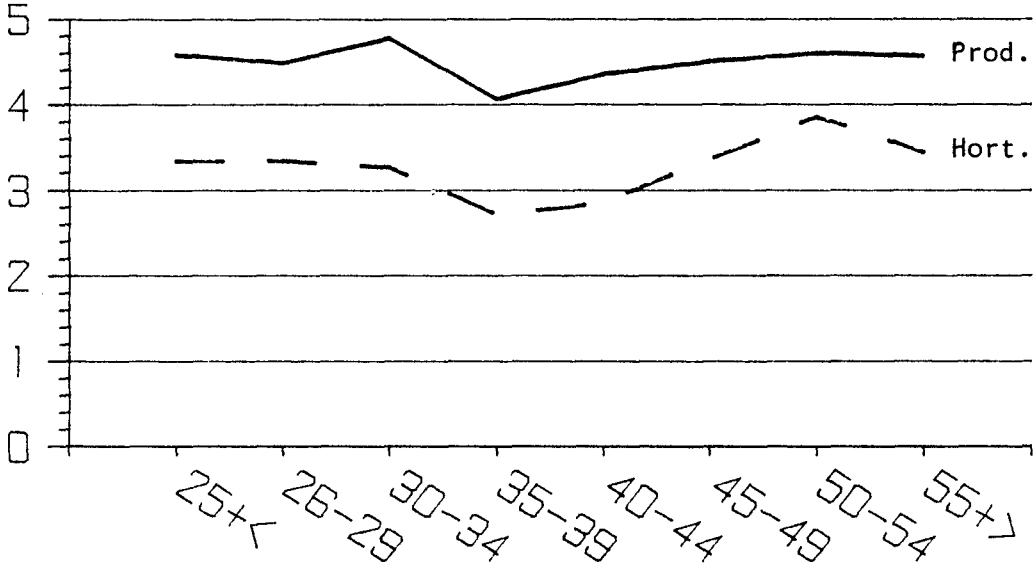



Figure 5.--Role perception: Advising youth organizations, by age.

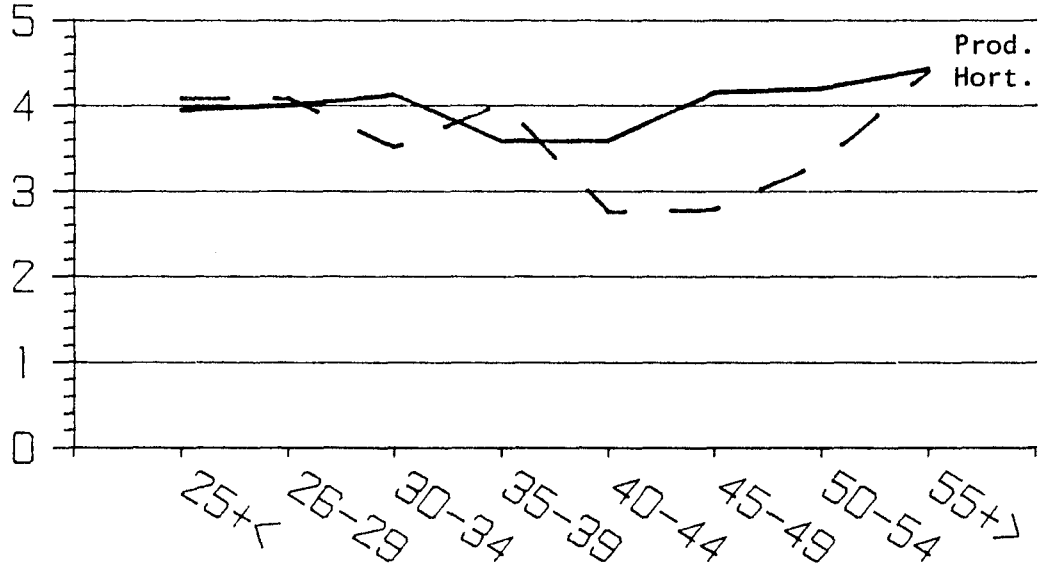



Figure 6.--Role perception: Educational leadership in the community, by age.

highest mean for the horticulture group was 3.87, held by the 50-54 year old group. It should be noted that only one person was in this group and that the largest group of horticulture teachers (n = 12) responding were 30-34 years of age. This group had a mean of 3.26. The second largest horticulture group (n = 5) had a mean of 2.72 and was 35-39 years of age. The 35-39 age group of horticulture teachers held the lowest mean. For both groups the respondents 35-39 years of age had the lowest means, with the production group being the higher of the two. The means for educational leadership were plotted (Figure 6), and only one age group (35-39 years) of horticulture teachers were higher than production teachers. The horticulture teachers in this group had a mean of 4.03, while the production teachers had a mean of 3.60. This was the lowest mean for any production group. The highest mean for the production group was 4.43, held by the 55> group, and this was also the horticulture group with the highest mean. The lowest mean for production teachers was 3.59, held by the 40-44 age group. These data may be examined by viewing Figure 6.

Multivariate analysis of variance was performed to determine the effect of teacher type by degree earned with respect to role perceptions held.

Secondary Hypothesis (Teacher Characteristic)

Ho 4: There is no difference in the role perceptions held between ornamental-horticulture and production-agriculture teachers based on degree earned.

Table 16.--Two-way multivariate analysis of variance significance test for the effect of teacher type by degree earned with respect to role perception.

| Effect | F | df | Signif. of F | Test Name |
|---|---|---|---|---|
| Main (degree earned) | 4.48186 | 24,174 | .00019* | Wilks |
| Main (teacher type) | 10.23509 | 8,60 | 0* | Wilks |

*Significant at alpha < .05.

The multivariate analysis of variance (two-way) indicated a significant main effect for degree earned and teacher type when tested at alpha < .05. The univariate F-test for degree earned indicated that there was a significant difference for the program area supervising the occupational experience program. After inspecting the means for this program area, the researcher decided that there was no real difference between the means and that the main effect of teacher type should be tested. The critical F-value for the main effect teacher type was 10.23509 with a probability of 0. Based on the results of this test, the null hypothesis was rejected. It was concluded that teachers differed by position group according to degree earned. The univariate analysis of variance indicated that the specific areas in which the teachers differed were advising youth organizations and serving as an educational leader in the community. These data may be examined in Table 17.

Table 17.--Univariate F-test for the effect of teacher type by degree earned with respect to role perceptions held, main effect (teacher type).

| Effect | (MS) Between | (MS) Within | df | F | Signif. of F |
|---|---|---|---|---|---|
| Advising youth organizations | 29.76112 | .63956 | 1,67 | 45.53355 | 0* |
| Educational leader in community | 2.26902 | .54609 | 1,67 | 4.15500 | .04546* |

*Significant at alpha < .05.

Due to the rejection of the null hypothesis, the data were further analyzed by plotting the means of each program area in which differences existed (Figures 7 and 8). When the means were plotted for advising the youth organization, the production teachers overall had the highest means. The highest mean for the production teachers was 4.87, and it was by the group holding the educational specialist degree. The lowest mean for the production group was 4.37, held by teachers holding the bachelor's degree. The highest mean for horticulture teachers was 3.75, held by teachers holding the educational specialist degree, and the lowest was 3.01, held by teachers with the master's degree. It should be noted that in all cases but one with both position groups means increased as degrees increased. The exception was the master's group of horticulture teachers, which declined from the bachelor's to the master's degree. Figure 7 presents these data. When the means were plotted for serving

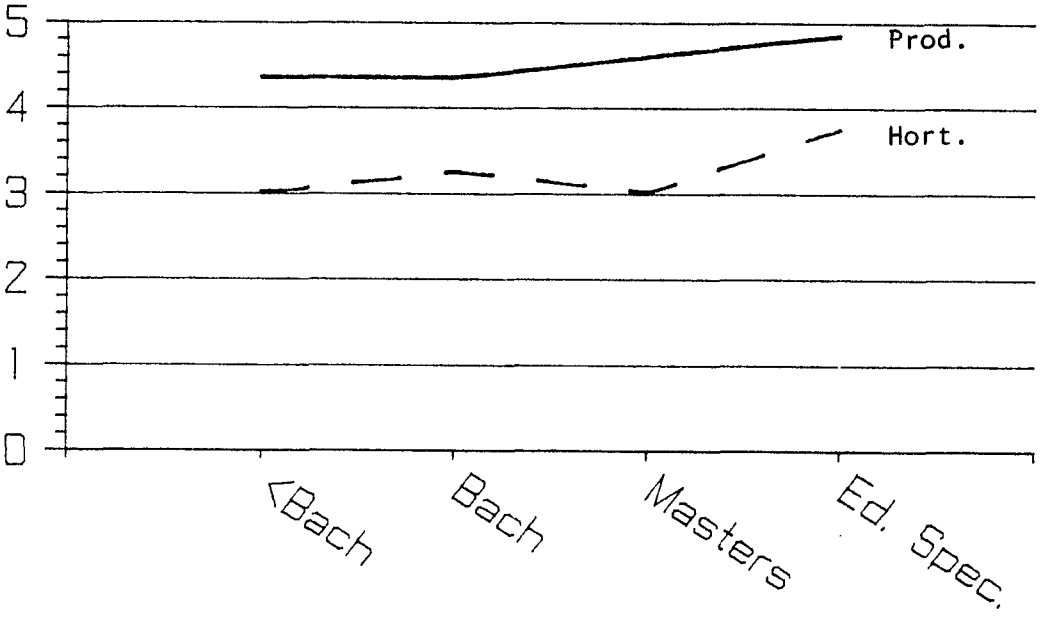



Figure 7.--Role perception: Advising youth organizations, by degree earned.

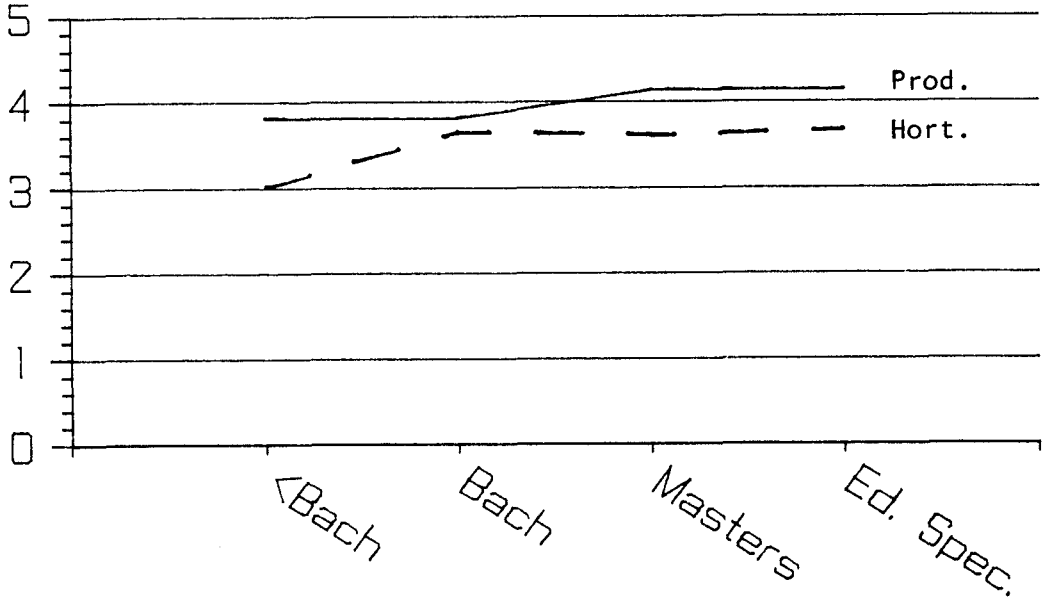



Figure 8.--Role perception: Educational leadership in the community, by degree earned.

as an educational leader in the community, production teachers generally had higher means for each degree area. There was basically no difference within position groups with higher degrees. The basic difference existed between groups which appeared to remain constant from one degree to the next. These data may be observed in Figure 8.

Multivariate analysis of variance (two-way) was performed to determine the effect of teacher type by years of teaching experience with respect to role perceptions held.

Secondary Hypothesis (Teacher Characteristic)

Ho 5: There is no difference in the role perceptions held between ornamental-horticulture and production-agriculture teachers based on years of teaching experience.

Table 18.--Two-way multivariate analysis of variance significance test for the effect of teacher type by years of teaching experience with respect to role perception.

| Effect | F | df | Signif. of F | Test Name |
|---|---|---|---|---|
| Main (teacher type) | 10.49385 | 8,56 | 0* | Wilks |

*Significant at alpha < .05.

The multivariate analysis of variance (two-way) indicated that there was a significant main effect for teacher type when tested at alpha < .05. The critical value for the F-distribution was 10.49385 with a probability of 0. The null hypothesis that there is no difference between the two groups based on years of teaching experience

was rejected. It was concluded that production teachers differed from horticulture teachers based on years of teaching experience. The univariate analysis of variance indicated that the specific areas of difference were advising youth organizations and serving as an educational leader in the community. Table 19 presents these data.

Table 19.--Univariate F-test for the effect of teacher type by years of teaching experience with respect to role perceptions held, main effect (teacher type).

| Effect | (MS) Between | (MS) Within | df | F | Signif. of F |
|---|---|---|---|---|---|
| Advising youth organizations | 29.76112 | .60326 | 1,63 | 49.33413 | 0* |
| Educational leader in community | 2.26902 | .50264 | 1,63 | 4.51423 | .03754* |

*Significant at alpha < .05.

Since the null hypothesis was rejected, the data were further analyzed by plotting the means of each program area showing a difference (Figures 9 and 10). When observing the means of advising youth organizations, it was noted that production teachers had the highest overall means. The production group with the highest mean (4.75) had zero years of teaching experience. The production group with the lowest mean (4.17) had 15-19 years of teaching experience. The horticulture group with the highest mean (4.15) had 1-4 years of teaching experience. The horticulture group with the lowest mean

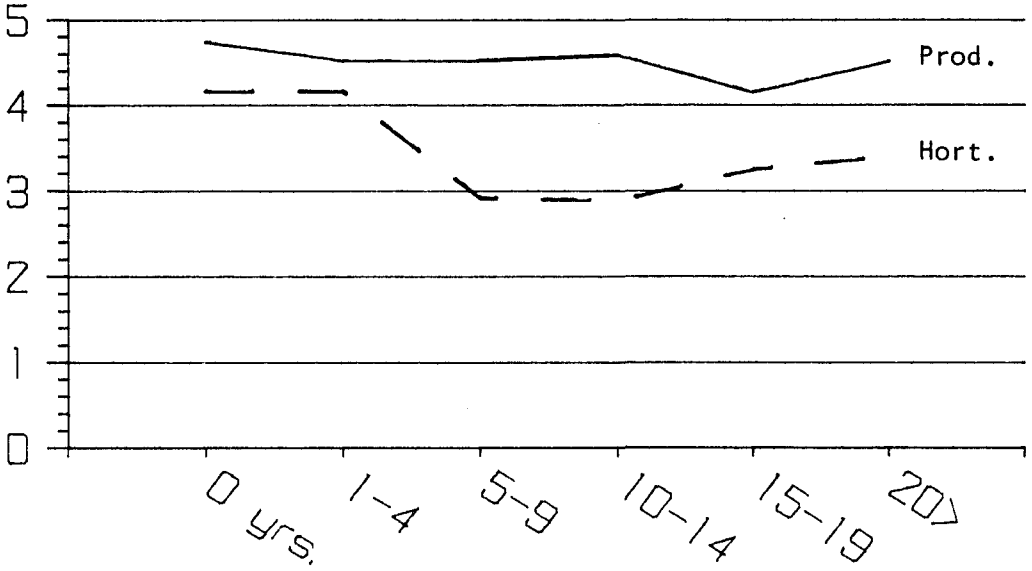



Figure 9.--Role perception: Advising youth organizations, by years of teaching experience.

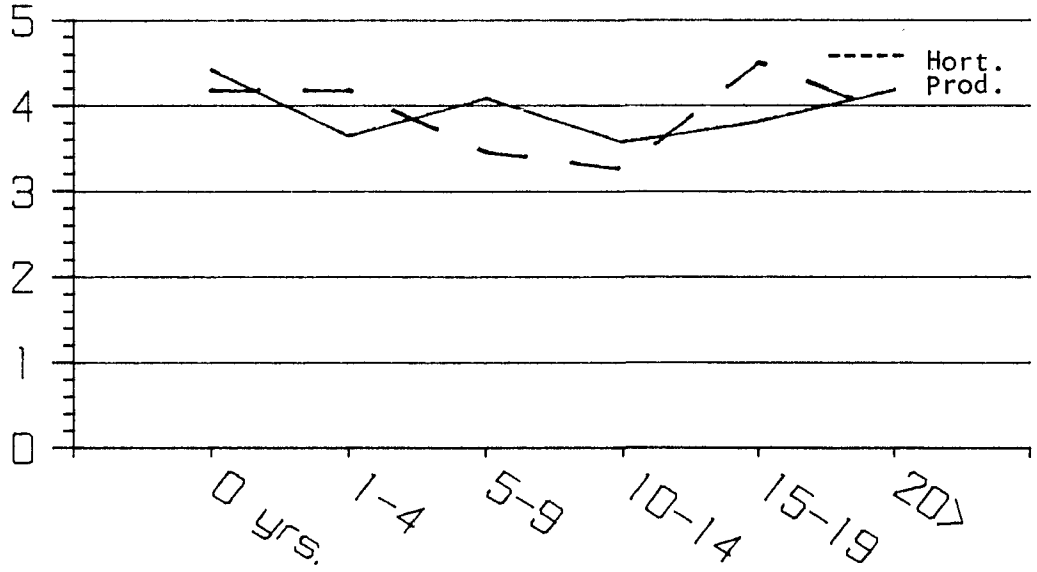



Figure 10.--Role perception: Educational leadership in the community, by years of teaching experience.

(2.89) had 10-14 years of teaching experience. The horticulture group with 5-9 years of teaching experience was very close to the group with 10-14 years of teaching experience, with a mean of 2.92. It seems that between 4 and 15 years of teaching experience role perceptions for advising youth organizations seem to decline. These data can be observed in Figure 9.

When examining the means concerning the teacher's role as an educational leader in the community, there seemed to be no set pattern. The means for both groups concerning this program area fluctuated as the years of teaching experience increased. The two lowest means (3.47 and 3.25) belonged to horticulture teachers with 5-9 and 10-14 years of teaching experience, respectively. The two highest means for horticulture teachers were 4.20 and 4.50 with 1-4 and 15-19 years of teaching experience, respectively. The two highest periods for production teachers were 0 years and 20> years, with means of 4.44 and 4.22, respectively. These data are presented in Figure 10 for examination.

A two-way multivariate analysis of variance was used to determine the effect of teacher type by student enrollment with respect to role perceptions held.

Secondary Hypothesis (School Characteristic)

Ho 6: There is no difference in the role perceptions held between ornamental-horticulture and production-agriculture teachers based on student enrollment.

Table 20.--Two-way multivariate analysis of variance significance test for the effect of teacher type by student enrollment with respect to role perception.

| Effect | F | df | Signif. of F | Test Name |
|---|---|---|---|---|
| Main (teacher type) | 10.49385 | 8,56 | 0* | Wilks |

*Significant at alpha < .05.

The two-way multivariate analysis of variance indicated a significant main effect for teacher type when tested at alpha < .05. The critical value for the F-distribution was 10.49385 with a probability of 0. Based on the preceding test, the null hypothesis that no difference exists between the two groups based on student enrollment was rejected. Therefore, it was concluded that the production teachers differed from horticulture teachers based on student enrollment.

The univariate F-test indicated that one program area was specifically affected by student enrollment, advising youth organizations. The significance level chosen for this test was < .05. Although role perceptions concerning the program area, serving as an educational leader in the community, were not significant, they were very close with a significance level of .05083. The researcher thought it would be wise to further explore the data concerning this area. The univariate data are displayed in Table 21.

Table 21.--Univariate F-test for the effect of teacher type by student enrollment with respect to role perceptions held, main effect (teacher type).

| Effect | (MS) Between | (MS) Within | df | F | Signif. of F |
|---|---|---|---|---|---|
| Advising youth organizations | 29.76112 | .55005 | 1,59 | 54.10610 | 0* |
| Educational leader in community | 2.26902 | .57094 | 1,59 | 3.97420 | .05083 |

*Significant at alpha < .05.

Since the null hypothesis was rejected, the data were further analyzed by plotting the means where differences were found (Figures 11 and 12). When the means for advising youth organizations were plotted, the production teachers generally had the higher means. The major exception between the two groups was located in schools with 1,250-1,499 students. This was the area where the means for horticulture teachers increased from the lowest of 2.25 to the highest of 4.68. This was also the only area where the mean of horticulture teachers exceeded that of the production teachers. It was at this point that the mean of production teachers reached its lowest point (2.87). These data are presented in Figure 11. When the means for serving as an educational leader in the community were plotted, they reacted almost identically to those for advising the youth organization. It is important to point out that 91.5 percent of the production programs were located in schools with student populations less than 1,250, and

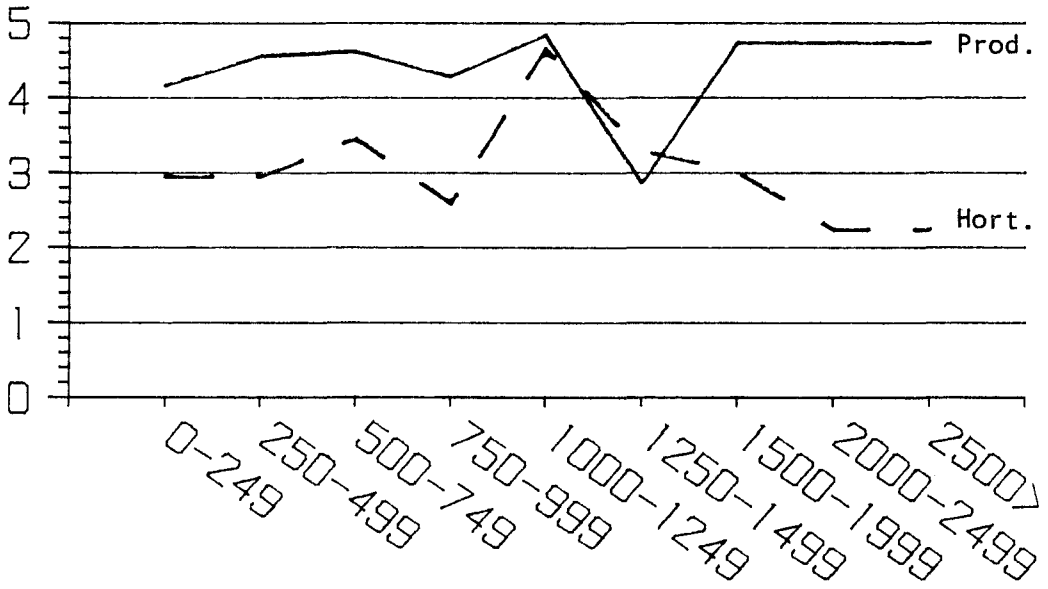



Figure 11.--Role perception: Advising youth organizations, by student enrollment.

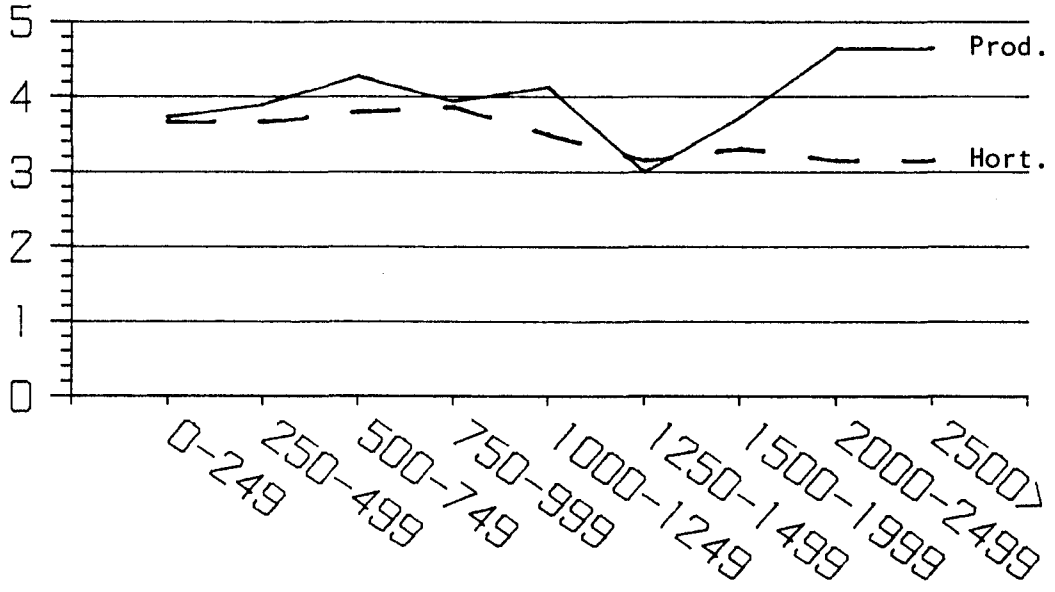



Figure 12.--Role perception: Educational leadership in the community, by student enrollment.

37 percent of the horticulture programs were located in schools with 1,250 or more students. Data concerning the role area serving as an educational leader in the community may be observed in Figure 12.

A two-way multivariate analysis of variance was used to determine the effect of teacher type by type school with respect to role perceptions held.

Secondary Hypothesis (School Characteristic)

Ho 7: There is no difference in the role perceptions held between ornamental-horticulture and production-agriculture teachers based on type school.

Table 22.--Two-way multivariate analysis of variance significance test for the effect of teacher type by type school with respect to role perception.

| Effect | F | df | Signif. of F | Test Name |
|---|---|---|---|---|
| Main (teacher type) | 10.05697 | 8,60 | 0* | Wilks |

*Significant at alpha < .05.

The two-way multivariate significance test indicated a significant main effect for teacher type when tested at alpha < .05. The critical F-value was 10.05697 and had a probability of 0. Based on the findings of this test, the null hypothesis was rejected. It was concluded that production teachers differed from horticulture teachers based on type school. The univariate analysis indicated that the two areas where differences existed were advising youth organizations and

serving as an educational leader in the community. Table 23 presents the univariate analysis.

Table 23.--Univariate F-test for the effect of teacher type by type school with respect to role perceptions held, main effect (teacher type).

| Effect | (MS) Between | (MS) Within | df | F | Signif. of F |
|---|---|---|---|---|---|
| Advising youth organizations | 32.14596 | .54439 | 1,67 | 59.04987 | 0* |
| Educational leader in community | 2.35357 | .50371 | 1,67 | 4.67249 | .03423* |

*Significant at alpha < .05.

Due to the rejection of the null hypothesis, the data were further analyzed by plotting the means of each area in which differences were found (Figures 13 and 14). Means concerning advising youth organizations indicated that production teachers recorded the highest means with area centers being the highest. Horticulture teachers at area centers recorded the lowest mean (3.08). These data can be examined in Figure 13. Production teachers had the highest means for serving as an educational leader in the community with area centers reporting the highest mean (4.50). Horticulture teachers in high schools recorded the lowest mean for this program area. These data can be examined in Figure 14.

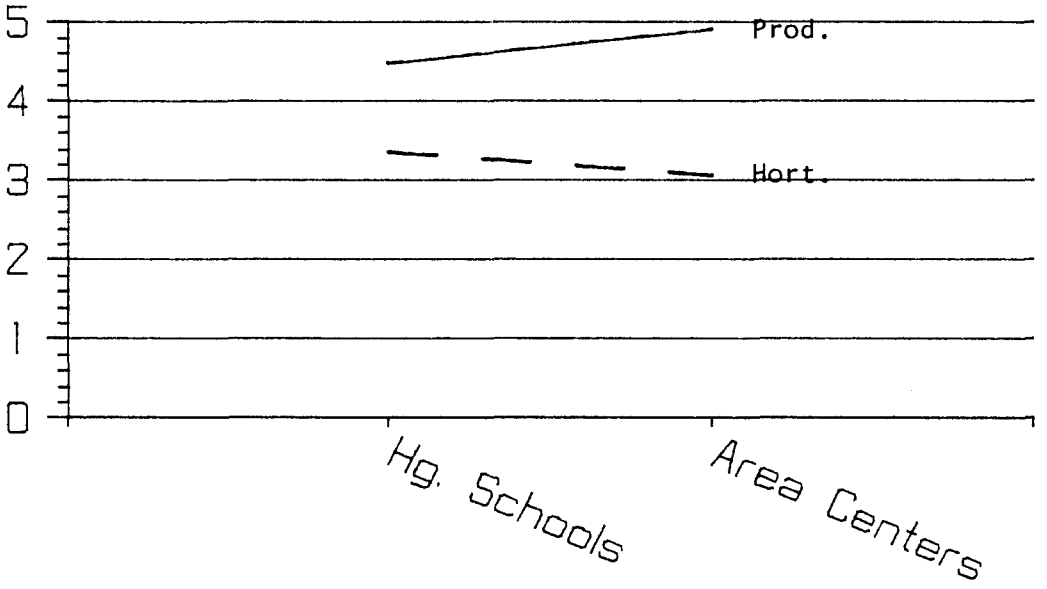



Figure 13.--Role perception: Advising youth organizations, by type school.

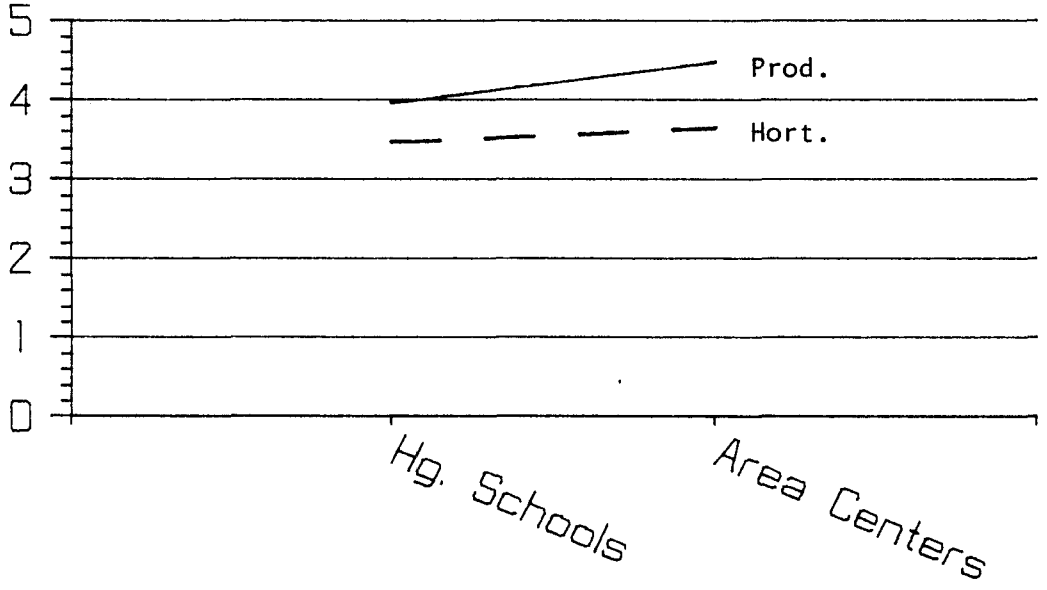



Figure 14.--Role perception: Educational leadership in the community, by type school.

A multivariate analysis of variance was performed to determine the effect of teacher type by school community classification with respect to role perceptions held.

Secondary Hypothesis (School Characteristic)

Ho 8: There is no difference in the role perceptions held between ornamental-horticulture and production-agriculture teachers based on school community classification.

Table 24.--Two-way multivariate analysis of variance significance test for the effect of teacher type by school community classification with respect to role perception.

| Effect | F | df | Signif. of F | Test Name |
|---|---|---|---|---|
| Main (teacher type) | 10.10836 | 8,57 | .000119* | Wilks |

*Significant at alpha < .05.

The multivariate analysis (two-way) indicated that there was a significant main effect for teacher type when tested at alpha < .05. The critical value for the F-distribution was 10.10838 with a probability of .000119. It was concluded that production teachers differed from horticulture teachers when they were compared in terms of school community classification. The univariate analysis indicated that the groups differed on advising the youth organization component of the program. The univariate data can be seen in Table 25.

Table 25.--Univariate F-test for the effect of teacher type by school community classification with respect to role perception.

| Effect | (MS) Between | (MS) Within | df | F | Signif. of F |
|---|---|---|---|---|---|
| Advising youth organizations | 29.02626 | .50818 | 1,64 | 57.11639 | 0* |

*Significant at alpha < .05.

Since the null hypothesis was rejected, the data were further analyzed by plotting the means for advising youth organizations (Figure 15). The production teachers had the highest mean, and all of their means were very close. The horticulture means were considerably lower, with the lowest mean (2.18) reported in rural communities and the highest mean (3.81) reported in communities classified as towns. These data can be examined further in Figure 15.

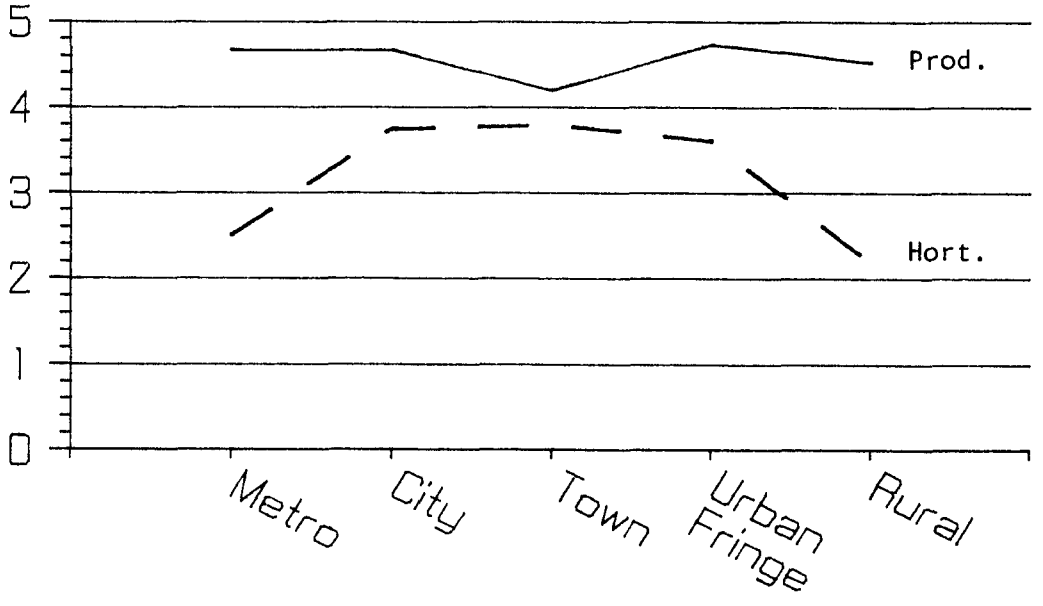



Figure 15.--Role perception: Advising youth organizations, by school community classification.

## Role Execution

A one-way multivariate analysis of variance was performed to determine if there were differences between production and horticulture teachers concerning the execution of their role activities.

### Primary Hypothesis

Ho 9: There is no difference between ornamental-horticulture and production-agriculture teachers concerning the execution of role activities for the position of the vocational agriculture teacher.

Table 26.--One-way multivariate analysis of variance for the effect of teacher type by role execution.

| Effect | F | df | Signif. of F | Test Name |
|---|---|---|---|---|
| Main (teacher type) | 10.66730 | 8,65 | 0* | Wilks |

*Significant at alpha < .05.

The multivariate analysis of variance significance test indicated that there were significant differences between the two groups in the execution of their role activities when tested at alpha < .05. The value for the F-distribution was 10.66730 with a probability of 0. Based on the results of the significance test, the null hypothesis was rejected. It was concluded that production teachers differed from horticulture teachers with respect to role execution. The univariate analysis of variance indicated that there were three areas in which differences occurred. These three areas were advising

youth organizations, guidance and counseling, and the adult instructional program. The univariate analyses indicating significant differences are shown in Table 27.

Table 27.--Univariate F-test for the effect of teacher type by role execution.

| Effect | (MS) Between | (MS) Within | df | F | Signif. of F |
|---|---|---|---|---|---|
| Advising youth organizations | 10.57807 | .32806 | 1,72 | 32.24446 | .000268* |
| Guidance and counseling | 1.42556 | .19790 | 1,72 | 7.20332 | .00902* |
| Adult instructional program | 5.19086 | .41303 | 1,72 | 12.56787 | .00069* |

*Significant at alpha < .05.

Due to the rejection of the null hypothesis, these data were further analyzed by inspecting the means where differences were found. When the means for advising youth organizations were examined, the horticulture teachers had the higher mean (2.05) and the production agriculture teachers had the lower mean (1.26). When the means for guidance and counseling were examined, the horticulture teachers had the lower (1.62) and the production teachers had the higher mean (1.90). When the means were examined for the adult instructional program, the production teachers had the higher mean (2.57) and the horticulture teachers had the lower mean (2.02). The means for all other program areas can be observed in Appendix J.

A two-way multivariate analysis of variance was used to determine if there was a significant effect associated with teacher sex and role execution. Probability data concerning role execution by sex and all other independent variables may be found in Appendix B.

Secondary Hypothesis (Teacher Characteristic)

Ho 10: There is no difference in the execution of role activities between ornamental-horticulture and production-agriculture teachers based on sex.

Table 28.--Two-way multivariate analysis of variance significance test for the effect of teacher type by sex with respect to role execution.

| Effect | F | df | Signif. of F | Test Name |
|---|---|---|---|---|
| Main (teacher type) | 10.97505 | 8,63 | 0* | Wilks |

*Significant at alpha < .05.

The critical value for the F-distribution was 10.97505 with a probability of 0. The significance test indicated that there was a significant main effect between production and horticulture teachers based on sex; therefore, the null hypothesis was rejected. The univariate analysis of variance indicated that there were three program areas that were different based on sex. These program areas were advising youth organizations, guidance and counseling, and the adult instructional program. The findings of the univariate analysis can be seen in Table 29.

Table 29.--Univariate F-test for the effect of teacher type by sex with respect to role execution, main effect (teacher type).

| Effect | (MS) Between | (MS) Within | df | F | Signif. of F |
|---|---|---|---|---|---|
| Advising youth organizations | 10.57807 | .31471 | 1,70 | 33.61231 | .000177* |
| Guidance and counseling | 1.42556 | .19852 | 1,70 | 7.18085 | .00918* |
| Adult instructional program | 5.19086 | .41899 | 1,70 | 12.38914 | .00076* |

*Significant at alpha < .05.

These data were further analyzed by plotting the means for each program area that indicated significant differences (Figures 16, 17, and 18). When the means for advising youth organizations were plotted, the horticulture teachers had the highest. The horticulture females had the highest (2.32) and production males had the lowest (1.25). These means can be observed in Figure 16. The means for guidance and counseling showed that production teachers had the highest. The production females had the highest mean (2.00), while the horticulture males had the lowest. These data may be examined in Figure 17. When the means for the adult instructional program were plotted, production teachers had the highest. Production males had the highest (2.50), while the horticulture females had the lowest (1.90). These data can be observed in Figure 18.

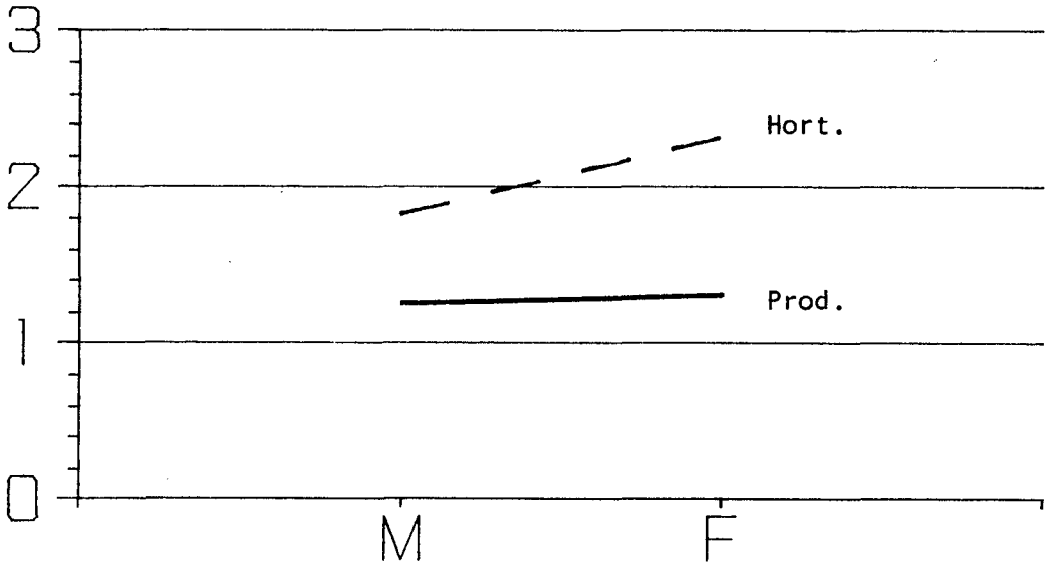



Figure 16.--Role execution: Advising youth organizations, by sex.

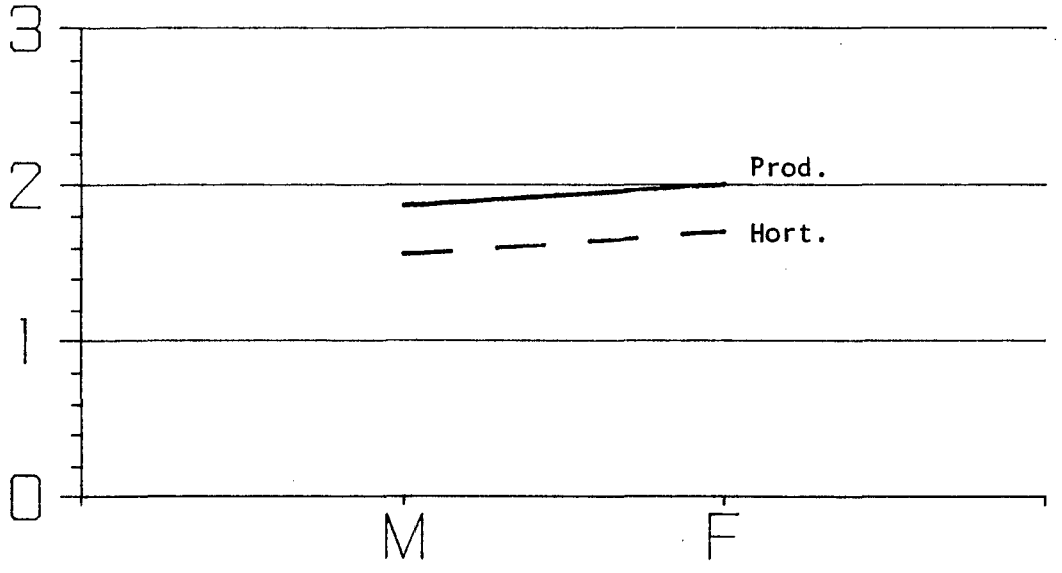



Figure 17.--Role execution: Guidance and counseling, by sex.

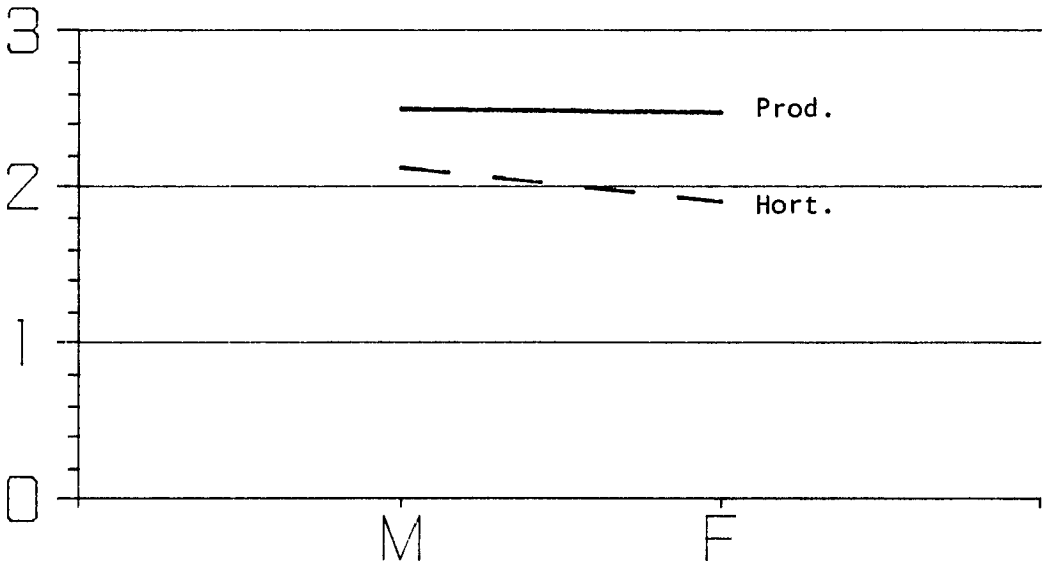



Figure 18.--Role execution: Adult education activities, by sex.

A two-way multivariate analysis of variance was performed to determine the effect of teacher type by age with respect to the execution of role activities.

Secondary Hypothesis (Teacher Characteristic)

Ho 11: There is no difference in the execution of role activities between ornamental-horticulture and production-agriculture teachers based on age.

Table 30.--Two-way multivariate analysis of variance significance test for the effect of teacher type by age with respect to role execution.

| Effect | F | df | Signif. of F | Test Name |
|---|---|---|---|---|
| Main (teacher type) | 10.86913 | 8,52 | 0* | Wilks |

*Significant at alpha < .05.

The two-way multivariate analysis of variance test indicated that there was a significant main effect for teacher type with respect to age. The critical value for the F-distribution was 10.86913 with a probability of 0. Based on the preceding hypothesis test, the null hypothesis was rejected. It was concluded that production teachers differed from horticulture teachers based on age with respect to role execution. The univariate F-test indicated a significant main effect for three program areas. These program areas were advising youth organizations, guidance and counseling, and the adult instructional program. The univariate F-test results can be examined in Table 31.

These data were further analyzed by plotting the means of each program area that indicated a significant difference (Figures 19, 20, and 21). The means for horticulture teachers concerning youth organizations were higher than those of production-agriculture teachers at all ages. The highest mean for horticulture teachers was 2.50, recorded by teachers 40-44 years of age. The lowest mean for horticulture teachers was 1.75, recorded by horticulture teachers 50-54 years of age. The

Table 31.--Univariate F-test for the effect of teacher type by age with respect to role execution, main effect (teacher type).

| Effect | (MS) Between | (MS) Within | df | F | Signif. of F |
|---|---|---|---|---|---|
| Advising youth organizations | 10.57807 | .37562 | 1,59 | 28.16175 | .000176* |
| Guidance and counseling | 1.42556 | .17462 | 1,59 | 8.16357 | .00589* |
| Adult instructional program | 5.19086 | .34842 | 1,59 | 14.89820 | .00028* |

*Significant at alpha < .05.

highest mean for production teachers was 1.41, recorded by production teachers 45-49 years of age. The lowest mean for production teachers was 1.08, recorded by production teachers 50-54 years of age. Further details of these data can be observed in Figure 19. When the means for guidance and counseling were plotted, production teachers were generally higher at all ages except the point at which both groups had the same mean (1.91). This was indicated by teachers 40-44 years of age. It is interesting that as age increased for production teachers the mean decreased to 40-44 years of age, and it was just the opposite for horticulture teachers concerning guidance and counseling. These data may be observed in Figure 20. When the means for adult education activities were plotted, production teachers were higher than horticulture teachers up to age 40. After age 40, horticulture teachers were higher than production teachers until after age 55. These data can be observed in Figure 21.

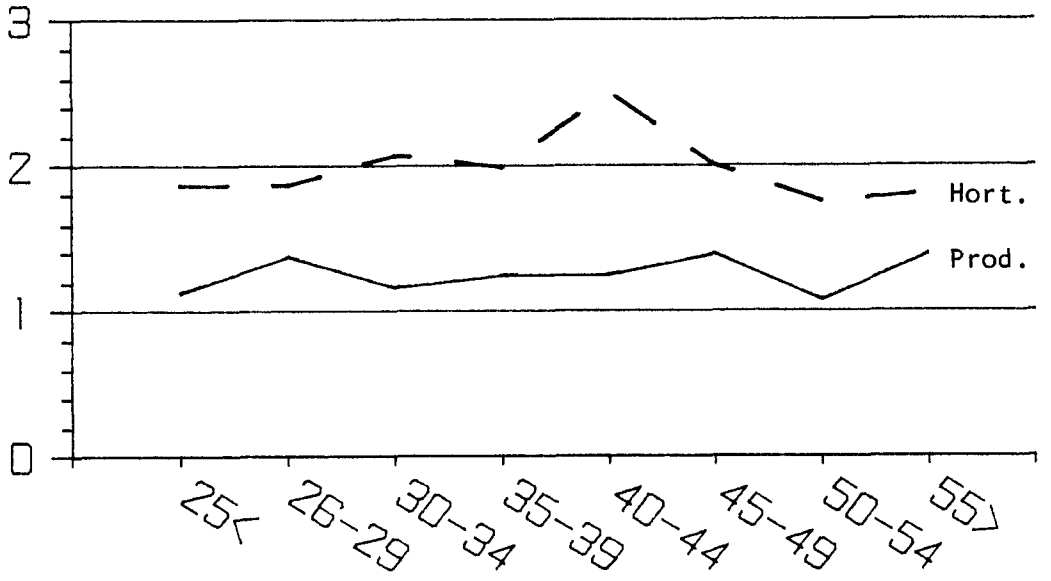



Figure 19.--Role execution: Advising youth organizations, by age.

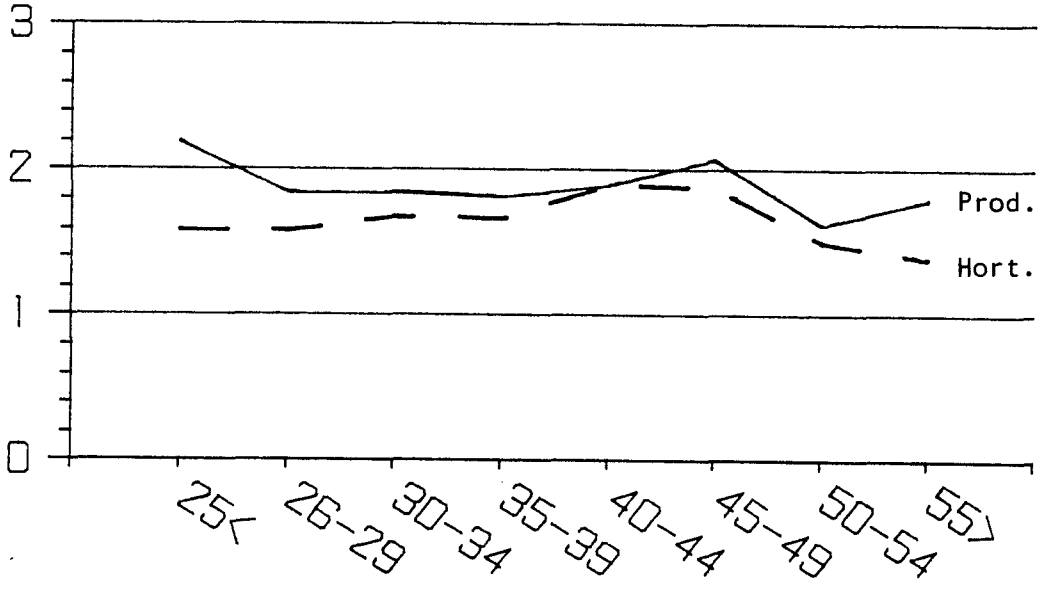



Figure 20.--Role execution: Guidance and counseling activities, by age.

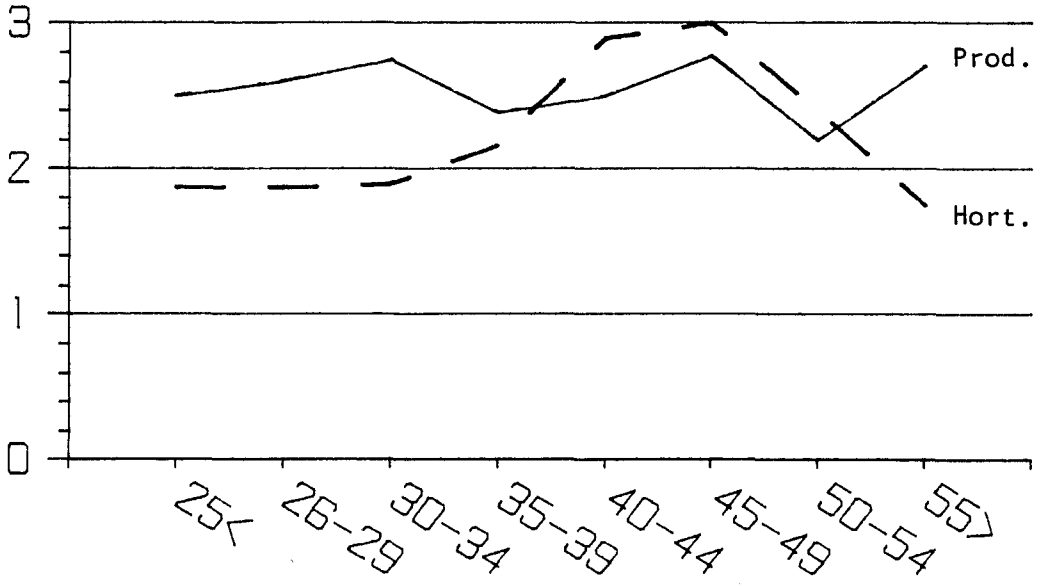



Figure 21.--Role execution: Adult education activities, by age.

A two-way multivariate analysis of variance was performed to determine the effect of teacher type by degree earned with respect to role execution.

Secondary Hypothesis (Teacher Characteristic)

Ho 12: There is no difference in the execution of role activities between ornamental-horticulture and production-agriculture teachers based on degree earned.

Table 32.--Two-way multivariate analysis of variance significance test for the effect of teacher type by degree earned with respect to role execution.

| Effect | F | df | Signif. of F | Test Name |
|---|---|---|---|---|
| Main (degree earned) | 2.69416 | 24,174 | .00011* | Wilks |
| Main (teacher type) | 10.14201 | 8,60 | 0* | Wilks |

*Significant at alpha < .05.

The two-way multivariate analysis of variance indicated a significant main effect for degree earned and teacher type when tested at alpha < .05. The researcher chose to perform a hypothesis test for the main effect, teacher type. The critical value for the F-distribution (teacher type) was 10.14201 with a probability of 0. Based on the hypothesis test, the null hypothesis was rejected. It was concluded that production teachers differed from horticulture teachers based on degree earned. The univariate F-test indicated a significant difference in three program areas. These areas were advising youth organizations, guidance and counseling, and the adult instructional program. Table 33 provides findings of areas indicating differences.

Table 33.--Univariate F-test for the effect of teacher type by degree earned with respect to role execution, main effect (teacher type).

| Effect | (MS) Between | (MS) Within | df | F | Signif. of F |
|---|---|---|---|---|---|
| Advising youth organizations | 10.57807 | .32989 | 1,67 | 32.06505 | .00033* |
| Guidance and counseling | 1.42556 | .18915 | 1,67 | 7.53663 | .00775* |
| Adult instructional program | 5.19086 | .42087 | 1,67 | 12.33366 | .00080* |

*Significant at alpha < .05.

Due to the rejection of the null hypothesis, the means were plotted for each program area indicating differences (Figures 22, 23, and 24). When the means for advising youth organizations were plotted, the horticulture teachers were clearly the higher of the two and remained constant after the master's degree. The mean of production teachers declined after the bachelor's degree. These data can be examined in Figure 22. When the means for guidance and counseling were plotted, production teachers declined after the bachelor's degree. Although the mean of horticulture teachers was lower at the bachelor's degree, it increased while the mean of production teachers declined. After the master's degree the mean of horticulture teachers exceeded that of production teachers. These data can be observed in Figure 23. When the means for adult education activities were plotted, the production teachers were higher for all degrees. After the bachelor's

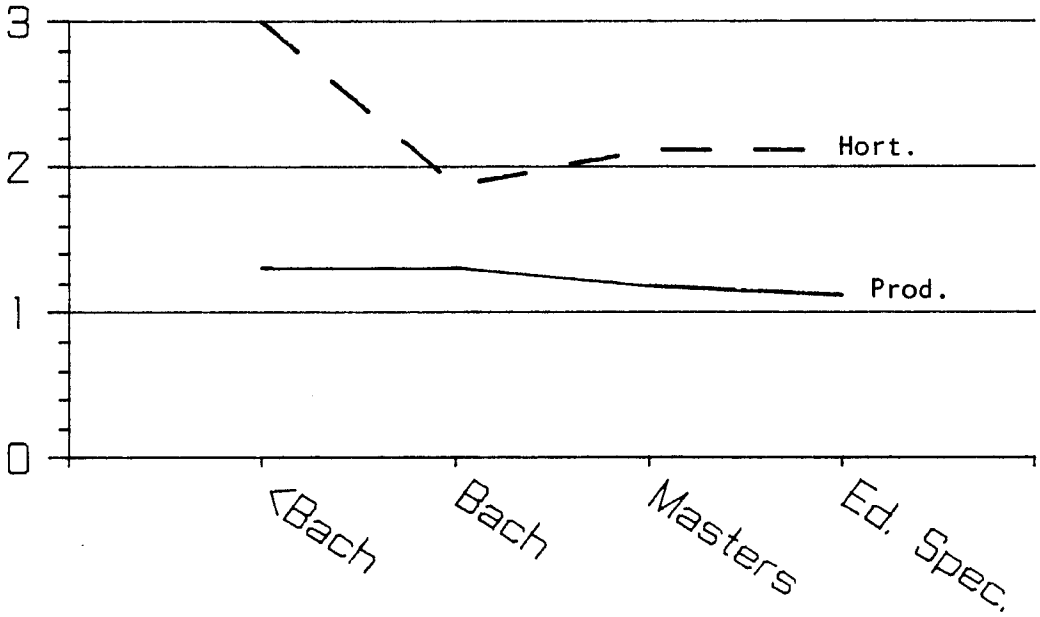



Figure 22.--Role execution: Advising youth organizations, by degree earned.

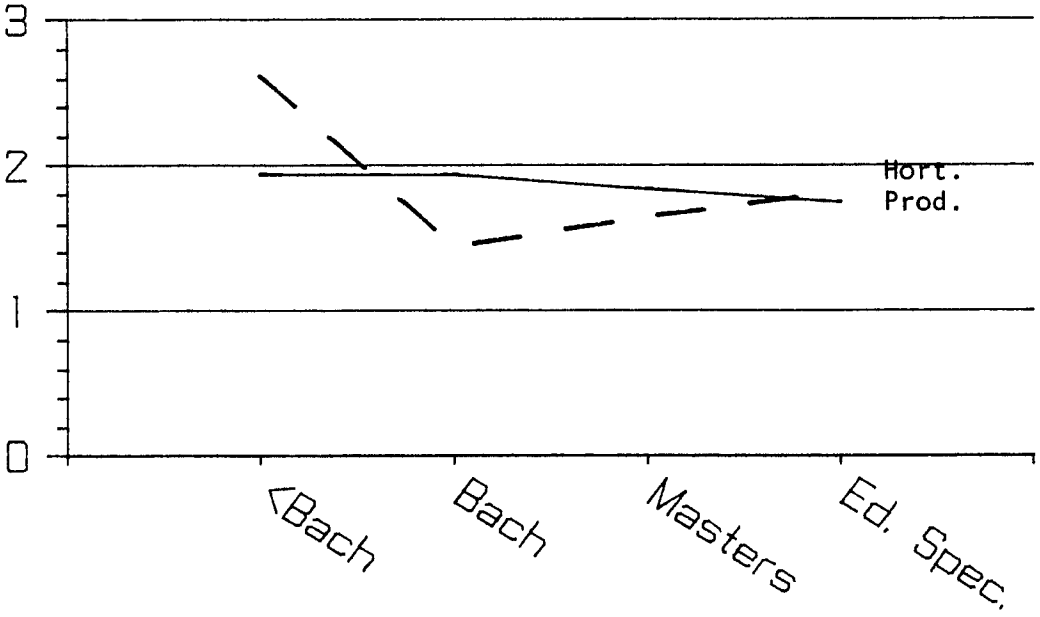



Figure 23.--Role execution: Guidance and counseling activities, by degree earned.

degree, both groups declined; after the master's degree, both groups increased. These data can be observed in Figure 24.

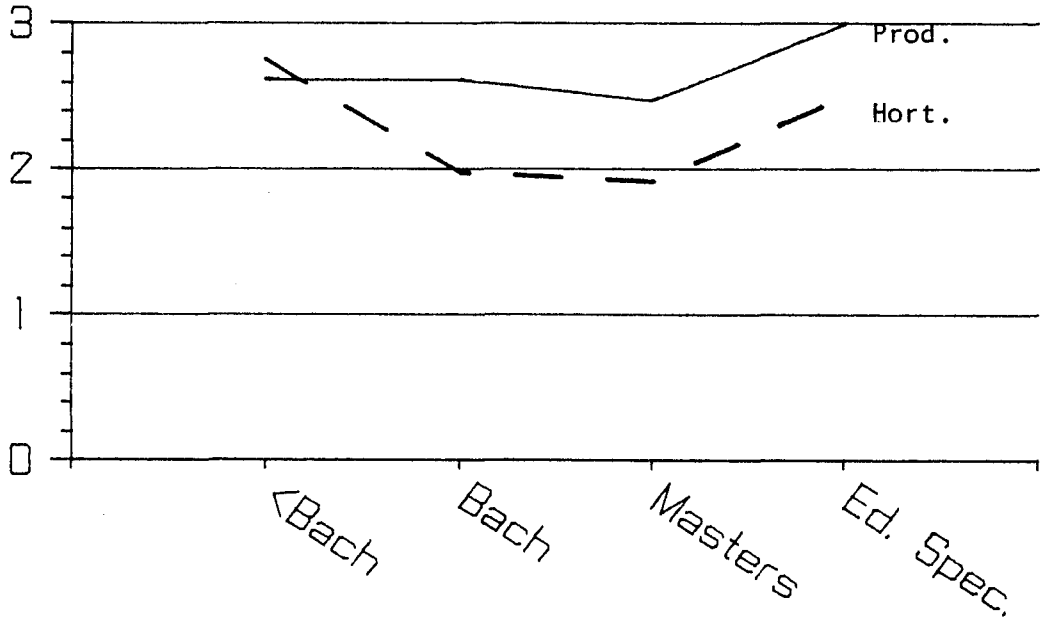



Figure 24.--Role execution: Adult education activities, by degree earned.

A two-way multivariate analysis of variance was performed to determine the effect of teacher type by years of teaching experience with respect to role execution.

Secondary Hypothesis (Teacher Characteristic)

Ho 13: There is no difference in the execution of role activities between ornamental-horticulture and production-agriculture teachers based on years of teaching experience.

Table 34.--Two-way multivariate analysis of variance significance test for the effect of teacher type by years of teaching experience with respect to role execution.

| Effect | F | df | Signif. of F | Test Name |
|---|---|---|---|---|
| Main (teacher type) | 11.02235 | 8,56 | 0* | Wilks |

*Significant at alpha < .05.

The two-way multivariate analysis of variance indicated a significant main effect for teacher type when tested at alpha < .05. The critical F-value was 11.02235 with a probability of 0. The null hypothesis was rejected, based on the significance test. It was concluded that production teachers differed from horticulture teachers based on years of teaching experience with respect to role execution. The univariate F-test indicated that the teachers differed in three program areas. These areas were advising youth organizations, guidance and counseling, and adult education activities. The univariate analysis is presented in Table 35.

Since the null hypothesis was rejected, these data were further analyzed by plotting the means of each area indicating differences (Figures 25, 26, and 27). When the means for advising youth organizations were plotted, horticulture teachers were higher than production teachers at all age categories. With 1-4 years of experience, the mean was 1.93 and steadily increased up to 15-19 years. The mean for production teachers started at 1.00 and reached a high of 1.37 with 5-9

Table 35.--Univariate F-test for the effect of teacher type by years of teaching experience with respect to role execution, main effect (teacher type).

| Effect | (MS) Between | (MS) Within | df | F | Signif. of F |
|---|---|---|---|---|---|
| Advising youth organizations | 10.57807 | .36172 | 1,63 | 29.24415 | .0001* |
| Guidance and counseling | 1.42556 | .21118 | 1,63 | 6.75038 | .01166* |
| Adult instructional program | 5.19086 | .43427 | 1,63 | 11.95312 | .00098* |

*Significant at alpha < .05.

years of experience. These data can be observed in Figure 25. When the means for guidance and counseling were plotted, production teachers were higher until 15-19 years of experience. The highest mean for production teachers was 2.33, recorded at 0 years of experience. The lowest mean for production teachers was 1.78, recorded at 10-14 years of experience. The highest mean for horticulture teachers was 1.87, recorded at 15-19 years of experience. These data can be observed in Figure 26. When the means for adult education activities were plotted, production teachers were higher up to 10-14 years of experience. After 14 years of teaching experience, horticulture teachers' mean increased from 2.04 to 3.00. These data can be observed in Figure 27.

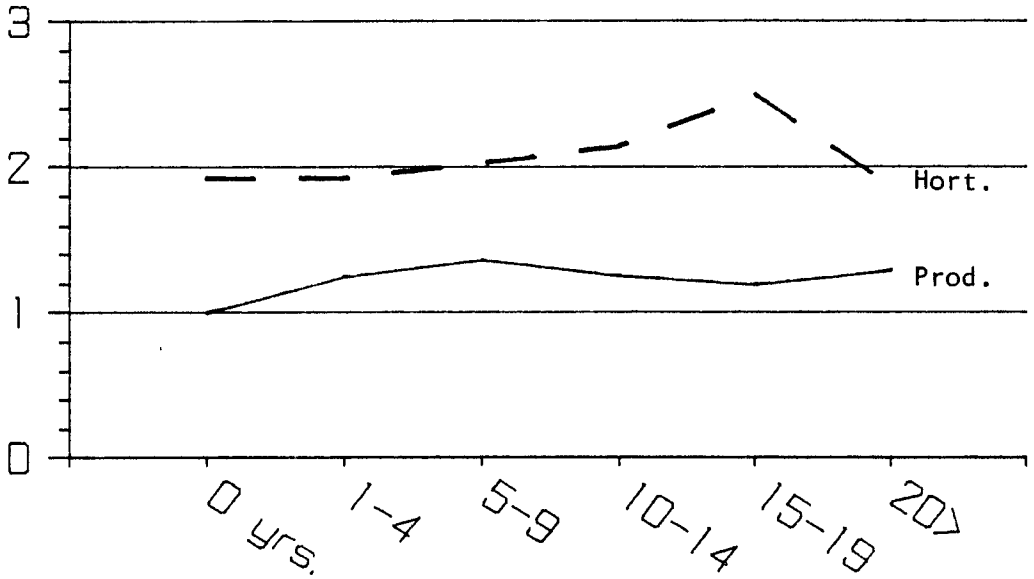



Figure 25.--Role execution: Advising youth organizations, by years of teaching experience.

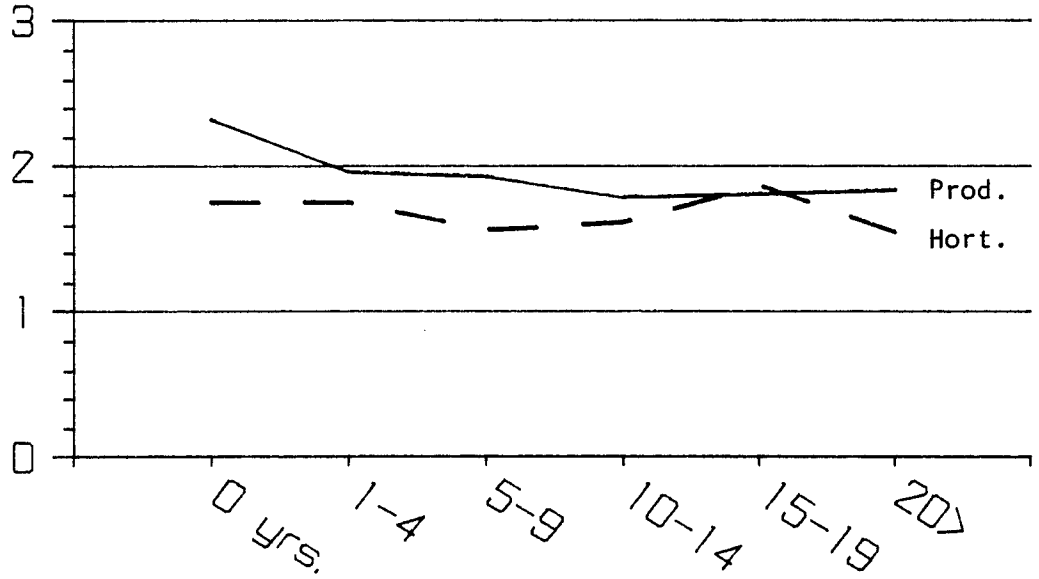



Figure 26.--Role execution: Guidance and counseling activities, by years of teaching experience.

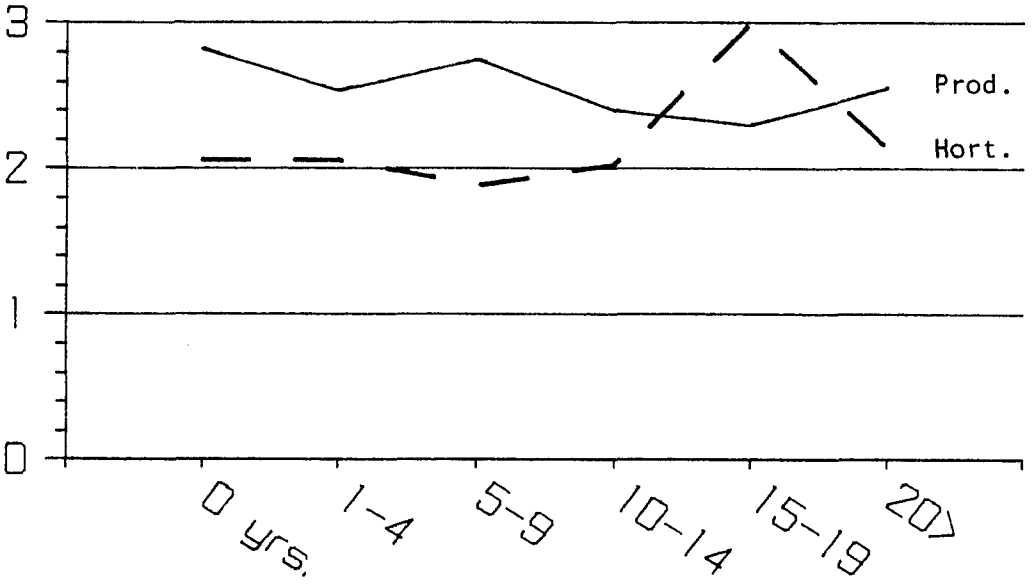



Figure 27.--Role execution: Adult education activities, by years of teaching experience.

A two-way multivariate analysis of variance was performed to determine the effect of teacher type by student enrollment with respect to role execution.

Secondary Hypothesis (School Characteristic)

Ho 14: There is no difference in the execution of role activities between production-agriculture and ornamental-horticulture teachers based on student enrollment.

Table 36.--Two-way multivariate analysis of variance significance test for the effect of teacher type by student enrollment with respect to role execution.

| Effect | F | df | Signif. of F | Test Name |
|---|---|---|---|---|
| Main (teacher type) | 12.36898 | 8,52 | 0* | Wilks |

*Significant at alpha < .05.

The two-way multivariate analysis of variance significance test indicated a significant main effect for teacher type when tested at alpha < .05. The critical F-value was 12.36898 with a probability of 0. Therefore, the null hypothesis was rejected. It was concluded that production teachers differed from horticulture teachers based on student enrollment concerning role execution. The univariate analysis indicated three areas in which significant differences existed. These three areas were advising youth organizations, guidance and counseling, and the adult instructional program. The univariate analysis is presented in Table 37.

Due to the rejection of the null hypothesis, the data were further analyzed by plotting the means of each area indicating differences (Figures 28, 29, and 30). When the means for advising youth organizations were plotted, horticulture teachers were higher in all school sizes. The lowest mean for horticulture teachers was 1.62, recorded by teachers having school enrollments of 500-749. The means for production teachers were generally low. The lowest mean for

Table 37.--Univariate F-test for the effect of teacher type by student enrollment with respect to role execution, main effect (teacher type).

| Effect | (MS) Between | (MS) Within | df | F | Signif. of F |
|---|---|---|---|---|---|
| Advising youth organizations | 10.57807 | .35282 | 1,59 | 29.98121 | .00094* |
| Guidance and counseling | 1.42556 | .16152 | 1,59 | 8.82582 | .00429* |
| Adult instructional program | 5.19086 | .34129 | 1,59 | 15.20971 | .00025* |

*Significant at alpha < .05.

production teachers was 1.12, recorded by teachers with 1,000-1,249 school enrollment, and the highest mean was 1.87, recorded by teachers with 1,250-1,499 school enrollment. These data can be observed in Figure 28. The means for guidance and counseling started low for horticulture teachers. Although the means started much lower than those of production teachers, they increased as school size increased. The lowest mean for horticulture teachers was .75, recorded by teachers with school enrollments of 500-749. The highest mean for horticulture teachers was 1.93, recorded by teachers with school enrollments of 1,250-1,499. The guidance and counseling means for production teachers were generally higher than those for horticulture teachers. The highest mean for production teachers was 2.25, recorded by teachers with school enrollments of 2,000-2,499. The lowest mean for production teachers

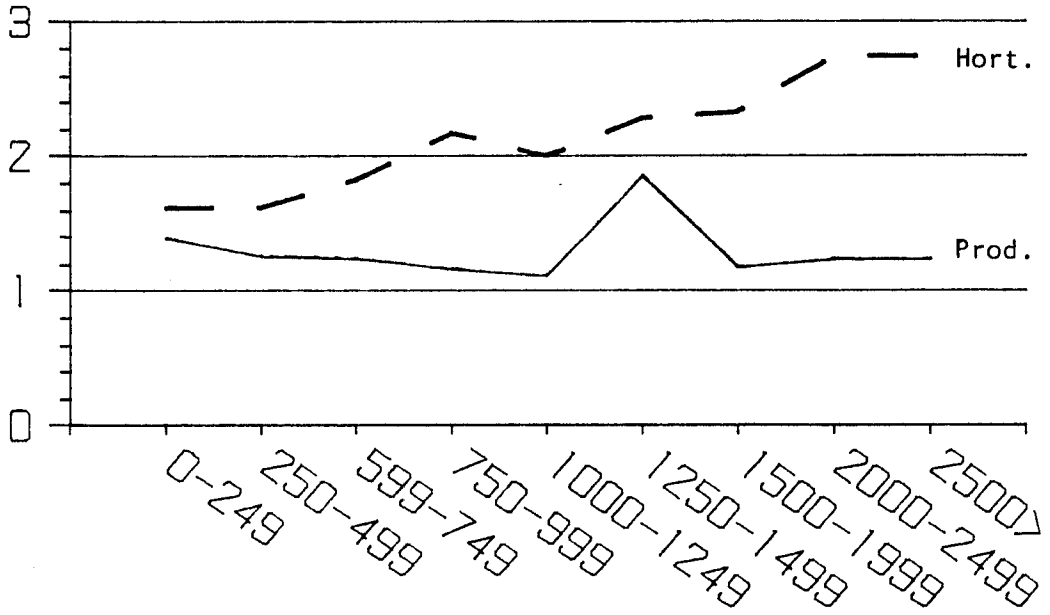



Figure 28.--Role execution: Advising youth organizations, by student enrollment.

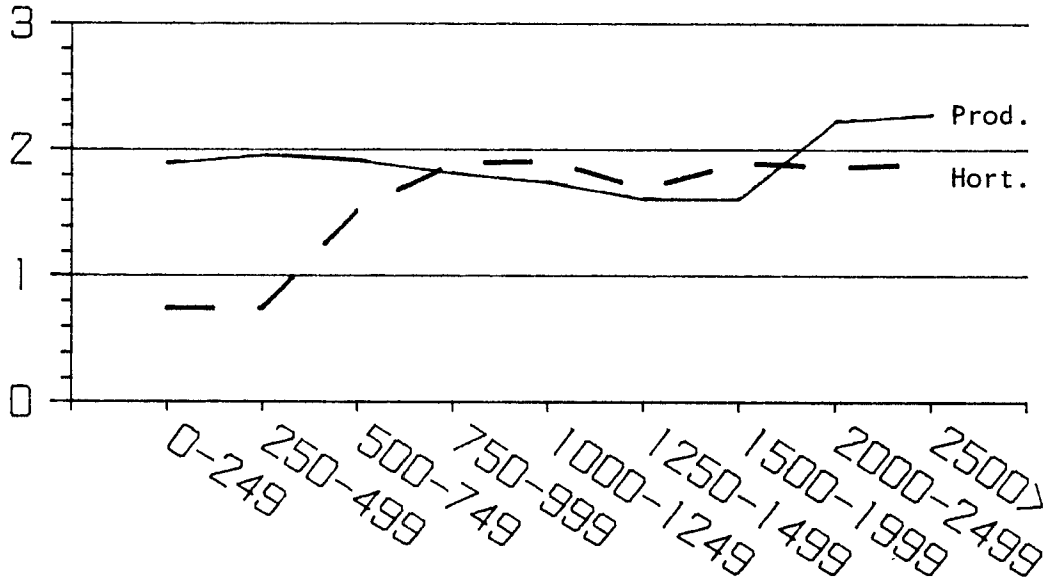



Figure 29.--Role execution: Guidance and counseling activities, by student enrollment.

was 1.62, recorded by teachers with school enrollments of 1,000-1,499. These data can be examined in Figure 29. When the means were plotted for adult education activities, the production teachers located in schools with enrollments between 0 and 999 had means 2.55 or better. After enrollments of 999, production means declined to 2.00. The means for horticulture teachers were generally lower than for production teachers until after 1,000 students. After 1,000 students, the means of horticulture teachers exceeded those of production teachers. These data can be observed in Figure 30.

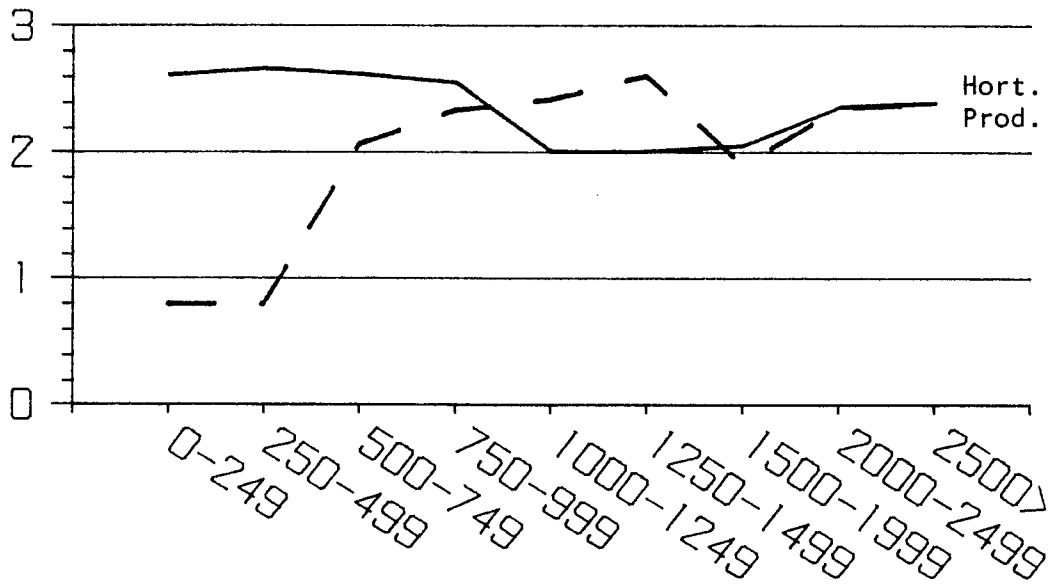



Figure 30.--Role execution: Adult education activities, by student enrollment.

A two-way multivariate analysis of variance was performed to determine the effect of teacher type by type school with respect to role execution.

Secondary Hypothesis (School Characteristic)

Ho 15: There is no difference in the execution of role activities between production-agriculture and ornamental-horticulture teachers based on type school.

Table 38.--Two-way multivariate analysis of variance significance test for the effect of teacher type by type school with respect to role execution.

| Effect | F | df | Signif. of F | Test Name |
|---|---|---|---|---|
| Main (type school) | 2.20935 | 8,60 | .03909* | Wilks |
| Main (teacher type) | 10.04807 | 8,60 | 0* | Wilks |

*Significant at alpha < .05.

The two-way multivariate significance test indicated a significant main effect for type school and teacher type when tested at alpha < .05. Since the main effect for type school was significant and may have confounded the effect of teacher type, the univariate analysis for the effect of type school was performed to determine specific areas of differences. The critical value for the F-distribution was 2.20935 with a probability of .039099. Based on the hypothesis test, the null hypothesis was rejected. It was concluded that both groups differed

with respect to the type of school in which they were employed concerning role execution. The univariate F-test for the effect of type school indicated that teachers differed on two program areas. It was concluded that teachers in area centers differed from those in high schools. The univariate analysis is presented in Table 39.

Table 39.--Univariate F-test for the effect of teacher type by type school with respect to role execution, main effect (type school).

| Effect | (MS) Between | (MS) Within | df | F | Signif. of F |
|---|---|---|---|---|---|
| Supervising occupational experience program | 1.54534 | .15520 | 1,67 | 9.95733 | .00240* |
| Member of the profession | 1.40186 | .25937 | 1,67 | 5.40489 | .02312* |

*Significant at alpha < .05.

These program areas were further analyzed by plotting the means (Figures 31 and 32). When the means for supervising occupational experience program were plotted, teachers in high schools held the higher means. Horticulture teachers in high schools recorded a mean of 1.87, while production teachers in high schools recorded a mean of 1.52. Horticulture teachers in area centers recorded a mean of 1.28, while production teachers in area centers recorded a mean of 1.19. These data can be examined in Figure 31. When the means for serving as a member of the profession were plotted, the high schools again had the

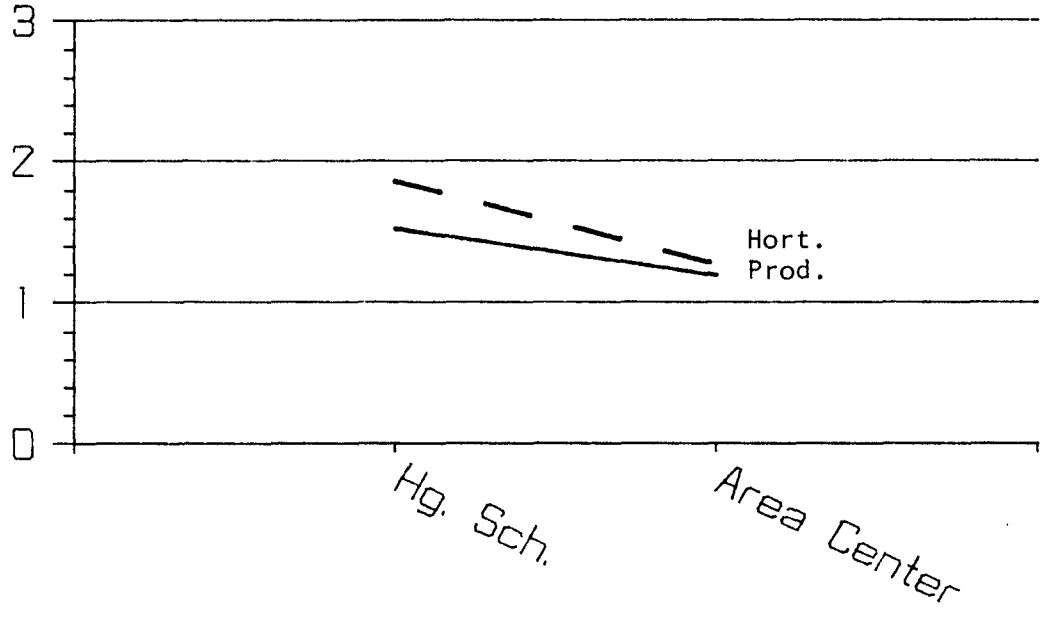



Figure 31.--Role execution: Supervising occupational experience programs, by type school.

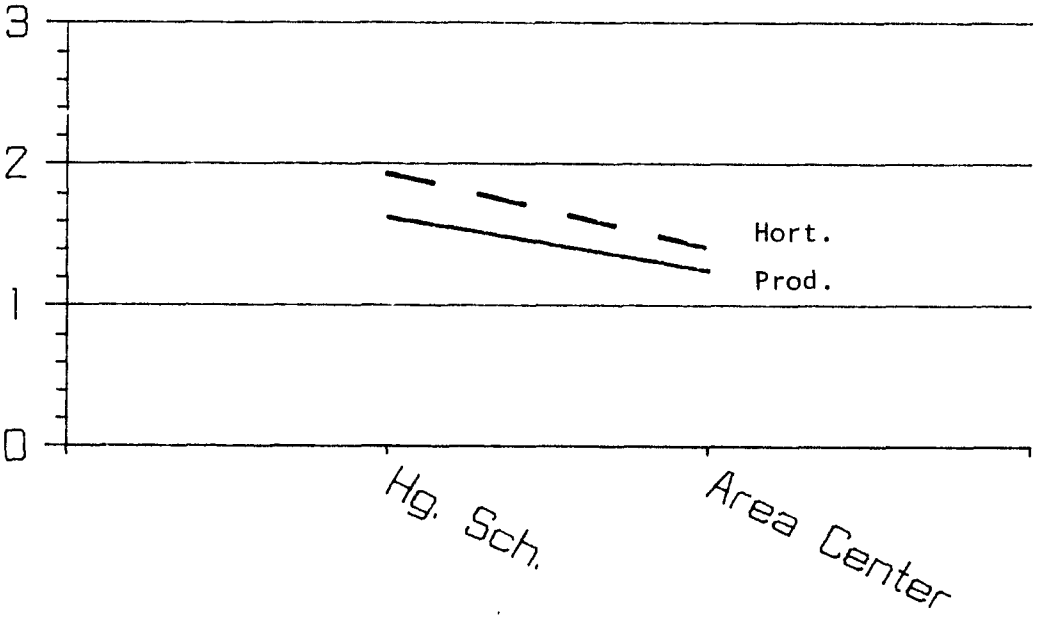



Figure 32.--Role execution: Serving as a member of the profession, by type school.

highest mean. The mean for horticulture teachers in high schools was 1.95, while the means for production teachers in high schools was 1.63. The mean for horticulture teachers in area centers was 1.41, while the mean for production teachers in area centers was 1.25. These data can be examined in Figure 32.

A two-way multivariate analysis of variance was performed to determine the effect of teacher type by school community classification with respect to role execution.

Secondary Hypothesis (School Characteristic)

Ho 16: There is no difference in the execution of role activities between production-agriculture and ornamental-horticulture teachers based on school community classification.

Table 40.--Two-way multivariate analysis of variance significance test for the effect of teacher type by school community classification with respect to role execution.

| Effect | F | df | Signif. of F | Test Name |
|---|---|---|---|---|
| Main (teacher type) | 10.66005 | 8,57 | 0* | Wilks |

*Significant at alpha < .05.

The two-way multivariate analysis of variance significance test indicated a significant main effect for teacher type when tested at alpha < .05. The critical value for the F-distribution was 10.66005 with a probability of 0. Based on the preceding hypothesis test, the null hypothesis was rejected. It was concluded that production

teachers differed from ornamental teachers in the different school community classifications. The univariate F-test indicated that the teachers differed on three different program areas. These program areas were advising youth organizations, guidance and counseling, and the adult instructional program. The univariate F-test is presented in Table 41.

Table 41.--Univariate F-test for the effect of teacher type by school community classification with respect to role execution.

| Effect | (MS) Between | (MS) Within | df | F | Signif. of F |
|---|---|---|---|---|---|
| Advising youth organizations | 10.33935 | .34608 | 1,64 | 29.87547 | .00081* |
| Guidance and counseling | 1.50305 | .16983 | 1,64 | 8.85040 | .00413* |
| Adult instructional program | 5.59610 | .36465 | 1,64 | 15.34634 | .00022* |

*Significant at alpha < .05.

To further analyze these data, the means of each area indicating differences were plotted (Figures 33, 34, and 35). The means for horticulture teachers concerning advising youth organizations were higher than those of production teachers in each community classification. The means for horticulture teachers were highest in the city classification (2.25) and lowest in the rural classification (1.50). The means for production teachers concerning advising youth

organizations were highest in the town classification (1.29) and lowest in the urban fringe classification (1.12). This information can be examined in Figure 33. When the means for guidance and counseling were plotted, the production teachers generally had higher means. Only horticulture teachers located in communities classified as urban fringe exceeded the mean of production teachers. The highest mean for horticulture teachers was at this point. Figure 34 provides a graphic presentation of these data. When the means for adult education activities were plotted, production teachers were generally higher. Urban fringe communities was the only category in which the horticulture teachers recorded a higher mean (2.55). These data may be examined in Figure 35.

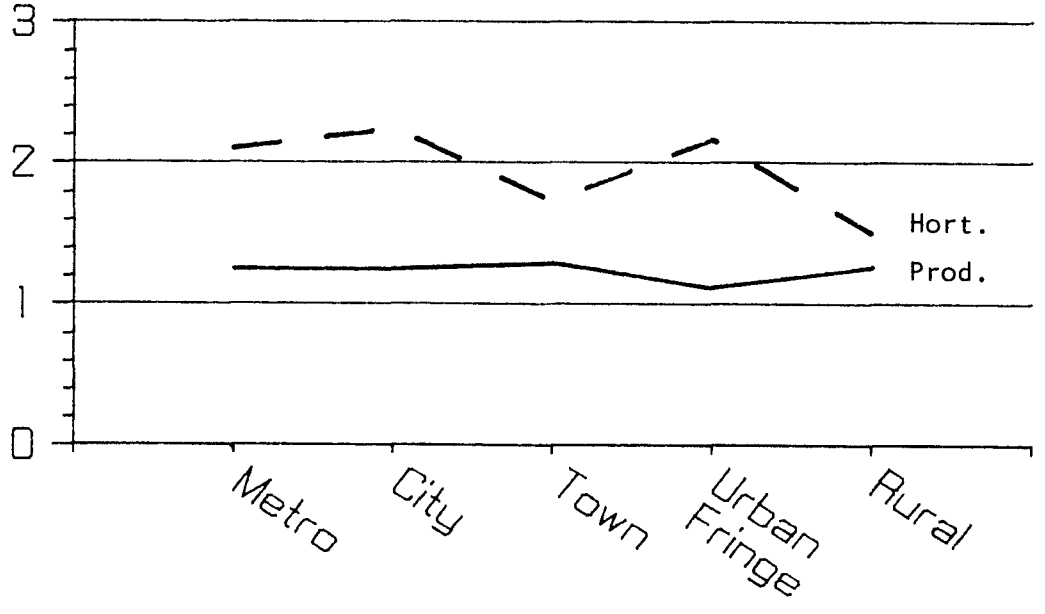



Figure 33.--Role execution: Advising youth organizations, by school community classification.

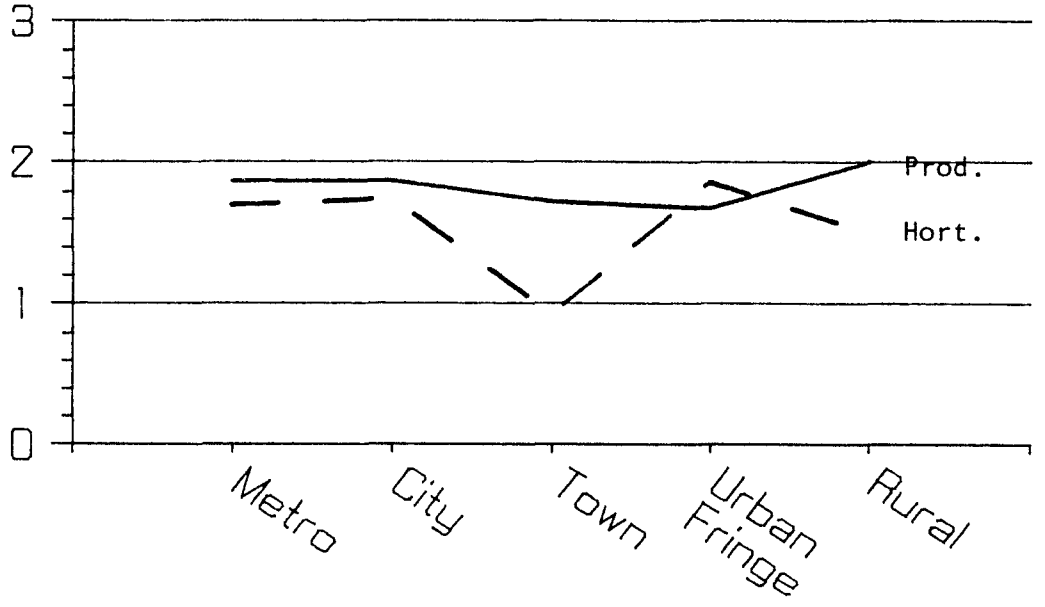



Figure 34.--Role execution: Guidance and counseling activities, by school community classification.

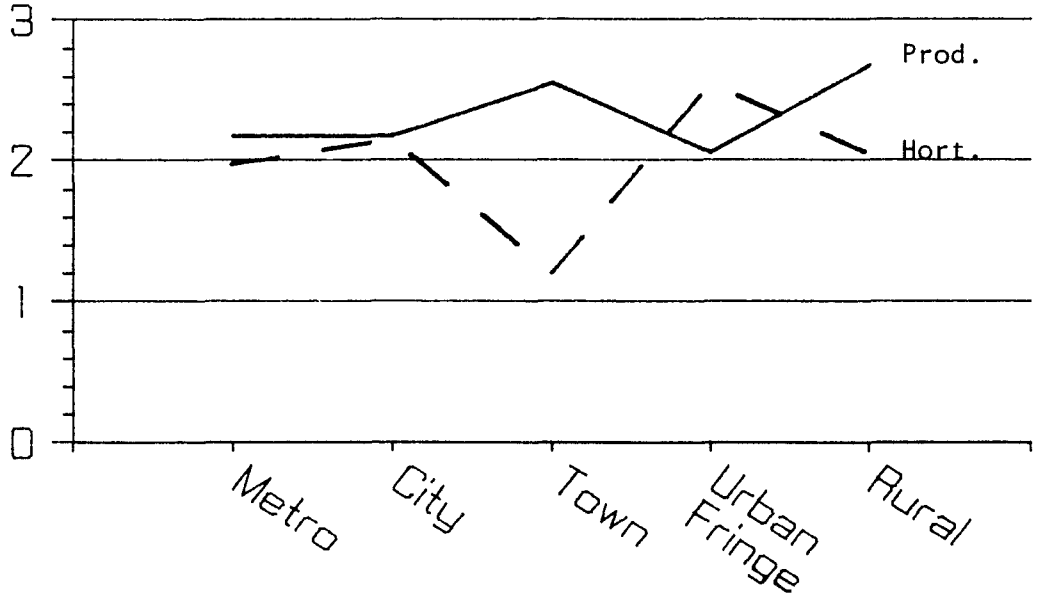



Figure 35.--Role execution: Adult education activities, by school community classification.

## Time Allocation

A one-way multivariate analysis of variance was performed to determine if there were differences between production and horticulture teachers concerning the time they allocated to each program area.

Primary Hypothesis

Ho 17: There is no difference between ornamental-horticulture and production-agriculture teachers concerning time allocated to each program area.

Table 42.--One-way multivariate analysis of variance for the effect of teacher type by time allocation.

| Effect | F | df | Signif. of F | Test Name |
|---|---|---|---|---|
| Main (teacher type) | 9.35309 | 9,50 | .00036* | Wilks |

*Significant at alpha < .05.

The one-way multivariate analysis of variance indicated a significant difference between horticulture and production teachers concerning time allocated to each program area when tested at alpha < .05. The critical value for the F-distribution was 9.35309 with a probability of .00036. Based on the significance test, the null hypothesis was rejected. It was concluded that there were differences between production and horticulture teachers with respect to time allocated to each program area. The univariate analysis of variance indicated that there were three areas that indicated a difference. The areas indicating differences are presented in Table 43.

Table 43.--Univariate F-test for the effect of teacher type by time allocated to each program area.

| Effect | (MS) Between | (MS) Within | df | F | Signif. of F |
|---|---|---|---|---|---|
| Advising youth organizations | 3745.10439 | 58.67377 | 1,58 | 63.82927 | 0* |
| Guidance and counseling | 479.45008 | 50.61178 | 1,58 | 9.47309 | .00318* |
| Adult instructional program | 150.76754 | 17.16924 | 1,58 | 8.78126 | .00441* |

*Significant at alpha < .05.

Due to the rejection of the null hypothesis, the data were further analyzed by examining the means of each area indicating a significant difference. The means for advising youth organizations revealed that production teachers allocated considerably more time than horticulture teachers. While production teachers allocated 18.89 percent of their time to advising youth organizations, the horticulture teachers allocated 2.50 percent of their time to this activity. When the means for guidance and counseling were examined, the horticulture teachers allocated 11.18 percent of their time, while production teachers allocated 5.31 percent. The means for adult education activities indicated that horticulture teachers allocated 4.00 percent of their time, while production teachers allocated .71 percent. Clearly the horticulture teachers devoted more time to adult education activities. Means for other program areas may be examined in Appendix C.

A two-way multivariate analysis of variance was performed to determine the effect of teacher type by sex with respect to time allocated to each program area. Probability data concerning time allocation by sex and all other independent variables may be found in Appendix B.

Secondary Hypothesis (Teacher Characteristic)

Ho 18: There is no difference in the time allocated to each program area between ornamental-horticulture and production-agriculture teachers based on sex.

Table 44.--Two-way multivariate analysis of variance significance test for the effect of teacher type by sex with respect to time allocation.

| Effect | F | df | Signif. of F | Test Name |
|---|---|---|---|---|
| Main (teacher type) | 9.11820 | 9,48 | .0007* | Wilks |

*Significant at alpha < .05.

The two-way multivariate analysis of variance test indicated a significant main effect for teacher type when tested at alpha < .05. The critical F-value was 9.11820 with a probability of .0007. Based on the hypothesis test, the null hypothesis was rejected. It was concluded that production males differed from horticulture males and production females differed from horticulture females. The univariate analysis indicated that the teachers differed with respect to advising youth organizations, guidance and counseling, and the adult

instructional program. The univariate analysis for data concerning these three areas is presented in Table 45.

Table 45.--Univariate F-test for the effect of teacher type by sex with respect to time allocation, main effect (teacher type).

| Effect | (MS) Between | (MS) Within | df | F | Signif. of F |
|---|---|---|---|---|---|
| Advising youth organizations | 3745.10439 | 59.92193 | 1,56 | 62.49973 | 0* |
| Guidance and counseling | 479.45008 | 51.04878 | 1,56 | 9.39200 | .00335* |
| Adult instructional program | 150.76754 | 17.72216 | 1,56 | 8.50729 | .00508* |

*Significant at alpha < .05.

Since the null hypothesis was rejected, these data were further analyzed by plotting the means of each area indicating differences (Figures 36, 37, and 38). The means for advising youth organizations indicated that production males and females allocated more time to this activity than did horticulture males and females. Figure 36 presents these data. The means for guidance and counseling indicated that horticulture males and females allocated more time to this activity. These data can be examined in Figure 37. The means for adult education activities indicated that horticulture teachers allocated more time for adult education activities than production teachers. These data can be examined in Figure 38.

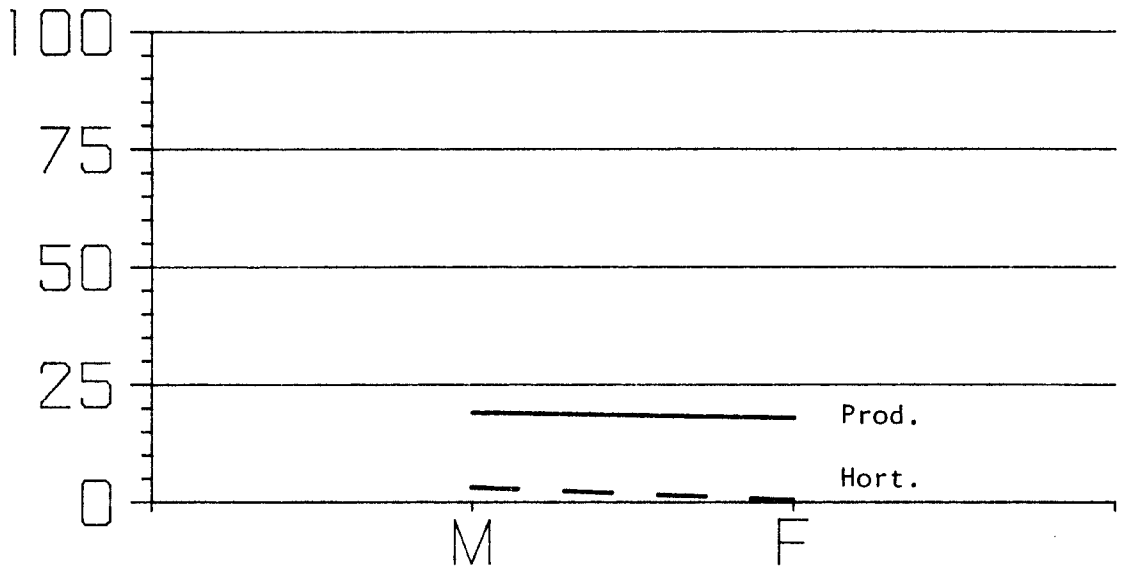



Figure 36.--Time allocation: Advising youth organizations, by sex.

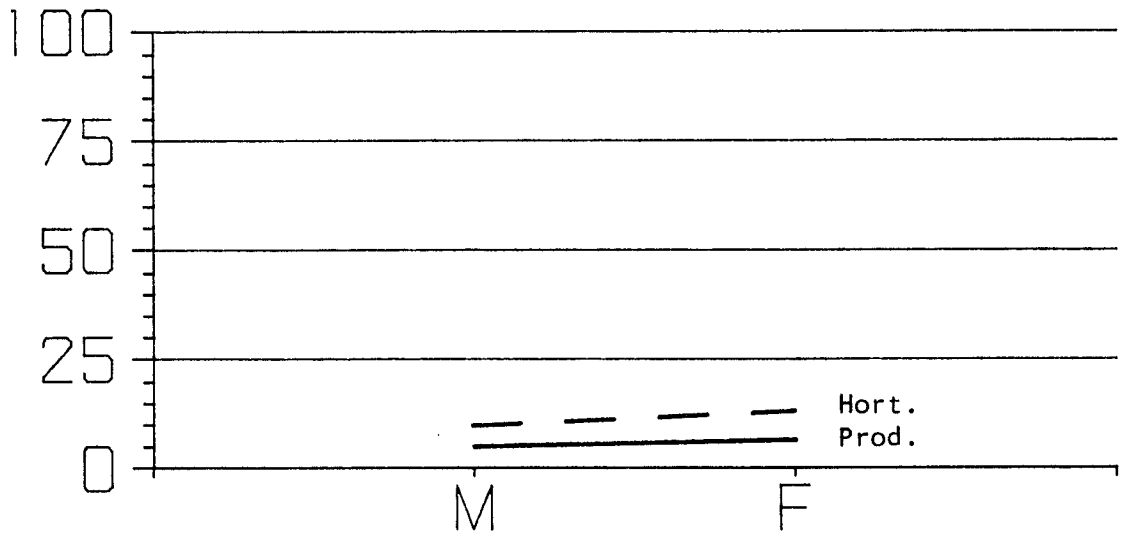



Figure 37.--Time allocation: Guidance and counseling activities, by sex.

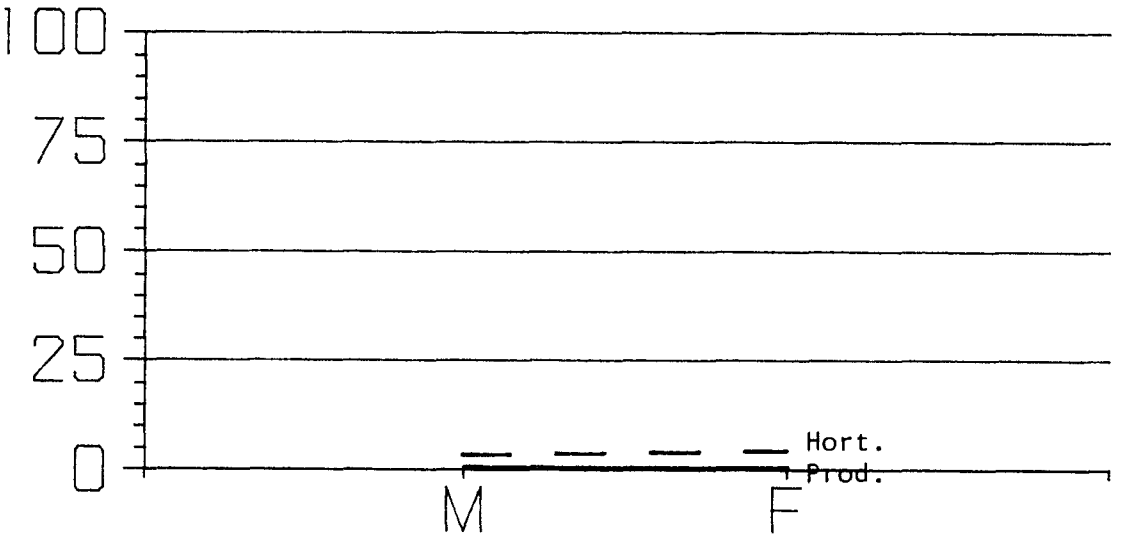



Figure 38.--Time allocation: Adult education activities, by sex.

A two-way multivariate analysis of variance was performed to determine the effect of teacher type by age with respect to time allocation.

Secondary Hypothesis (Teacher Characteristic)

Ho 19: There is no difference in the time allocated to each program area between ornamental-horticulture and production agriculture teachers based on age.

Table 46.--Two-way multivariate analysis of variance significance test for the effect of teacher type by age with respect to time allocation.

| Effect | F | df | Signif. of F | Test Name |
|---|---|---|---|---|
| Interaction (teacher type x age) | 2.49815 | 54,193 | .00025* | Wilks |
| Main (age) | 1.26473 | 63,214 | .11169 | Wilks |
| Main (teacher type) | 9.03982 | 9,37 | .0004* | Wilks |

*Significant at alpha < .05.

The two-way multivariate analysis of variance indicated a significant interaction effect (teacher type x age) and main effect for teacher type when tested at alpha < .05. Since interaction effect may confound main effect, the interaction effect will be discussed. The critical value for the F-distribution was 2.49815 with a probability of .00025 for the interaction effect. Based on the hypothesis test, the null hypothesis was rejected. It was concluded that time allocated to some program areas depended on the interaction of age and teacher type. Although a significant main effect for teacher type was found, it cannot be said that this was actually caused by teacher type because the cells were not equal and were not independent; therefore, the interaction effect may have confounded the main effect. The univariate analysis indicated four program areas were part of this interaction. These program areas were guidance and counseling, the adult instructional program, member of a professional staff, and member of the

profession. The significant univariate data are presented in Table 47.

Table 47.--Univariate F-test for the effect of teacher type by age with respect to time allocated to each program area, interaction effect (teacher type x age).

| Effect | (MS) Between | (MS) Within | df | F | Signif. of F |
|---|---|---|---|---|---|
| Guidance and counseling | 115.09166 | 42.58780 | 6,45 | 2.70246 | .02510* |
| Adult instructional program | 37.81191 | 14.66701 | 6,45 | 2.57802 | .03120* |
| Member of a professional staff | 166.36203 | 54.94470 | 6,45 | 3.02781 | .01425* |
| Member of the profession | 124.35814 | 16.95335 | 6,45 | 7.33531 | .0003* |

*Significant at alpha < .05.

Because the null hypothesis was rejected, the data were further analyzed by plotting the means of each area indicated by the univariate analysis (Figures 39-42). The means for guidance and counseling indicated that after the age of 40, teachers spent more time on this activity, especially horticulture teachers. The means for guidance and counseling can be examined in Figure 39. The means for adult instructional activities indicated that older horticulture teachers allocated more time to adult programs while production teachers allocated less time with increased age. These data are presented in Figure 40. When

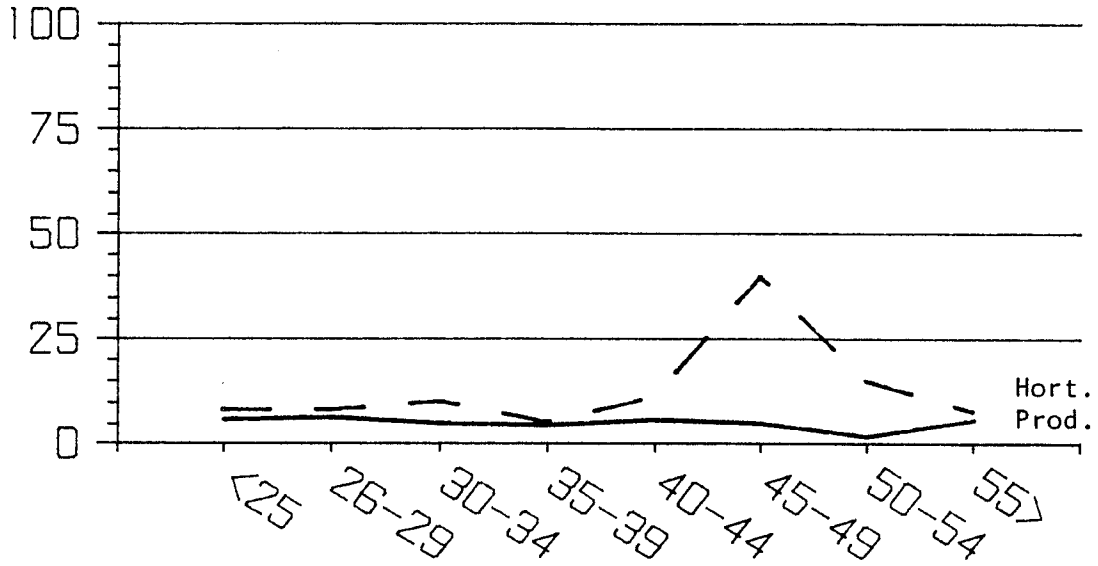



Figure 39.--Time allocation: Guidance and counseling activities, by age.

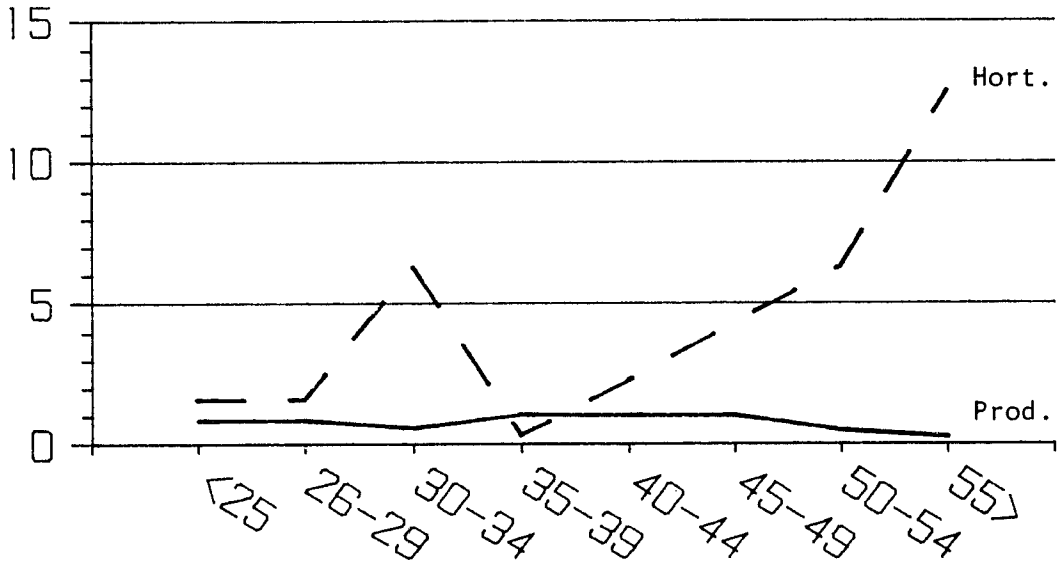



Figure 40.--Time allocation: Adult education activities, by age.

the means for serving as a member of a professional staff were plotted, the age categories 35-39 and 50-54 indicated significant interactions. At age 35-39 production teachers indicated the least amount of time for staff activities and steadily increased to age 50-54. Horticulture teachers indicated the greatest amount of time at age 35-39 and decreased until after 49 years of age. These data can be examined in Figure 41. When the means for serving as a member of the profession were plotted, production teachers of all ages less than 55 allocated more time to the profession. The highest mean for production teachers was 35 percent, while the lowest mean was 3 percent. The highest mean for horticulture teachers was 4.71 percent, and the lowest mean was .50 percent. It is interesting that after age 29 the mean for horticulture teachers declined until age 54. These data can be examined in Figure 42.

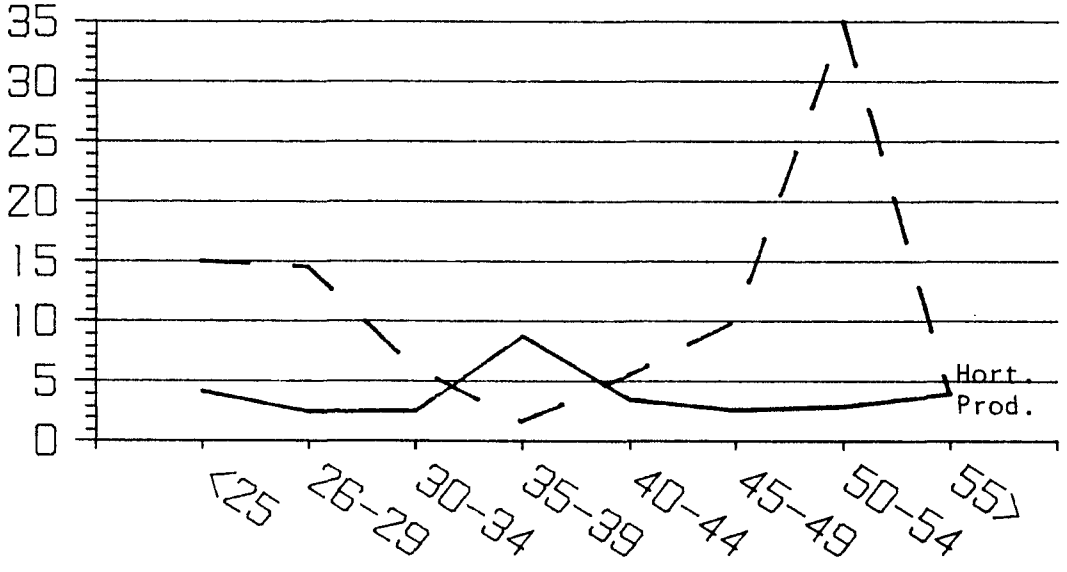



Figure 41.--Time allocation: Professional staff activities, by age.

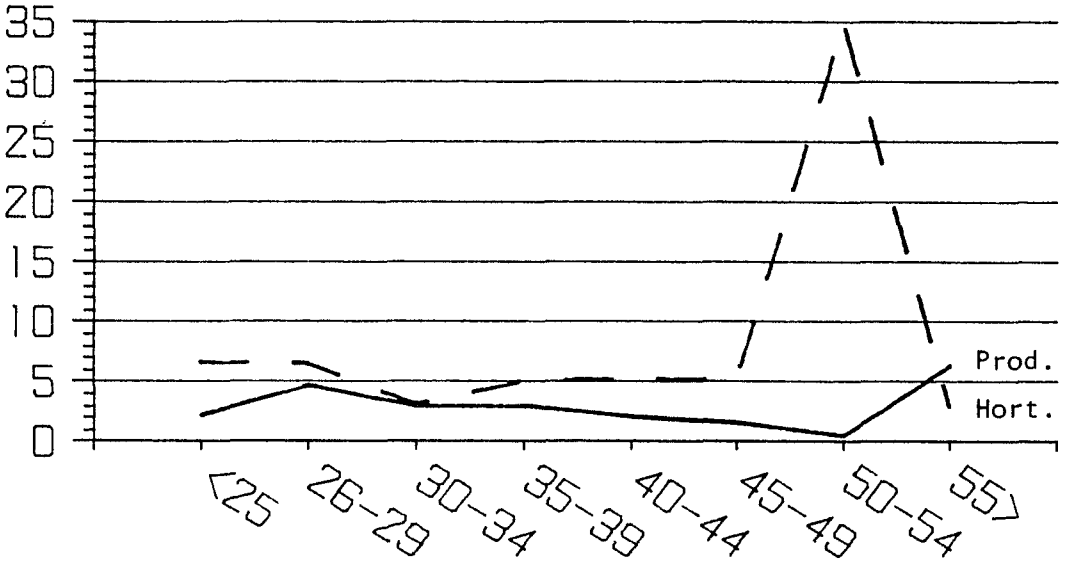



Figure 42.--Time allocation: Serving as a member of the profession, by age.

A two-way multivariate analysis of variance was performed to determine the effect of teacher type by degree earned with respect to time allocation.

Secondary Hypothesis (Teacher Characteristic)

Ho 20: There is no difference in the time allocated to each program area between ornamental-horticulture and production-agriculture teachers based on degree earned.

Table 48.--Two-way multivariate analysis of variance significance test for the effect of teacher type by degree earned with respect to time allocation.

| Effect | F | df | Signif. of F | Test Name |
|---|---|---|---|---|
| Main (teacher type) | 8.82041 | 9,46 | .000147* | Wilks |

*Significant at alpha < .05.

The two-way multivariate analysis of variance indicated a significant main effect for teacher type when tested at alpha < .05. The value for the F-distribution was 8.82041 with a probability of .000147. The null hypothesis was rejected. It was concluded that production teachers differed from horticulture teachers based on degrees. The univariate analysis indicated that the areas indicating significant differences were advising youth organizations, guidance and counseling, and the adult instructional program. The univariate analysis is presented in Table 49.

Due to the rejection of the null hypothesis, the means of the areas indicating differences were plotted to determine specific areas of difference (Figures 43, 44, and 45). When the means for advising youth organizations were plotted, the means of production teachers were clearly much higher than the means of horticulture teachers. It is important to note that the means of both groups dropped after the bachelor's degree. These data can be observed in Figure 43. The

Table 49.--Univariate F-test for the effect of teacher type by degree earned with respect to time allocated to each program area, main effect (teacher type).

| Effect | (MS) Between | (MS) Within | df | F | Signif. of F |
|---|---|---|---|---|---|
| Advising youth organizations | 3745.10439 | 62.15278 | 1,54 | 60.25643 | 0* |
| Guidance and counseling | 479.45008 | 49.88430 | 1,54 | 9.61124 | .00307* |
| Adult instructional program | 150.76754 | 18.15008 | 1,54 | 8.30672 | .00566* |

*Significant at alpha < .05.

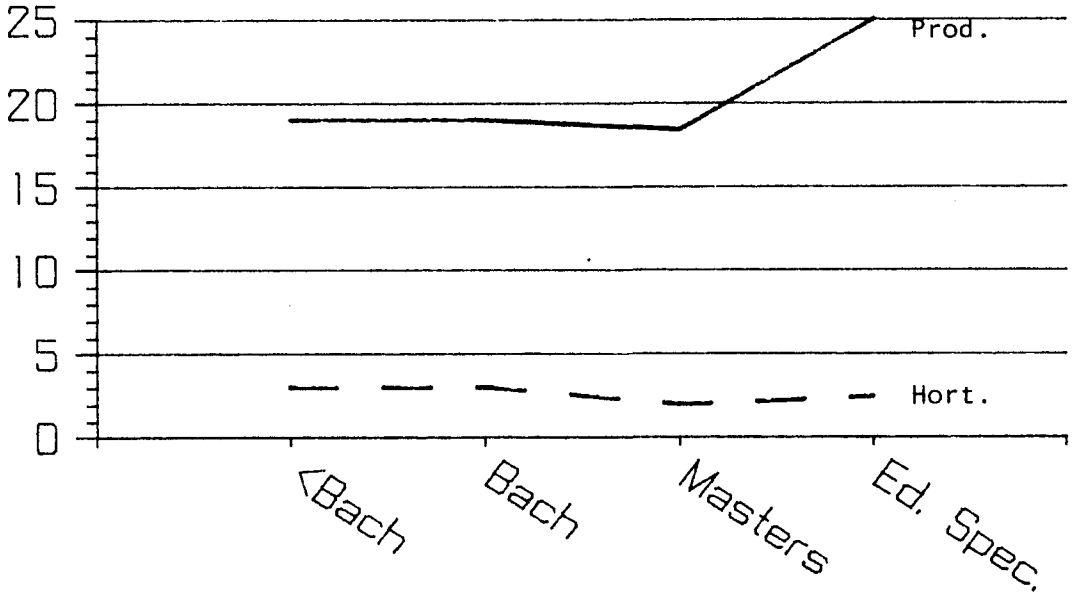



Figure 43.--Time allocation: Advising youth organizations, by degree earned.

means for guidance and counseling were extremely low for both groups; however, horticulture teachers were consistently higher than production teachers. Data concerning guidance and counseling can be examined in Figure 44. The means for adult education activities indicated that horticulture teachers allocated more time across all degrees. It is interesting that after the bachelor's degree the mean of horticulture teachers declined from 4.70 percent to 3.10 percent, while the mean for production teachers increased from .66 percent to .81 percent. These data can be examined in Figure 45.

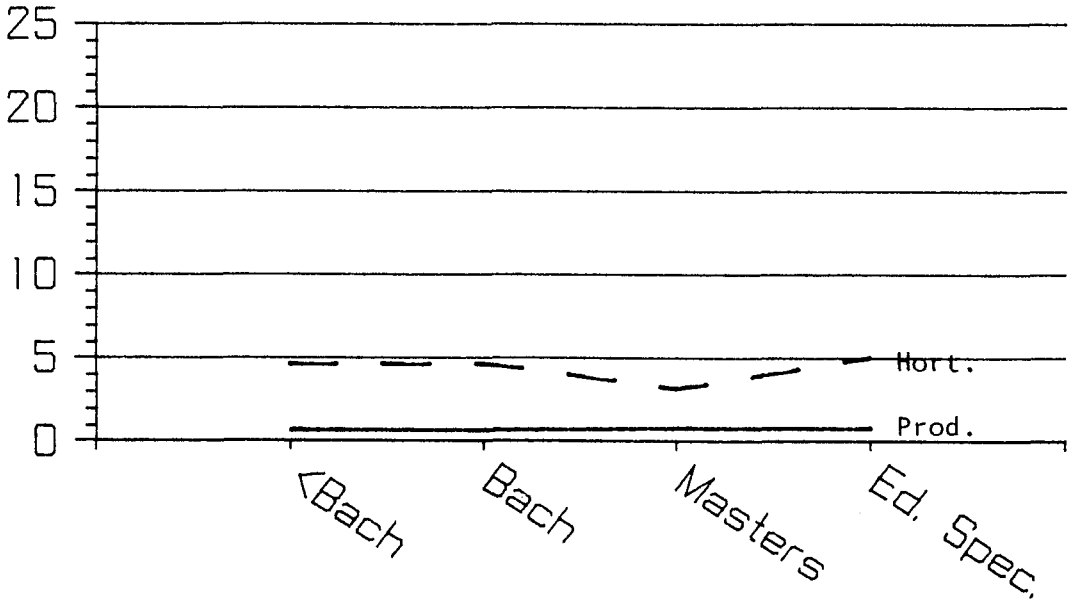



Figure 44.--Time allocation: Guidance and counseling activities, by degree earned.

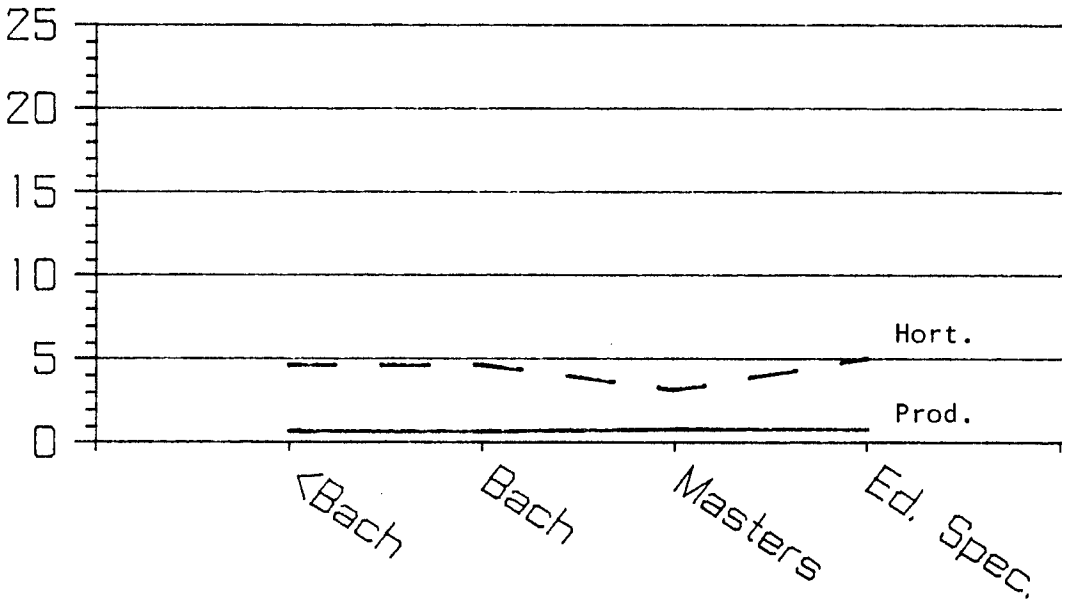



Figure 45.--Time allocation: Adult education activities, by degree earned.

A two-way multivariate analysis of variance was performed to determine the effect of teacher type by years of teaching experience with respect to time allocation.

Secondary Hypothesis (Teacher Characteristic)

Ho 21: There is no difference in the time allocated to each program area between ornamental-horticulture and production-agriculture teachers based on years of teaching experience.

Table 50.--Two-way multivariate analysis of variance significance test for the effect of teacher type by years of teaching experience with respect to time allocation.

| Effect | F | df | Signif. of F | Test Name |
|---|---|---|---|---|
| Main (teacher type) | 9.46283 | 9,42 | .00010* | Wilks |

*Significant at alpha < .05.

The two-way multivariate analysis of variance significance test indicated a significant main effect for teacher type. The value for the F-distribution was 9.46283 with a probability of .00010. The null hypothesis was rejected. It was concluded that production teachers differed from horticulture teachers based on years of teaching experience. The univariate analysis of variance indicated that the specific areas that differed were advising youth organizations, guidance and counseling, and the adult instructional program. Data concerning the univariate analysis can be observed in Table 51.

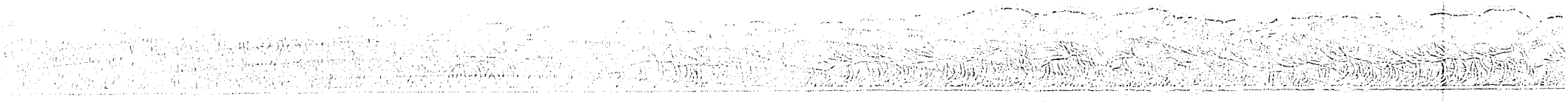
The data were further analyzed by plotting the means of each significant area (Figures 46, 47, and 48). The means for advising youth organizations clearly indicated that production teachers allocated more time across all categories of years teaching experience. The lowest percentage for production teachers was 14.16 percent, recorded by teachers with 1-4 years of teaching experience; the highest percentage was 23.57 percent, recorded by teachers with 15-19 years of teaching experience. The highest for horticulture teachers was 4.00

Table 51.--Univariate F-test for the effect of teacher type by years of teaching experience with respect to time allocation.

| Effect | (MS) Between | (MS) Within | df | F | Signif. of F |
|---|---|---|---|---|---|
| Advising youth organizations | 3745.10439 | 60.33995 | 1,50 | 62.06674 | 0* |
| Guidance and counseling | 479.45008 | 51.49868 | 1,50 | 9.30995 | .00364* |
| Adult instructional program | 150.76754 | 13.59492 | 1,50 | 11.08999 | .00164* |

*Significant at alpha < .05.

percent, recorded by teachers with 10-14 years of teaching experience; the lowest was 1.25 percent, recorded by teachers with 1-4 years of experience. These data can be observed in Figure 46. When the means for guidance and counseling were plotted, the horticulture teachers allocated more time across all categories. This area indicated a decline in both groups after 4 years until 10-14 years. The highest mean for horticulture teachers was 20.00 percent, recorded by teachers with 20> years; the lowest was 7.20 percent, recorded by teachers with 10-14 years. The highest mean for production teachers was 6.00 percent, recorded by teachers with 0 years; the lowest mean was 3.33, recorded by teachers with 10-14 years. Ten to 14 years was the point at which both groups allocated the least time for guidance and counseling activities. Data concerning guidance and counseling can be examined in Figure 47. The data for the adult instructional program



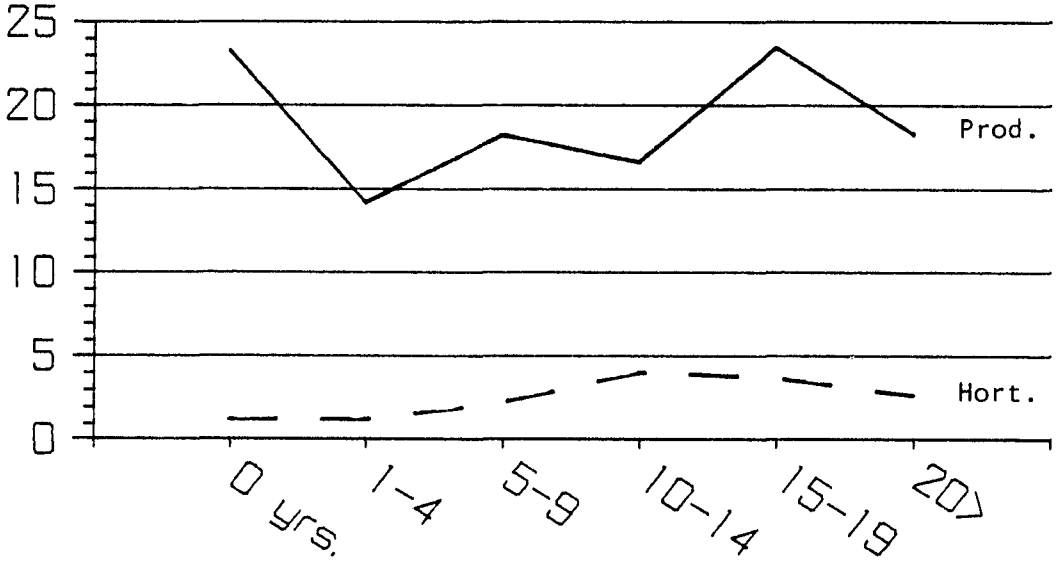



Figure 46.--Time allocation: Advising youth organizations, by years of teaching experience.

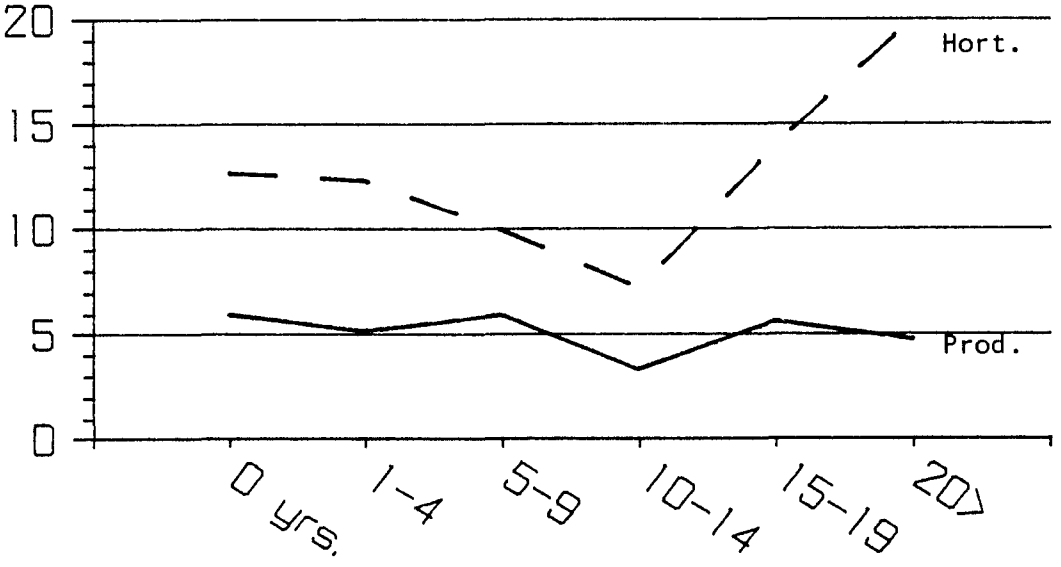



Figure 47.--Time allocation: Guidance and counseling activities, by years of teaching experience.

indicated that horticulture teachers allocated more time across all categories. The highest for horticulture teachers was 10.00 percent, recorded by teachers with 1-4 years; the lowest was 2.30 percent, recorded by teachers with 5-9 years. The highest for production teachers was 1.16 percent, recorded by teachers with 1-4 years; the lowest was .40 percent, recorded by teachers with 5-9 years. These data can be examined in Figure 48.

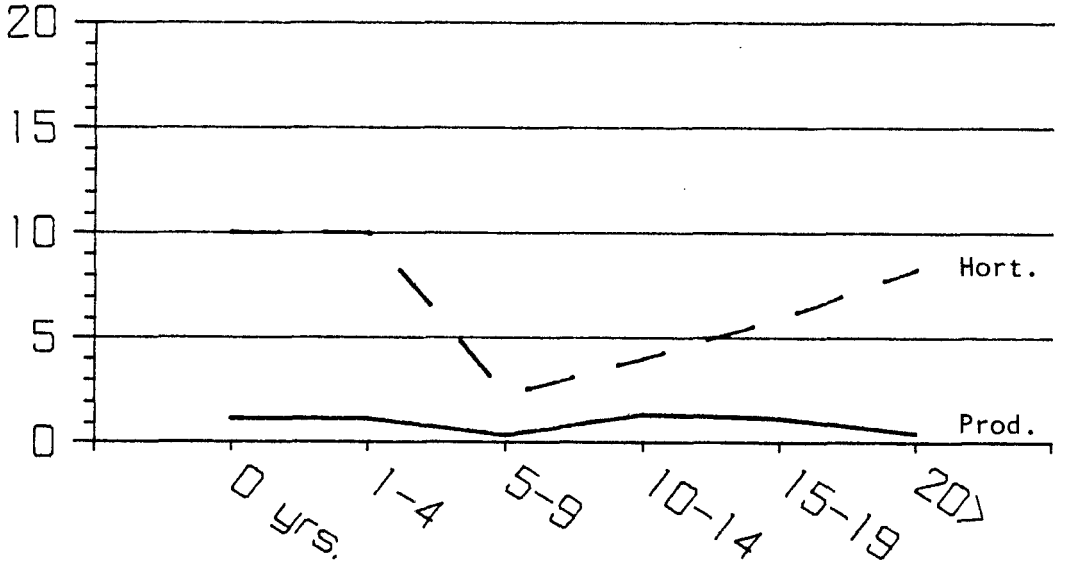



Figure 48.--Time allocation: Adult education activities, by years of teaching experience.

A two-way multivariate analysis of variance was performed to determine the effect of teacher type by student enrollment.

Secondary Hypothesis (School Characteristic)

Ho 22: There is no difference in the time allocated to each program area between ornamental-horticulture and production-agriculture teachers based on student enrollment.

Table 52.--Two-way multivariate analysis of variance significance test for the effect of teacher type by student enrollment with respect to time allocation.

| Effect | F | df | Signif. of F | Test Name |
|---|---|---|---|---|
| Interaction (teacher type x student enrollment) | 1.88278 | 36,144 | .00478* | Wilks |
| Main (student enrollment) | 1.04069 | 72,238 | .40355 | Wilks |
| Main (teacher type) | 9.44504 | 9,38 | .000228* | Wilks |

*Significant at alpha < .05.

The two-way multivariate analysis of variance significance test indicated a significant interaction effect and main effect for teacher type. The interaction effect may have confounded the main effect because the cells were not equal and therefore not independent. The researcher believed that the interaction effect did not confound the main effect in this case; therefore, a detailed discussion will be presented concerning the main effect of teacher type. The univariate analysis of the interaction effect indicated a significant interaction

effect for the adult instructional program. The critical value for the F-distribution, main effect was 9.44504 with a probability of .000228. The null hypothesis was rejected. It was concluded that production teachers differed from horticulture teachers with respect to student enrollment. The univariate analysis for the main effect indicated that the teachers differed with respect to three areas. Table 53 presents the data concerning these three areas.

Table 53.--Univariate F-test for the effect of teacher type by student enrollment with respect to time allocation.

| Effect | (MS) Between | (MS) Within | df | F | Signif. of F |
|---|---|---|---|---|---|
| Advising youth organizations | 3745.10439 | 59.49991 | 1,46 | 62.94302 | 0* |
| Guidance and counseling | 479.45008 | 41.40168 | 1,46 | 11.58039 | .00139* |
| Adult instructional program | 150.76754 | 15.68697 | 1,46 | 9.61100 | .00330* |

*Significant at < .05.

Since the null hypothesis was rejected, these data were further analyzed by plotting the means of each area indicating differences (Figures 49, 50, and 51). When the means for advising youth organizations were plotted, production teachers allocated more time across all categories. The highest mean for production teachers was 30 percent, recorded by teachers with school enrollments of 2,000-2,499; the lowest

was 10 percent, recorded by teachers with school enrollments of 1,500-1,999. The highest mean for horticulture teachers was 5 percent, recorded by teachers with school enrollments of 1,250-1,499; the lowest mean for horticulture teachers was .33 percent, recorded by teachers with school enrollments of 1,500-1,999. Data concerning advising youth organizations can be examined in Figure 49. Data concerning guidance and counseling indicated that horticulture teachers generally allocated more time for this activity. The lowest mean for horticulture teachers was 4.20 percent, recorded by teachers with 1,000-1,249 students enrolled in their schools. This was the only point at which the mean of production teachers exceeded that of horticulture teachers. The mean for horticulture teachers sharply declined after 500-749 students to 1,000-1,249. After 1,249 student enrollment, the mean steadily increased until 2,000-2,499 students. The highest mean for production teachers was 10 percent, recorded by teachers with enrollments of 2,000-2,499. The lowest mean for production teachers was 3.22 percent, recorded by teachers with enrollments of 750-999. Data concerning guidance and counseling can be examined in Figure 50. When the data for adult education activities were plotted, the horticulture teachers allocated more time overall. The greatest difference between the two groups existed between 500 and 1,249 students. The highest mean for horticulture teachers was 10 percent, and the lowest mean was 2.40 percent. The highest mean for production teachers was 2.5 percent, and the lowest mean was .33 percent. These data can be examined in Figure 51.

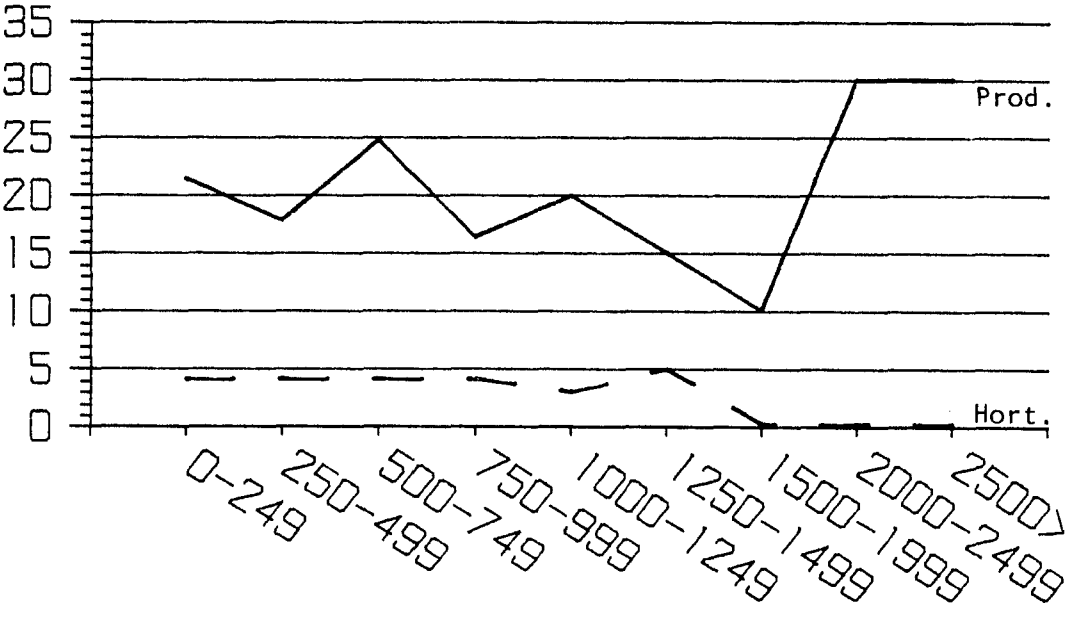



Figure 49.--Time allocation: Advising youth organizations, by student enrollment.

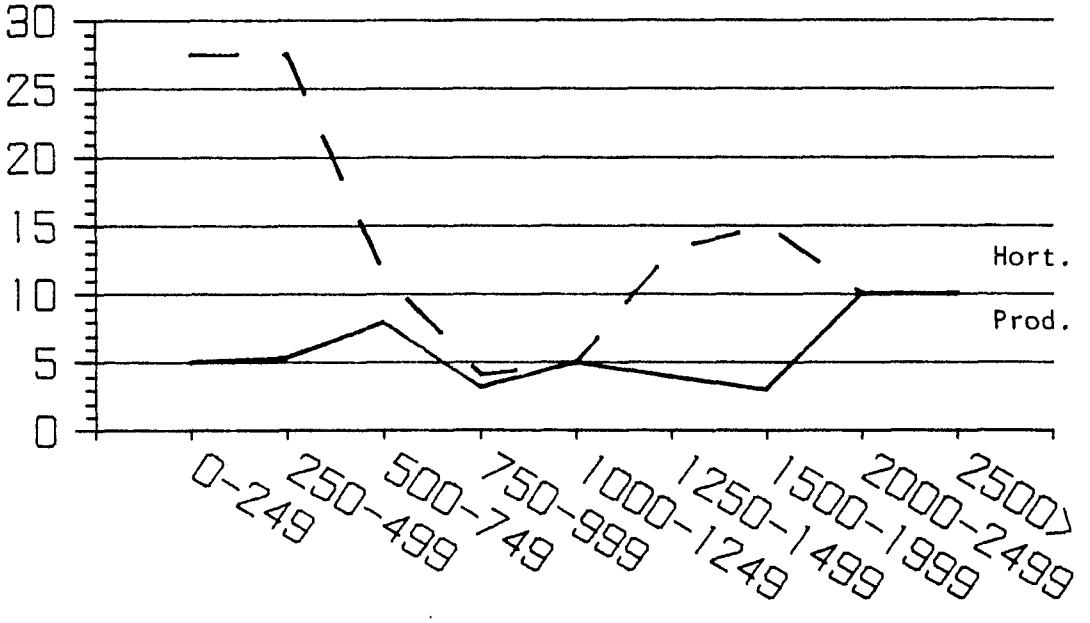



Figure 50.--Time allocation: Guidance and counseling activities, by student enrollment.

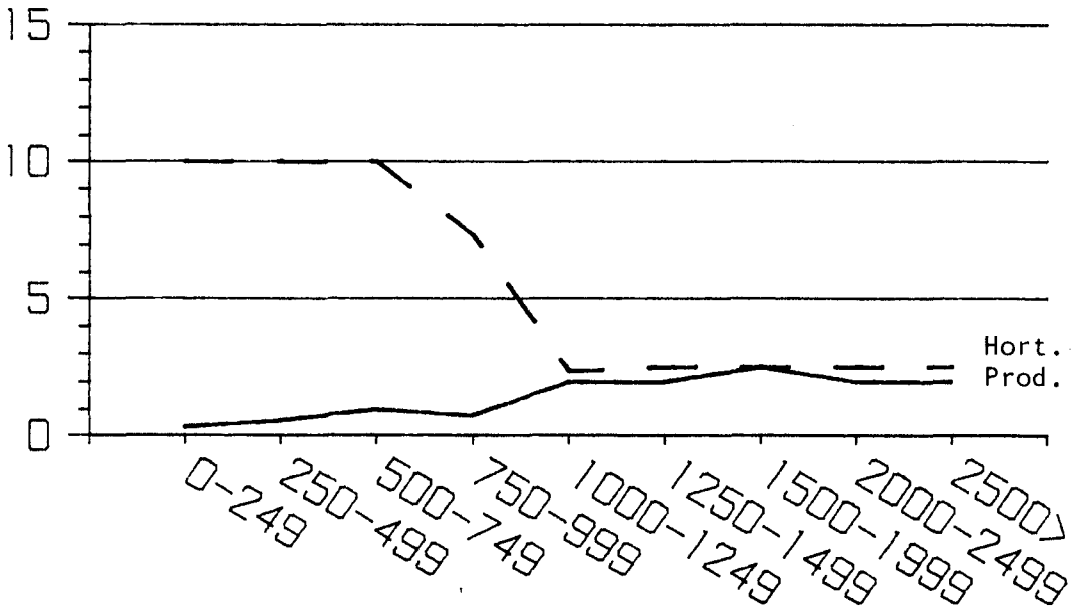



Figure 51.--Time allocation: Adult education activities, by student enrollment.

A two-way multivariate analysis of variance was performed to determine the effect of teacher type by type school with respect to time allocation.

Secondary Hypothesis (School Characteristic)

Ho 23: There is no difference in the time allocated to each program area between ornamental-horticulture and production-agriculture teachers based on type school.

Table 54.--Two-way multivariate analysis of variance significance test for the effect of teacher type by type school with respect to time allocation.

| Effect | F | df | Signif. of F | Test Name |
|---|---|---|---|---|
| Main (type school) | 2.17720 | 9,45 | .04185* | Wilks |
| Main (teacher type) | 9.04415 | 9,45 | .0001* | Wilks |

*Significant at alpha < .05.

The two-way multivariate analysis of variance significance test indicated a significant main effect for type school and teacher type when tested at alpha < .05. Since the cells were not equal and independent, the main effect for type school may have confounded the main effect for teacher type. Therefore, a detailed discussion of the main effect for type school will be presented. The critical F-value for the main effect (type school) was 2.17720 with a probability of .04185. Based on the significance test, the null hypothesis was rejected. It was concluded that all teachers differed on time allocation with respect to type school. The univariate analysis for the effect of teacher type indicated that production teachers differed from horticulture teachers concerning advising youth organizations, guidance and counseling, and the adult instructional program. The univariate analysis for the effect of type school indicated a difference between type school with respect to the adult instructional program and serving as an educational leader in the community. Table

55 presents data concerning the univariate analysis for the effect of type school.

Table 55.--Univariate F-test for the effect of teacher type by type school with respect to time allocated to each program area, main effect (type school).

| Effect | (MS) Between | (MS) Within | df | F | Signif. of F |
|---|---|---|---|---|---|
| Adult instructional program | 74.20614 | 16.25583 | 1,53 | 4.56489 | .03727* |
| Educational leader in the community | 288.40766 | 52.37551 | 1,53 | 5.50654 | .02272* |

*Significant at alpha < .05.

Due to the rejection of the null hypothesis, the means for each area were plotted (Figures 52 and 53). The means for the adult instructional program indicated that horticulture teachers employed in area centers allocated more time for adult activities. These data can be observed in Figure 52. When the means for community leadership activities were plotted, the horticulture teachers in high schools allocated more time (14.40 percent) overall, and production teachers in area centers had the next highest mean (4.50 percent). Horticulture teachers in high schools allocated the most time, and horticulture teachers in area centers allocated the least. These data can be examined in Figure 53.

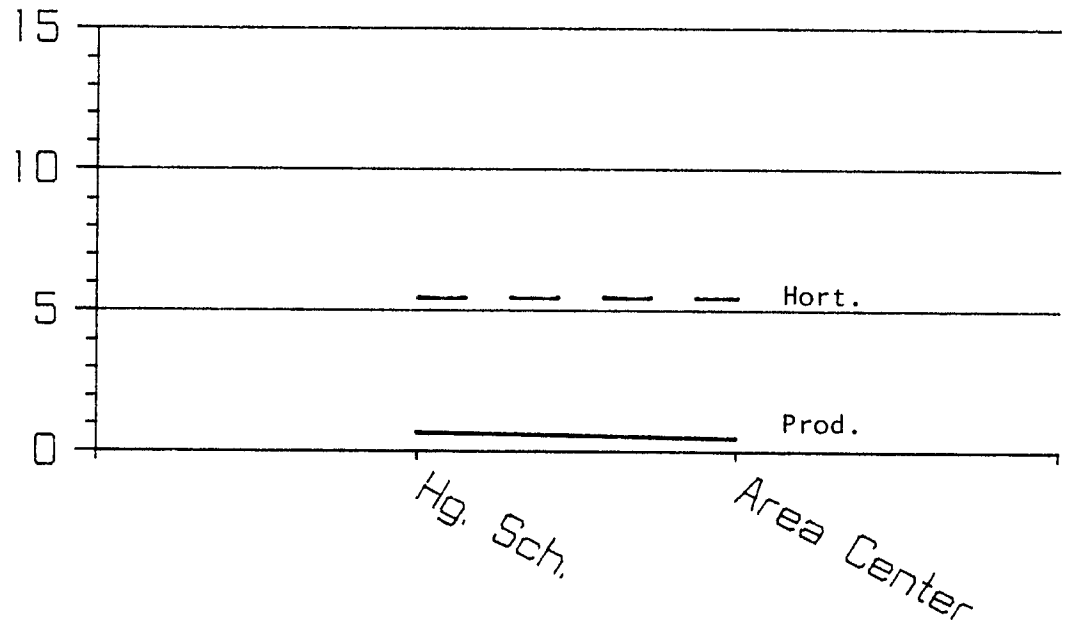



Figure 52.--Time allocation: Adult education activities, by type school.

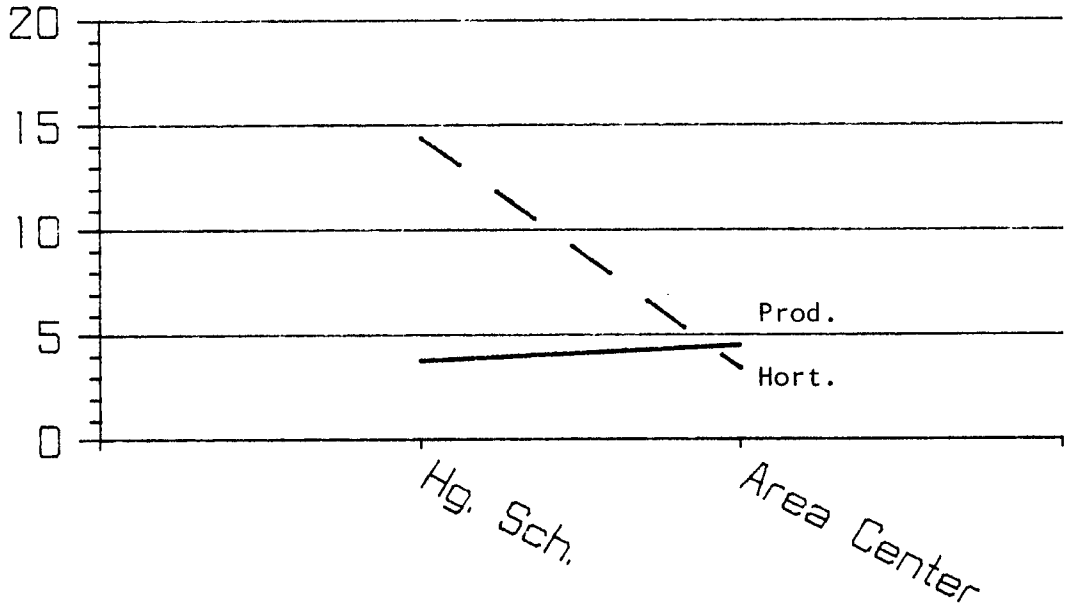



Figure 53.--Time allocation: Educational leadership in the community, by type school.

A two-way multivariate analysis of variance was performed to determine the effect of teacher type by school community classification with respect to time allocation.

Secondary Hypothesis (School Characteristic)

Ho 24: There is no difference in the time allocated to each program area between ornamental-horticulture and production-agriculture teachers based on school community classification.

Table 56.--Two-way multivariate analysis of variance significance test for the effect of teacher type by school community classification with respect to time allocation.

| Effect | F | df | Signif. of F | Test Name |
|---|---|---|---|---|
| Interaction (teacher type x school community classification) | 4.49824 | 27,123 | 0* | Wilks |
| Main (school community classification) | 1.25350 | 36,159 | .17408 | Wilks |
| Main (teacher type) | 9.13389 | 9,42 | .000171* | Wilks |

*Significant at alpha < .05.

The two-way multivariate analysis of variance indicated a significant interaction effect and main effect for teacher type. Since the cells were not equal and independent, an interaction effect may have confounded the main effect. Therefore, a detailed discussion of the interaction effect will be presented. The critical F-value for the interaction effect was 4.4982 with a probability of 0. Therefore, the

null hypothesis was rejected. It was concluded that time allocated to each program area was an interaction between teacher type and school community classification. The univariate analysis for the main effect of teacher type indicated that the teachers differed concerning advising youth organizations, guidance and counseling, and the adult instructional program. The univariate analysis for the interaction effect indicated the program areas showing interaction were the adult instructional program and educational leadership in the community. The univariate analysis for the interaction effect can be observed in Table 57.

Table 57.--Univariate F-test for the effect of teacher type by school community classification with respect to time allocated to each program area, interaction effect (teacher type x school community classification).

| Effect | (MS) Between | (MS) Within | df | F | Signif. of F |
|---|---|---|---|---|---|
| Adult instructional program | 50.86112 | 15.19702 | 3,50 | 3.34678 | .02628* |
| Educational leader in the community | 660.51243 | 21.23150 | 3,50 | 31.11002 | 0* |

*Significant at alpha < .05.

Since the null hypothesis was rejected, the data were further analyzed by plotting the means of the areas indicating interaction (Figures 54 and 55). The means for the adult instructional program

indicated an inverse relationship between community classification and teacher type. As the size of the community decreased, the amount of time allocated by horticulture teachers increased. As community size decreased for production teachers, the time allocated also decreased with the exception of the urban fringe classification. The urban fringe classification is where production teachers recorded the highest mean and horticulture teachers recorded their lowest mean. These data can further be observed in Figure 54. The means for serving as an educational leader in the community behaved similarly to those of the adult instructional program. As the means of production teachers declined from one classification to the next, the means for horticulture teachers increased, and vice versa. These data can be observed in Figure 55.

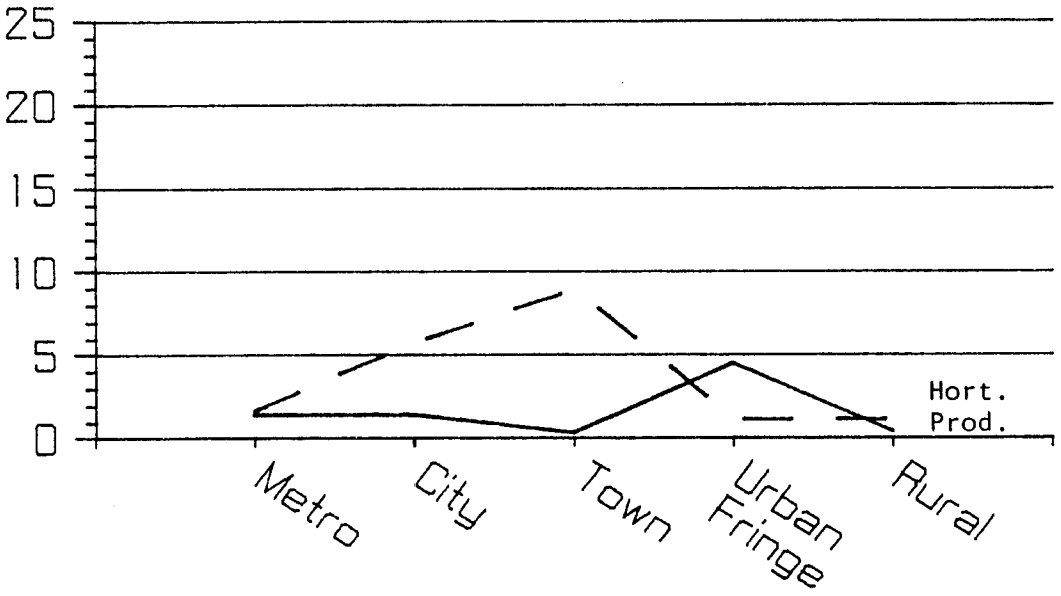



Figure 54.--Time allocation: Adult education activities, by school community classification.

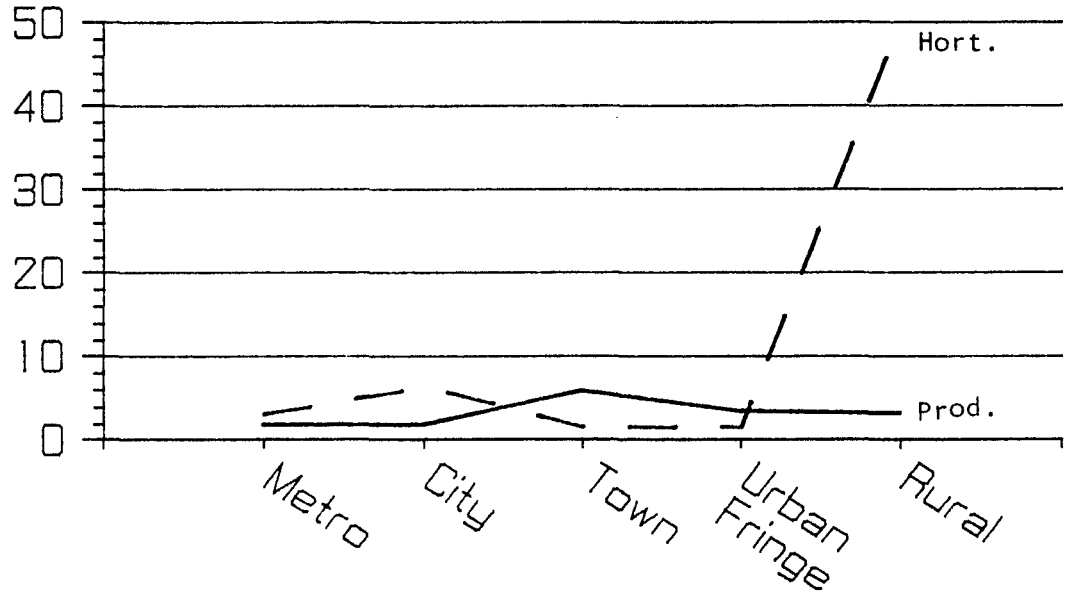



Figure 55.--Time allocation: Educational leadership in the community, by school community classification.

## Importance Attached to Each Program Area

These data were analyzed by comparing the means of each area by teacher type. Those areas in which the means differed by .5 or more were considered to be significant. These data could possibly be analyzed by more sophisticated analysis.

Primary Hypothesis

Ho 25: There is no difference between ornamental-horticulture and production-agriculture teachers concerning the importance they attach to each program area.

Table 58.--Means for each program area by position group and differences concerning importance attached to each program area.

| Program Area | Horticulture Mean (N=27) | Production Mean (N=47) | Mean Diff. |
|---|---|---|---|
| Planning and implementing the instructional program for secondary students | 4.85 | 4.74 | .11 |
| Advising a vocationally related youth organization | 2.85 | 4.57 | 1.72* |
| Supervising occupational experience program | 3.85 | 4.39 | .54* |
| Serving in a guidance and counseling capacity | 4.07 | 3.84 | .23 |
| Planning the adult instructional program | 2.81 | 2.47 | .34 |
| Working as an educational leader in the community | 3.77 | 3.70 | .07 |
| Working as a member of a professional staff | 4.15 | 3.98 | .17 |
| Working as a member of the profession | 4.12 | 4.07 | .05 |

*Significant when means differ by .5 or more.

According to the data shown in Table 58, production teachers differed from horticulture teachers concerning two program areas. Therefore, the null hypothesis was rejected. The two program areas were advising youth organizations and supervising occupational experience programs. When observing the data concerning youth organizations, the mean of horticulture teachers indicated that this area was of

little to some importance, while the mean of production teachers indicated that it was important to very important. When observing the means for supervising the occupational experience program, the means for horticulture teachers indicated that it was of some importance to important, while the mean of production teachers indicated that it was important to very important.

To further analyze the data concerning the importance attached to each program area, the means were ranked by position group (see Table 59). When the means were rank ordered, both groups identified planning and implementing the instructional program for secondary students as the most important and the adult instructional program as least important.

Table 59.--Means by rank concerning importance attached to each area.

| Program Area | Horticulture | | Production | |
|---|---|---|---|---|
| | Rank | Mean | Rank | Mean |
| Planning and implementing the instructional program for secondary students | 1 | 4.85 | 1 | 4.74 |
| Advising vocationally related youth organizations | 7 | 2.85 | 2 | 4.57 |
| Supervising occupational experience programs | 5 | 3.85 | 3 | 4.39 |
| Serving in a guidance and counseling capacity | 4 | 4.07 | 6 | 3.84 |
| Planning and implementing the adult instructional program | 8 | 2.81 | 8 | 2.47 |
| Working as an educational leader in the community | 6 | 3.77 | 7 | 3.70 |
| Working as a member of a professional staff | 2 | 4.15 | 5 | 3.98 |
| Working as a member of the profession | 3 | 4.12 | 4 | 4.07 |

# CHAPTER V

# SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this chapter is to summarize the research study, review research objectives, state conclusions, and make recommendations for further research.

## Summary of the Study

### Need for the Study

Vocational agriculture in the secondary schools of Michigan is part of a comprehensive Vocational Education plan offered to the students of the state. This plan provides for special vocational courses designed to meet the needs of the student, state, and community. Vocational courses are designed to meet specific needs of the community, especially the vocational-agriculture program.

There are tremendous expectations of the vocational-agriculture teacher. It is apparent that the role of the vocational-agriculture teacher is determined before the incumbent is selected. Guba, Getzels, Bible, and many others agree that if role performance is to be effective, the person occupying the position must: (1) understand and internalize roles associated with the position, (2) to a certain extent agree with the roles, and (3) understand how these roles relate to others around him/her.

Considering the nature of the job of the agriculture teacher, it is imperative that the role perceptions of the agriculture teacher be understood by decision makers, teacher educators, agriculture teachers, and prospective agriculture teachers. This study was designed to define and analyze the role perceptions of production and horticulture teachers in Michigan. Defining and analyzing the role perceptions of these teachers provided insight into what is happening in local programs and how they may be improved. Teacher educators will be able to use this information to improve curriculum and experiences for prospective teachers. Prospective teachers will be able to use the results of this study as a vehicle to understanding what the job of the vocational-agriculture teacher entails. This is a very important aspect of the study; persons occupying the position usually determine the quality of the program. If prospective teachers have an in-depth understanding of the position before they occupy it, it is conceivable that the most dedicated and qualified individuals will seek these positions.

Objectives of the Study

Specific objectives of the study were:

1. To determine if production-agriculture teachers differ from ornamental-horticulture teachers concerning perceptions of selected roles.

2. To determine if teacher characteristics and/or school characteristics influence the perceptions of selected roles of production-agriculture and ornamental-horticulture teachers.

3. To determine if production-agriculture teachers differ from ornamental-horticulture teachers concerning the execution of selected role activities.

4. To determine if teacher characteristics and/or school characteristics influence the execution of selected roles of production-agriculture and ornamental-horticulture teachers.

5. To determine if production-agriculture teachers differ from ornamental-horticulture teachers concerning the allocation of time to each program area.

6. To determine if teacher characteristics and/or school characteristics influence the time production-agriculture and ornamental-horticulture teachers allocate for selected program areas.

7. To determine if differences exist between production-agriculture and ornamental horticulture teachers concerning the importance they attach to the selected program areas.

Methodology

The data were obtained from 72 vocational-agriculture teachers in Michigan by mailed questionnaire during fall 1984. All of these teachers were actively teaching in a vocational-agriculture program and were receiving added cost funds to compensate for additional duties that are demanded by the program.

The questionnaire provided the respondents an opportunity to respond to four different types of data. The types of data were concerning role perception, role execution, time allocation to each

program area, and the importance attached to each program area. The basic format for the instrument involved eight areas for the vocational-agriculture program. Eighty role activities were identified and used to define the eight areas. The 80 role activities were used to collect data concerning role perception and role execution. The eight program areas were used to collect data concerning time allocation and importance attached to each program area.

The data concerning role perception consisted of a five-point scale. A response of 1 indicated that the activity "definitely should not be done," while a response of 5 indicated that the activity "definitely should be done." To determine the frequency that these 80 role activities were executed, a three-point scale was used. A response of 1 indicated that the activity was "never done," a response of 2 indicated that the activity was done "sometimes," and a response of 3 indicated that the activity was done "often."

Data concerning time allocation were collected by having the respondents indicate the percentage of time they allocated to each area. Data concerning importance attached to each program area were collected by having the respondents indicate on a five-point scale the importance they attached to each area. A response of 0 indicated that the area was "of no importance," while a response of 4 indicated that the area was very important.

The respondents were divided into two groups: (1) production-agriculture teachers and (2) ornamental-horticulture teachers. The responses of each group were compared, based on each type of data

collected in general and specifically. They were compared in general by testing for differences between the two groups. Role perception, role execution, and data concerning time allocation were compared specifically by testing for specific differences concerning seven selected independent variables.

## Summary of Findings

The findings of this study were as follows:

### Characteristics of Respondents in the Position Groups

1. Thirty-six and five-tenths percent of the respondents were horticulture teachers and 63.5 percent were production teachers.

2. Seventy-one and seven-tenths percent of the total group were males and 28.4 percent were females.

3. The smallest group pertaining to sex was production females--12.2 percent of the total sample.

4. Sixty-six and three-tenths percent of all teachers were under 40 years of age.

5. Fifty-one and four-tenths percent of all teachers held a bachelor's degree and 43.2 percent held a master's degree.

6. It is interesting that 71.1 percent of all respondents holding the bachelor's degree were production teachers.

7. Only 4.1 percent of all teachers held the educational specialist degree, and no teachers held a doctorate degree.

8. Fifty-two and seven-tenths percent of all teachers had less than 10 years of teaching experience.

9. Thirty-two and four-tenths percent of all teachers had five to nine years of teaching experience.

10. Seventy-one and seven-tenths percent of all teachers worked in schools with fewer than 1,000 students.

11. Sixty-eight and one-tenth percent of all production teachers worked in schools with fewer than 750 students.

12. Fifty-nine and two-tenths percent of all horticulture teachers worked in schools with 1,000 or more students.

13. Sixty-four and nine-tenths percent of all teachers worked in high schools, and 31.1 percent worked at area centers.

14. Seventy-seven and eight-tenths percent of all horticulture teachers worked in area centers, whereas 91.5 percent of all production teachers worked in high schools.

15. Forty-three and eight-tenths percent of all programs were located in rural communities.

16. Fifty-nine and two-tenths percent of all horticulture programs were located in metropolitan or city areas.

17. Sixty-five and two-tenths percent of all production programs were located in rural areas.

Differences Concerning
Role Perception

1. There was a significant difference between production-agriculture and ornamental-horticulture teachers concerning role perception.

2. The multivariate analysis of variance indicated that the groups differed with respect to advising youth organizations and serving as an educational leader in the community.

3. The data indicated that production teachers had higher perceptions for roles concerning advising youth organizations and serving as an educational leader in the community than did horticulture teachers.

4. When the data were tested for the effect of age, sex, degree earned, teaching experience, student enrollment, type school, and school community classification, a significant effect was indicated for all independent variables.

Differences Concerning
Role Execution

1. There was a significant difference between production-agriculture and ornamental-horticulture teachers concerning the execution of role activities.

2. The multivariate analysis of variance indicated that production-agriculture teachers differed from ornamental-horticulture teachers with respect to advising youth organizations, guidance and counseling, and the adult instructional program.

3. The data indicated that horticulture teachers performed activities associated with youth organizations more frequently than did production teachers, and production teachers performed activities associated with guidance and counseling and the adult instructional program more frequently than horticulture teachers did.

4. When the data were tested for the effect of age, sex, degree earned, teaching experience, student enrollment, type school, and school community classification, a significant effect was indicated concerning all independent variables.

Time Allocated to Each Program

1. There was a significant difference between production and horticulture teachers concerning the time each allocated to each program area.

2. The multivariate analysis of variance indicated that production teachers differed from horticulture teachers concerning time allocation with respect to advising youth organizations, guidance and counseling, and the adult instructional program.

3. The data indicated that production teachers allocated more time for advising youth organizations and horticulture teachers allocated more time for guidance and counseling and the adult instructional program.

4. When the data were tested for the effect of sex, age, degree earned, teaching experience, student enrollment, type school, and school community classification, a significant effect was indicated for each independent variable.

Importance Attached to Each Program

1. There was a significant difference between ornamental-horticulture and production-agriculture teachers concerning the importance they attached to each program area.

2. When the means were compared for a difference of .5 or greater, they indicated that the two groups of teachers differed with respect to advising youth organizations and supervising the occupational experience program.

3. The data indicated that production teachers attached more importance to advising youth organizations and supervising occupational experience programs than did horticulture teachers.

4. There were no differences between the two groups concerning planning and implementing the adult instructional program; however, the means of both groups indicated they attached little importance to this area.

## Conclusions

The conclusions of this study are based on an analysis of the data collected and a review of the literature.

1. The researcher concluded that those role activities directly related to teaching and the school were (a) held in high esteem by all teachers and (b) conducted more often than any other role activities and consumed most of the teachers' work time.

2. Horticulture teachers did not perceive advising youth organizations as a part of their role responsibilities and consequently did not allocate as much time for this activity as production teachers did.

3. The researcher concluded that activities associated with adults were not considered to be important by either group.

4. Teacher characteristics and/or school characteristics appeared to influence:

a. The role perceptions held by production-agriculture and ornamental-horticulture teachers.

b. The execution of role activities by production-agriculture and ornamental-horticulture teachers.

c. The amount of time allocated to each area of the program by production-agriculture and ornamental-horticulture teachers.

## Recommendations

The findings and conclusions of this study provided a basis for recommendations concerning the vocational-agriculture program and further research.

### Program Recommendations

1. Advising youth organizations should be reevaluated as a part of the horticulture program by state and local program directors and by agriculture teacher educators at Michigan State University.

2. If the youth-organization component of the vocational-agriculture program is to continue to be a part of the horticulture program, a strategy should be developed and implemented that would encourage and assist horticulture teachers with this phase of the program.

3. Inservice and curriculum development should focus more on the supervised-occupational-experience component of the vocational-agriculture program.

4. Incentives should be provided by state and local administrations to improve adult education activities deemed essential to the vocational-agriculture program and to the community.

Research Recommendations

1. A study could be conducted to determine the feasibility of youth organizations as a part of all vocational-agriculture programs.

2. A study could be conducted to investigate the relationship between role perception and role performance of the vocational-agriculture teacher.

3. A study could be conducted to investigate the predictors of role performance as related to the vocational-agriculture teacher.

4. A study could be conducted to investigate the relationship between administrators' knowledge of the role of the vocational-agriculture teacher and support/no support of the program.

# APPENDICES

# APPENDIX A

## INSTRUMENT DEVELOPMENT AND DATA COLLECTION

DEPARTMENT OF AGRICULTURAL & EXTENSION EDUCATION

410 AGRICULTURE HALL • MICHIGAN STATE UNIVERSITY
EAST LANSING, MICHIGAN 48824-1039
(517) 355-6580

October 11, 1984

Dear

Attached please find a copy of the proposed instrument and a copy of the purposes/objectives of the study. Please evaluate for content, clarity, style and organization. If possible I would like to have your recommendations by Wednesday October 17, 1984. Your assistance will be appreciated.

Sincerely,

Larry Powers

# ROLE PERCEPTIONS OF THE VOCATIONAL AGRICULTURE TEACHER

BY LARRY POWERS

QUESTIONNAIRE

This questionnaire is designed to determine the role perceptions of vocational agriculture teachers in Michigan. The information gained in this study will be very useful for strengthening and improving vocational agriculture. All information is confidential. All information will be used for professional purposes only. Your cooperation is needed and will be greatly appreciated.

A. Background Information (one response for each item)

1. What is your title or position?

____ 1. Ornamental-horticulture teacher
____ 2. Production-agriculture teacher
____ 3. Other (specify) _____

2. Sex

____ 1. Male ____ 2. Female

3. Age

____ 1. 25 or under
____ 2. 26-29
____ 3. 30-34
____ 4. 35-39
____ 5. 40-44
____ 6. 45-49
____ 7. 50-54
____ 8. 55 and over

4. Highest academic degree earned:

____ 1. Less than a Bachelor's degree
____ 2. Bachelor's degree
____ 3. Master's degree
____ 4. Ed. Specialist degree
____ 5. Ed.D. degree
____ 6. Ph.D. degree

5. Number of years you have been a teacher of agriculture:

____ 1. 0
____ 2. 1-4
____ 3. 5-9
____ 4. 10-14
____ 5. 15-19
____ 6. 20 or more

6. In what area is your teaching certificate?

____ 1. Ornamental horticulture
____ 2. Production agriculture
____ 3. Vocational agriculture
____ 4. Social science
____ 5. Physical education
____ 6. Language
____ 7. Industrial arts
____ 8. Speech and English
____ 9. Science
____ 10. Other (specify) _____

7. Type of teaching certificate you presently hold:

____ 1. Annual authorization in agriculture
____ 2. Temporary vocational authorization in agriculture
____ 3. Full vocational authorization in agriculture
____ 4. Secondary provisional certificate with vocational endorsement in agriculture
____ 5. Secondary continuing certificate with vocational endorsement in agriculture

8. What is the total enrollment of high school students in your school (grades 9-12)?

____ 1. 99 or less
____ 2. 100 to 199
____ 3. 200 to 299
____ 4. 300 to 399
____ 5. 400 to 499
____ 6. 500 to 599
____ 7. 600 to 699
____ 8. 700 to 799
____ 9. 800 to 899
____ 10. 900 to 999
____ 11. 1000 and over

9. In what type of school are you employed?

____ 1. Area Vocational Educational Center
____ 2. High school

DIRECTIONS: Please circle a number from 1 through 5 on the scale to the right of each item, thereby indicating the extent to which you feel obligated to do the following things. Also circle the letter to the right of the numbers indicating how often you do each item.

1 = Definitely Should Not
2 = Should Not
3 = May or May Not
4 = Should
5 = Definitely Should

O = Often
S = Sometimes
N = Never

| B. Planning and Implementing the Instructional Program for Secondary Students | To what extent do you feel obligated to do the following things? | How Often? Often | Sometimes | Never |
|---|---|---|---|---|
| 10. Develop a written course of study for each class taught at the beginning of the year. | 1 2 3 4 5 | O | S | N |
| 11. Conduct field trips to enhance classroom instruction. | 1 2 3 4 5 | O | S | N |
| 12. Use advisory committee to plan instructional programs at least one year in advance. | 1 2 3 4 5 | O | S | N |
| 13. Visit the homes of all your agriculture students. | 1 2 3 4 5 | O | S | N |
| 14. Provide instruction on current technology (e.g., computers). | 1 2 3 4 5 | O | S | N |
| 15. Teach classes other than agriculture. | 1 2 3 4 5 | O | S | N |
| 16. Involve students in activities of the local fairs. | 1 2 3 4 5 | O | S | N |
| 17. Provide students with instruction in reading, writing, and arithmetic while teaching. | 1 2 3 4 5 | O | S | N |
| 18. Develop acceptable social conduct among students. | 1 2 3 4 5 | O | S | N |
| 19. Constantly evaluate and record student progress on objectives of each unit taught. | 1 2 3 4 5 | O | S | N |
| 20. Teach nonvocational classes in agriculture. | 1 2 3 4 5 | O | S | N |
| 21. Teach problem-solving techniques. | 1 2 3 4 5 | O | S | N |
| 22. Collect specimens for teaching. | 1 2 3 4 5 | O | S | N |
| 23. Develop materials for teaching. | 1 2 3 4 5 | O | S | N |
| 24. Order teaching supplies. | 1 2 3 4 5 | O | S | N |
| 25. Conduct annual inventory of supplies and equipment. | 1 2 3 4 5 | O | S | N |
| 26. Discuss budgeting for the vocational agriculture program with principal and/or superintendent. | 1 2 3 4 5 | O | S | N |
| 27. Have the advisory committee evaluate the vocational agriculture program annually. | 1 2 3 4 5 | O | S | N |
| 28. Provide primary maintenance for facilities and equipment. | 1 2 3 4 5 | O | S | N |
| 29. Teach classes during the summer months. | 1 2 3 4 5 | O | S | N |

| | To what extent do you feel obligated to do the following things? | How Often? | | |
|---|---|---|---|---|
| | | Often | Sometimes | Never |
| **C. Advising Youth Organization** | | | | |
| 30. Encourage all class members to become members of a vocationally related youth organization (e.g., FFA, Horticulture Club). | 1 2 3 4 5 | O | S | N |
| 31. Involve members in local, state, or national activities of the youth organization. | 1 2 3 4 5 | O | S | N |
| 32. Prepare members of the organization for competitive contests. | 1 2 3 4 5 | O | S | N |
| 33. Work toward developing leadership among members. | 1 2 3 4 5 | O | S | N |
| 34. Assist the members with development of an annual program of activities. | 1 2 3 4 5 | O | S | N |
| 35. Be responsible for ensuring each member is placed on an active committee. | 1 2 3 4 5 | O | S | N |
| 36. Assist officers with record keeping. | 1 2 3 4 5 | O | S | N |
| 37. Teach students about the youth organization as part of the instructional program. | 1 2 3 4 5 | O | S | N |
| **D. Supervising the Occupational Experience Program** | | | | |
| 38. Assist each student with the development of a personal plan to identify those occupational skills that are necessary for job entry. | 1 2 3 4 5 | O | S | N |
| 39. Assist students with the selection of occupational learning experiences to coincide with career objective. | 1 2 3 4 5 | O | S | N |
| 40. Use students' home resources to provide occupational learning experiences. | 1 2 3 4 5 | O | S | N |
| 41. Supervise the students' occupational learning experiences during the summer months. | 1 2 3 4 5 | O | S | N |
| 42. Teach students occupational skills in agriculture. | 1 2 3 4 5 | O | S | N |
| 43. Survey community to determine the demand for skills related to your teaching area. | 1 2 3 4 5 | O | S | N |
| 44. Coordinate the students' occupational learning experiences with local and/or state job demands. | 1 2 3 4 5 | O | S | N |
| 45. Assist students with job placement. | 1 2 3 4 5 | O | S | N |
| 46. Keep a record of skills development of your students. | 1 2 3 4 5 | O | S | N |
| 47. Use school facilities to provide occupational learning experiences for the students. | 1 2 3 4 5 | O | S | N |
| 48. Teach students occupational skills that are consistent with job demands. | 1 2 3 4 5 | O | S | N |
| 49. Provide students with learning experiences that can be used as a foundation for further skills development. | 1 2 3 4 5 | O | S | N |
| 50. Supervise the students' occupational experiences during the school year. | 1 2 3 4 5 | O | S | N |

| | To what extent do you feel obligated to do the following things? | | | | | How Often? | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Often | Sometimes | Never |
| **E. Guidance and Counseling** | | | | | | | | |
| 51. Limit the enrollment in your classes. | 1 | 2 | 3 | 4 | 5 | O | S | N |
| 52. Provide students with information about agriculture careers. | 1 | 2 | 3 | 4 | 5 | O | S | N |
| 53. Determine who should enroll in vocational agriculture. | 1 | 2 | 3 | 4 | 5 | O | S | N |
| 54. Maintain current records of each student's progress toward his/her career objective. | 1 | 2 | 3 | 4 | 5 | O | S | N |
| 55. Visit prospective students and their parents to explain the vocational-agriculture program. | 1 | 2 | 3 | 4 | 5 | O | S | N |
| 56. Consult regularly the cumulative records of your students. | 1 | 2 | 3 | 4 | 5 | O | S | N |
| 57. Confer with individual students about their personal vocational problems. | 1 | 2 | 3 | 4 | 5 | O | S | N |
| 58. Develop a career development plan for each student. | 1 | 2 | 3 | 4 | 5 | O | S | N |
| **F. Planning and Implementing the Adult Instructional Program** | | | | | | | | |
| 59. Organize and teach adult classes. | 1 | 2 | 3 | 4 | 5 | O | S | N |
| 60. Organize classes for others to teach. | 1 | 2 | 3 | 4 | 5 | O | S | N |
| 61. Visit adult homes for instructional purposes. | 1 | 2 | 3 | 4 | 5 | O | S | N |
| 62. Organize field trips for adult groups. | 1 | 2 | 3 | 4 | 5 | O | S | N |
| 63. Call in specialists from companies to assist with adult instruction. | 1 | 2 | 3 | 4 | 5 | O | S | N |
| 64. Survey the community to determine adult learning needs. | 1 | 2 | 3 | 4 | 5 | O | S | N |
| 65. Plan a program for adults that will continue for one year. | 1 | 2 | 3 | 4 | 5 | O | S | N |
| 66. Organize recreational activities for adults participating in the program. | 1 | 2 | 3 | 4 | 5 | O | S | N |
| **G. Working as an Educational Leader in the Community** | | | | | | | | |
| 67. Represent the school in community agriculture activities. | 1 | 2 | 3 | 4 | 5 | O | S | N |
| 68. Determine community educational needs in your teaching area. | 1 | 2 | 3 | 4 | 5 | O | S | N |
| 69. Attend meetings held by community clientele. | 1 | 2 | 3 | 4 | 5 | O | S | N |
| 70. Involve citizens in planning the vocational-agriculture program. | 1 | 2 | 3 | 4 | 5 | O | S | N |
| 71. Participate in civic service organizations. | 1 | 2 | 3 | 4 | 5 | O | S | N |
| 72. Live in the school community. | 1 | 2 | 3 | 4 | 5 | O | S | N |
| **H. Working as a Member of a Professional Staff** | | | | | | | | |
| 73. Attend regularly local staff meetings. | 1 | 2 | 3 | 4 | 5 | O | S | N |
| 74. Attend school functions that include the total school. | 1 | 2 | 3 | 4 | 5 | O | S | N |
| 75. Work on teacher committees. | 1 | 2 | 3 | 4 | 5 | O | S | N |

| | To what extent do you feel obligated to do the following things? | How Often? Often | Sometimes | Never |
|---|---|---|---|---|
| 76. Coordinate your program activities with other activities within the school. | 1 2 3 4 5 | O | S | N |
| 77. Seek suggestions from other teachers to improve the program. | 1 2 3 4 5 | O | S | N |
| 78. Assist in the development and implementation of school policies. | 1 2 3 4 5 | O | S | N |
| 79. Interpret school policies to persons in the community. | 1 2 3 4 5 | O | S | N |
| 80. Use administrators' suggestions to improve program. | 1 2 3 4 5 | O | S | N |
| 81. Assist other teachers in improving the quality of learning they provide for students. | 1 2 3 4 5 | O | S | N |
| I. Working as a Member of the Profession | | | | |
| 82. Establish active membership in the professional organizations (e.g., MATVA, AVA, NVATA). | 1 2 3 4 5 | O | S | N |
| 83. Take courses for college credit to improve professional skills. | 1 2 3 4 5 | O | S | N |
| 84. Participate in workshops designed to improve teaching skills in technical areas. | 1 2 3 4 5 | O | S | N |
| 85. Attend meetings of agriculture-teacher organizations. | 1 2 3 4 5 | O | S | N |
| 86. Identify prospective teachers. | 1 2 3 4 5 | O | S | N |
| 87. Assist neighboring agriculture teachers with teaching problems. | 1 2 3 4 5 | O | S | N |
| 88. Support legislation that improves the teaching profession. | 1 2 3 4 5 | O | S | N |
| 89. Work on local and/or state initiatives to improve vocational agriculture. | 1 2 3 4 5 | O | S | N |
| Please write any additional role activities that you perform. | | | | |
| J. 90. | 1 2 3 4 5 | O | S | N |
| 91. | 1 2 3 4 5 | O | S | N |
| 92. | 1 2 3 4 5 | O | S | N |
| 93. | 1 2 3 4 5 | O | S | N |
| 94. | 1 2 3 4 5 | O | S | N |
| 95. | 1 2 3 4 5 | O | S | N |
| 96. | 1 2 3 4 5 | O | S | N |
| 97. | 1 2 3 4 5 | O | S | N |
| 98. | 1 2 3 4 5 | O | S | N |
| 99. | 1 2 3 4 5 | O | S | N |
| 100. | 1 2 3 4 5 | O | S | N |

Considering the various tasks of the teacher of vocational agriculture, please indicate how important you feel the following to be, by circling one of the numbers to the left of each item. Also indicate the percentage of your time you devote to each.

4 = Very Important
3 = Important
2 = Of Some Importance
1 = Of Little Importance
0 = Of No Importance

| | | % of Your Time |
|---|---|---|
| 0 1 2 3 4 | Planning and implementing the instructional program for secondary students. | _____ |
| 0 1 2 3 4 | Advising a vocationally related youth organization. | _____ |
| 0 1 2 3 4 | Supervising occupational experiences of your students. | _____ |
| 0 1 2 3 4 | Serving in a guidance and counseling capacity for your students. | _____ |
| 0 1 2 3 4 | Planning and implementing the adult instructional program. | _____ |
| 0 1 2 3 4 | Working as an educational leader in the community. | _____ |
| 0 1 2 3 4 | Working as a member of a professional staff. | _____ |
| 0 1 2 3 4 | Working as a member of the profession. | _____ |

DEPARTMENT OF AGRICULTURAL & EXTENSION EDUCATION

410 AGRICULTURE HALL • MICHIGAN STATE UNIVERSITY
EAST LANSING, MICHIGAN 48824-1039
(517) 355-6580

November 16, 1984

Dear Teachers

There is very little current information available that would facilitate curriculum development and inservice needs of horticulture teachers in Michigan.

The horticulture teachers are in an excellent position to assist in determining these needs. To determine the role perceptions of the horticulture teachers would provide valuable information for curriculum development and inservice needs. This information is needed to assist in developing the best educational programs possible for Michigan's youth.

You can assist by responding to the enclosed questionnaire.

Please respond to all items. Your responses will be held in complete confidence. The information will only be used for professional purposes by the researchers. The self-addressed and stamped envelope is enclosed for your convenience. It would be greatly appreciated if you would return your questionnaire by November 30, 1984.

Thank you for your cooperation.

Sincerely,

Larry Powers
Ph.D. Graduate Student

Dr. Harrison Gardner
Professor
Ag & Extension Education

Dr. Carroll Wamhoff
Department Chairman
Ag & Extension Education

DEPARTMENT OF AGRICULTURAL & EXTENSION EDUCATION

410 AGRICULTURE HALL • MICHIGAN STATE UNIVERSITY
EAST LANSING, MICHIGAN 48824-1039
(517) 355-6580

December 4, 1984

Dear Colleague:

A short time ago you should have received a questionnaire concerning the role perceptions of horticulture teachers and production agriculture teachers. The researchers would like to express their appreciation to you for taking the time to assist in this research.

If you have not returned your questionnaire we ask that you take a few minutes and complete it and mail it to us. We realize you are very busy and involved with your students but to assist us in this effort will ultimately benefit the students enrolled in horticulture and production agriculture in Michigan.

Thank you for your cooperation.

Sincerely,

Larry Powers
Ph.D. (Graduate Student)

Dr. Harrison Gardner, Professor
Dept. of Agriculture and
Extension Education

Dr. C. Wamhoff, Chairman, Dept. of Agriculture and Extension Education

DEPARTMENT OF AGRICULTURAL & EXTENSION EDUCATION

410 AGRICULTURE HALL • MICHIGAN STATE UNIVERSITY
EAST LANSING, MICHIGAN 48824-1039
(517) 355-6580

December 11, 1984

Dear Colleague:

We are continuing efforts to improve Agricultural Education programs in Michigan. A short time ago you should have received a questionnaire concerning role perception of Vocational Agriculture teachers. We realize that you are very busy with your students but we hope that you will take time to complete the questionnaire. Just in case you have mis-placed the first questionnaire, we have enclosed another one for your convenience with a self-addressed stamped envelope.

Thank you for your cooperation.

Sincerely,

Larry Powers

Larry Powers
Ph.D. (Graduate Student)

Student Enrollment Changes

1. 0- 249
2. 250- 499
3. 500- 749
4. 750- 999
5. 1,000-1,249
6. 1,250-1,499
7. 1,500-1,999
8. 2,000-2,499
9. 2,500 or more

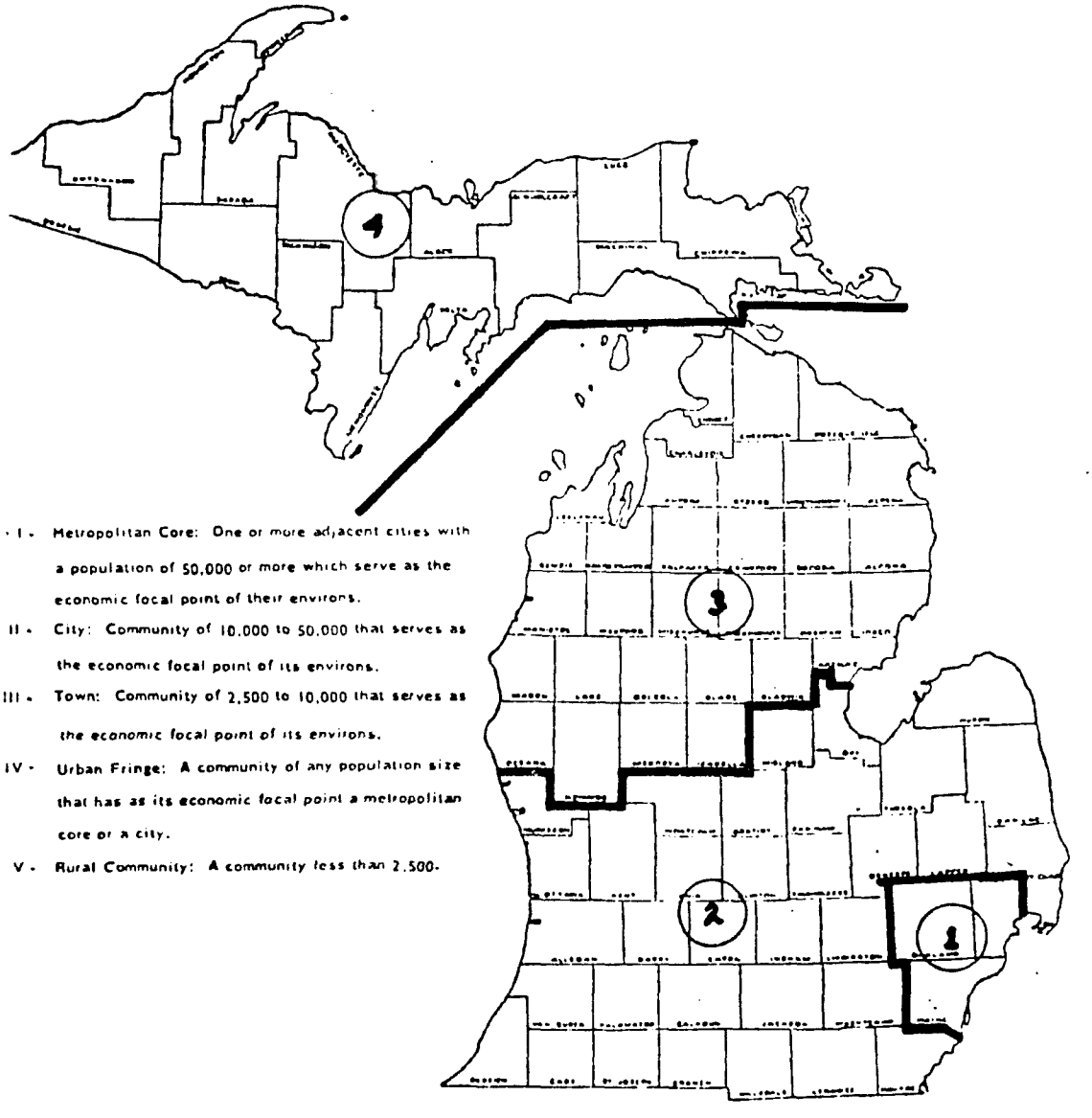
## REGION AND COMMUNITY TYPE CATEGORIES

Region 1 - Wayne, Oakland and Macomb Counties.

2 - All counties in Southern Michigan that are south of and including Muskegon, Kent, Montcalm, Gratiot, Midland and Bay counties. This excludes Region 1.

3 - All counties that are north of the above mentioned line and that are in the Lower Peninsula.

4 - All counties that are in the Upper Peninsula.




I - Metropolitan Core: One or more adjacent cities with a population of 50,000 or more which serve as the economic focal point of their environs.

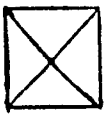
II - City: Community of 10,000 to 50,000 that serves as the economic focal point of its environs.

III - Town: Community of 2,500 to 10,000 that serves as the economic focal point of its environs.

IV - Urban Fringe: A community of any population size that has as its economic focal point a metropolitan core or a city.

V - Rural Community: A community less than 2,500.

| GEOGRAPHIC AREA / COMMUNITY TYPE | REGION 1 | REGION 2 | REGIONS 364 |
|---|---|---|---|
| CORE AREAS AND CITIES TYPE I & II | STRATUM 1 | STRATUM 2 | |
| TOWNS & FRINGE TYPE III & IV | STRATUM 3 | STRATUM 4 | |
| RURAL COMMUNITY TYPE V | | STRATUM 5 | STRATUM 6 |

 = NO SCHOOLS IN THIS CELL

The attached Michigan Map explains the Regions & Types.

# APPENDIX B

## PROBABILITY DATA AND MEANS FOR IMPORTANCE ATTACHED TO PROGRAM AREAS

Table B-1.--Probability data taken from all the univariate F-tests concerning all dependent and independent variables with respect to role perception.

| Teacher Type | Planning | Advising | S.O.E.P. | Guidance | Adult | Comm. Leader | Prof. Staff | Profes-sion |
|---|---|---|---|---|---|---|---|---|
| Sex[a] | .67728 | 0* | .30666 | .95601 | .22664 | .04474* | .50061 | .84212 |
| Age[a] | .68161 | .00012* | .32686 | .95362 | .18921 | .03492* | .49821 | .84082 |
| Degree earned[a] | .66450 | 0* | .17184 | .95568 | .22775 | .04546* | .49476 | .83975 |
| Yrs. experience[a] | .67381 | 0* | .31421 | .95472 | .22726 | .03754* | .51046 | .83731 |
| Student enroll.[a] | .67683 | 0* | .30306 | .95586 | .22871 | .05083 | .52157 | .84687 |
| Type school[a] | .37848 | 0* | .19804 | .71164 | .26427 | .03423* | .60958 | .65166 |
| School community classification[a] | .71790 | 0* | .33771 | .99914 | .15066 | .05473 | .39233 | .90966 |

*Significant at alpha < .05.

Effect: [a]Main (teacher type)
[b]Main (independent variable)
[c]Interaction effect

Table B-2.--Probability data taken from all univariate F-tests concerning all dependent and independent variables with respect to role execution.

| Teacher Type | Planning | Advising | S.O.E.P. | Guidance | Adult | Comm. Leader | Prof. Staff | Profes-sion |
|---|---|---|---|---|---|---|---|---|
| Sex[a] | .76875 | .000177* | .22092 | .00918* | .00076* | .47980 | .08821 | .27226 |
| Age[a] | .77373 | .000176* | .24382 | .00589* | .00028* | .45244 | .08578 | .27618 |
| Degree earned[a] | .76839 | .00033* | .18817 | .00775* | .00080* | .47539 | .08822 | .27804 |
| Yrs. experience[a] | .77747 | .0001* | .22565 | .01166* | .00098* | .48543 | .10218 | .28915 |
| Student enroll.[a] | .76668 | .00094* | .20620 | .00429* | .00025* | .45007 | .06951 | .26105 |
| Type school[b] | .63656 | .84449 | .00240* | .37011 | .12469 | .18157 | .31401 | .02312* |
| School community classification[a] | .76937 | .00081* | .18535 | .00413* | .00022* | .52389 | .07102 | .24609 |

*Significant at alpha < .05.

Effect: [a]Main (teacher type)
[b]Main (independent variable)
[c]Interaction effect

Table B-3.--Probability data taken from all univariate F-tests concerning all dependent and independent variables with respect to time allocation.

| Teacher Type | Planning | Advising | S.O.E.P. | Guidance | Adult | Comm. Leader | Prof. Staff | Profes-sion | Other |
|---|---|---|---|---|---|---|---|---|---|
| Sex[a] | .51402 | 0* | .26713 | .00335* | .00508* | .35261 | .11779 | .11947 | .46173 |
| Age[c] | .13493 | .46342 | .88014 | .02510* | .03120* | .22258 | .01425* | .0003* | .06666 |
| Degree earned[a] | .51812 | 0* | .27000 | .00307* | .00566* | .34560 | .11971 | .12396 | .46524 |
| Yrs. experience[a] | .49524 | 0* | .25079 | .00364* | .00164* | .34154 | .12494 | .11118 | .45311 |
| Student enroll.[a] | .48110 | 0* | .25189 | .00139* | .00330* | .34539 | .09909 | .10752 | .44883 |
| Type school[b] | .42091 | .09558 | .11278 | .44149 | .03727 | .02272* | .99263 | .39571 | .75210 |
| School community classification[c] | .17854 | .58637 | .16494 | .22675 | .02628* | 0* | .41691 | .44570 | .02361* |

*Significant at alpha < .05.

Effect: [a]Main (teacher type)
[b]Main (independent variable)
[c]Interaction effect

Table B-4.--Means for importance attached to each program area, by position group.

| Program Area | Ornamental (N=27) | | Production (N=47) | |
|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. |
| Planning and implementing the instructional program for secondary students | 4.85 | .36 | 4.74 | .68 |
| Advising a vocationally related youth organization | 2.85 | 1.20 | 4.57 | .78 |
| Supervising occupational experiences of your students | 3.85 | .92 | 4.39 | .83 |
| Serving in a guidance and counseling capacity for your students | 4.07 | .73 | 3.84 | .95 |
| Planning and implementing the adult instructional program | 2.81 | 1.41 | 2.47 | 1.06 |
| Working as an educational leader in the community | 3.77 | 1.21 | 3.70 | .99 |
| Working as a member of a professional staff | 4.15 | .77 | 3.98 | 1.08 |
| Working as a member of the profession | 4.12 | 1.03 | 4.07 | 1.12 |

# APPENDIX C

## SUMMARY MEANS AND STANDARD DEVIATIONS

## FOR ALL DATA

Table C-1.--Means and standard deviations by position group for role perception, for each role activity.

| Role Activity | Ornamental (N=27) | | Production (N=47) | |
|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. |
| B. Planning and Implementing the Instructional Program for Secondary Students | | | | |
| 10. Develop a written course of study for each class taught at the beginning of the year. | 4.11 | .89 | 4.09 | .73 |
| 11. Conduct field trips to enhance classroom instruction. | 4.56 | .58 | 4.57 | .68 |
| 12. Use advisory committee to plan instructional programs at least one year in advance. | 4.15 | .89 | 3.96 | .98 |
| 13. Visit the homes of all your agriculture students. | 2.42 | 1.24 | 4.39 | .85 |
| 14. Provide instruction on current technology (e.g., computers). | 4.33 | .83 | 4.34 | .70 |
| 15. Teach classes other than agriculture. | 2.41 | 1.45 | 2.50 | 1.07 |
| 16. Involve students in activities of the local fairs. | 3.11 | 1.22 | 4.28 | .80 |
| 17. Provide students with instruction in reading, writing, and arithmetic while teaching. | 3.78 | 1.15 | 3.98 | .90 |
| 18. Develop acceptable social conduct among students. | 4.78 | .42 | 4.45 | .72 |
| 19. Constantly evaluate and record student progress on objectives of each unit taught. | 4.52 | .70 | 4.17 | .70 |
| 20. Teach nonvocational classes in agriculture. | 2.81 | 1.18 | 2.96 | 1.05 |
| 21. Teach problem-solving techniques. | 4.50 | .85 | 4.31 | .66 |
| 22. Collect specimens for teaching. | 4.56 | .89 | 4.23 | .70 |
| 23. Develop materials for teaching. | 4.74 | .45 | 4.28 | .80 |
| 24. Order teaching supplies. | 4.85 | .36 | 4.61 | .61 |
| 25. Conduct annual inventory of supplies and equipment. | 4.63 | .56 | 4.26 | .82 |
| 26. Discuss budgeting for the vocational agriculture program with principal and/or superintendent. | 4.22 | .97 | 4.47 | .69 |
| 27. Have the advisory committee evaluate the vocational agriculture program annually. | 4.19 | .79 | 4.26 | .97 |
| 28. Provide primary maintenance for facilities and equipment. | 3.70 | 1.27 | 3.74 | .99 |
| 29. Teach classes during the summer months. | 3.37 | 1.18 | 2.70 | .95 |
| C. Advising Youth Organization | | | | |
| 30. Encourage all class members to become members of a vocationally related youth organization (e.g., FFA, Horticulture Club). | 3.0 | 1.18 | 4.57 | .85 |
| 31. Involve members in local, state, or national activities of the youth organization. | 3.0 | 1.11 | 4.63 | .74 |
| 32. Prepare members of the organization for competitive contests. | 3.1 | 1.24 | 4.53 | .65 |
| 33. Work toward developing leadership among members. | 3.93 | 1.17 | 4.63 | .74 |
| 34. Assist the members with development of an annual program of activities. | 3.30 | 1.20 | 4.45 | .77 |
| 35. Be responsible for ensuring each member is placed on an active committee. | 2.96 | 1.06 | 4.10 | .75 |

Table C-1.--Continued.

| Role Activity | Ornamental (N=27) | | Production (N=47) | |
|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. |
| 36. Assist officers with record keeping. | 2.84 | 1.19 | 4.30 | .66 |
| 37. Teach students about the youth organization as part of the instructional program. | 3.08 | 1.26 | 4.50 | .64 |
| D. Supervising the Occupational Experience Program | | | | |
| 38. Assist each student with the development of a personal plan to identify those occupational skills that are necessary for job entry. | 4.42 | .76 | 4.28 | .62 |
| 39. Assist students with the selection of occupational learning experiences to coincide with career objective. | 4.42 | .76 | 4.28 | .68 |
| 40. Use students' home resources to provide occupational learning experiences. | 3.50 | 1.14 | 4.45 | .65 |
| 41. Supervise the students' occupational learning experiences during the summer months. | 2.92 | 1.09 | 4.51 | .83 |
| 42. Teach students occupational skills in agriculture. | 4.54 | .58 | 4.62 | .61 |
| 43. Survey community to determine the demand for skills related to your teaching area. | 4.38 | .75 | 3.87 | .85 |
| 44. Coordinate the students' occupational learning experiences with local and/or state job demands. | 4.19 | .90 | 3.87 | .85 |
| 45. Assist students with job placement. | 4.27 | .83 | 4.00 | .86 |
| 46. Keep a record of skills development of your students. | 4.47 | .76 | 3.96 | .75 |
| 47. Use school facilities to provide occupational learning experiences for the students. | 4.69 | .62 | 4.45 | .69 |
| 48. Teach students occupational skills that are consistent with job demands. | 4.69 | .62 | 4.36 | .64 |
| 49. Provide students with learning experiences that can be used as a foundation for further skills development. | 4.69 | .55 | 4.45 | .62 |
| 50. Supervise the students' occupational experiences during the school year. | 4.08 | 1.09 | 4.50 | .69 |
| E. Guidance and Counseling | | | | |
| 51. Limit the enrollment in your classes. | 3.96 | 1.04 | 3.49 | 1.12 |
| 52. Provide students with information about agriculture careers. | 4.44 | .85 | 4.68 | .63 |
| 53. Determine who should enroll in vocational agriculture. | 3.44 | 1.28 | 3.72 | .95 |
| 54. Maintain current records of each student's progress toward his/her career objective. | 4.33 | .73 | 3.81 | .77 |
| 55. Visit prospective students and their parents to explain the vocational-agriculture program. | 2.96 | 1.11 | 4.02 | .92 |
| 56. Consult regularly the cumulative records of your students. | 3.70 | 1.14 | 3.60 | .80 |
| 57. Confer with individual students about their personal vocational problems. | 4.00 | 1.40 | 3.93 | .73 |
| 58. Develop a career development plan for each student. | 3.92 | 1.02 | 3.66 | .84 |

Table C-1.--Continued.

| Role Activity | Ornamental (N=27) | | Production (N=47) | |
|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. |
| F. Planning and Implementing the Adult Instructional Program | | | | |
| 59. Organize and teach adult classes. | 3.44 | .97 | 2.91 | .80 |
| 60. Organize classes for others to teach. | 3.00 | 1.08 | 2.87 | .77 |
| 61. Visit adult homes for instructional purposes. | 2.46 | 1.10 | 2.91 | .88 |
| 62. Organize field trips for adult groups. | 3.22 | 1.21 | 2.93 | .80 |
| 63. Call in specialists from companies to assist with adult instruction. | 3.42 | 1.21 | 3.11 | .82 |
| 64. Survey the community to determine adult learning needs. | 3.19 | 1.04 | 2.87 | .81 |
| 65. Plan a program for adults that will continue for one year. | 3.15 | 1.13 | 2.78 | .76 |
| 66. Organize recreational activities for adults participating in the program. | 2.69 | .97 | 2.60 | .71 |
| G. Working as an Educational Leader in the Community | | | | |
| 67. Represent the school in community agriculture activities. | 3.74 | .98 | 4.26 | .77 |
| 68. Determine community educational needs in your teaching area. | 3.54 | .99 | 4.06 | .76 |
| 69. Attend meetings held by community clientele. | 3.65 | .98 | 3.98 | .87 |
| 70. Involve citizens in planning the vocational-agriculture program. | 3.56 | 1.19 | 3.94 | .89 |
| 71. Participate in civic service organizations. | 3.89 | .93 | 3.72 | .88 |
| 72. Live in the school community. | 3.31 | 1.05 | 3.94 | 1.09 |
| H. Working as a Member of a Professional Staff | | | | |
| 73. Attend regularly local staff meetings. | 4.63 | .56 | 4.55 | .62 |
| 74. Attend school functions that include the total school. | 4.44 | .85 | 4.34 | .70 |
| 75. Work on teacher committees. | 4.41 | .80 | 4.06 | .89 |
| 76. Coordinate your program activities with other activities within the school. | 4.11 | .85 | 4.34 | .67 |
| 77. Seek suggestions from other teachers to improve the program. | 4.15 | .72 | 3.98 | .82 |
| 78. Assist in the development and implementation of school policies. | 4.30 | .78 | 4.09 | .75 |
| 79. Interpret school policies to persons in the community. | 3.96 | .94 | 3.62 | .90 |
| 80. Use administrators' suggestions to improve program. | 3.89 | 1.15 | 4.34 | .64 |
| 81. Assist other teachers in improving the quality of learning they provide for students. | 3.96 | .80 | 3.70 | .72 |

Table C-1.--Continued.

| Role Activity | Ornamental (N=27) | | Production (N=47) | |
|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. |
| I. Working as a Member of the Profession | | | | |
| 82. Establish active membership in the professional organizations (e.g., MATVA, AVA, NVATA). | 3.81 | .96 | 4.06 | 1.03 |
| 83. Take courses for college credit to improve professional skills. | 4.33 | .83 | 4.06 | .96 |
| 84. Participate in workshops designed to improve teaching skills in technical areas. | 4.44 | .89 | 4.36 | .76 |
| 85. Attend meetings of agriculture-teacher organizations. | 4.26 | .81 | 4.23 | .81 |
| 86. Identify prospective teachers. | 3.58 | .76 | 3.74 | .82 |
| 87. Assist neighboring agriculture teachers with teaching problems. | 3.67 | 1.07 | 4.00 | .74 |
| 88. Support legislation that improves the teaching profession. | 4.33 | .83 | 4.21 | .81 |
| 89. Work on local and/or state initiatives to improve vocational agriculture. | 4.04 | .98 | 4.04 | .88 |

Table C-2.--Means and standard deviations by position group for role execution, for each role activity.

| Role Activity | Ornamental (N=27) | | Production (N=47) | |
|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. |
| B. Planning and Implementing the Instructional Program for Secondary Students | | | | |
| 10. Develop a written course of study for each class taught at the beginning of the year. | 1.46 | .51 | 1.63 | .49 |
| 11. Conduct field trips to enhance classroom instruction. | 1.48 | .64 | 1.62 | .53 |
| 12. Use advisory committee to plan instructional programs at least one year in advance. | 1.77 | .65 | 1.76 | .61 |
| 13. Visit the homes of all your agriculture students. | 2.65 | .64 | 1.55 | .50 |
| 14. Provide instruction on current technology (e.g., computers). | 1.67 | .73 | 1.61 | .68 |
| 15. Teach classes other than agriculture. | 2.28 | .84 | 1.84 | .82 |
| 16. Involve students in activities of the local fairs. | 2.34 | .75 | 1.40 | .54 |
| 17. Provide students with instruction in reading, writing, and arithmetic while teaching. | 1.58 | .64 | 1.42 | .54 |
| 18. Develop acceptable social conduct among students. | 1.04 | .19 | 1.21 | .41 |
| 19. Constantly evaluate and record student progress on objectives of each unit taught. | 1.30 | .47 | 1.43 | .54 |
| 20. Teach nonvocational classes in agriculture. | 2.36 | .49 | 2.33 | .67 |
| 21. Teach problem-solving techniques. | 1.40 | .58 | 1.40 | .50 |
| 22. Collect specimens for teaching. | 1.22 | .51 | 1.50 | .51 |
| 23. Develop materials for teaching. | 1.26 | .45 | 1.45 | .50 |
| 24. Order teaching supplies. | 1.04 | .20 | 1.40 | .54 |
| 25. Conduct annual inventory of supplies and equipment. | 1.30 | .47 | 1.51 | .55 |
| 26. Discuss budgeting for the vocational-agriculture program with principal and/or superintendent. | 1.50 | .65 | 1.51 | .59 |
| 27. Have the advisory committee evaluate the vocational-agriculture program annually. | 1.56 | .65 | 1.70 | .59 |
| 28. Provide primary maintenance for facilities and equipment. | 1.65 | .63 | 1.57 | .54 |
| 29. Teach classes during the summer months. | 2.23 | .71 | 2.51 | .66 |
| C. Advising Youth Organization | | | | |
| 30. Encourage all class members to become members of a vocationally related youth organization (e.g., FFA, Horticulture Club) | 2.20 | .76 | 1.19 | .45 |
| 31. Involve members in local, state, or national activities of the youth organization. | 2.32 | .69 | 1.15 | .42 |
| 32. Prepare members of the organization for competitive contests. | 2.36 | .70 | 1.19 | .45 |
| 33. Work toward developing leadership among members. | 1.84 | .75 | 1.11 | .31 |
| 34. Assist the members with development of an annual program of activities. | 2.16 | .75 | 1.34 | .56 |

Table C-2.--Continued.

| Role Activity | Ornamental (N=27) | | Production (N=47) | |
|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. |
| 35. Be responsible for ensuring each member is placed on an active committee. | 2.28 | .68 | 1.62 | .57 |
| 36. Assist officers with record keeping. | 2.38 | .65 | 1.36 | .53 |
| 37. Teach students about the youth organization as part of the instructional program. | 2.25 | .74 | 1.19 | .40 |
| D. Supervising the Occupational Experience Program | | | | |
| 38. Assist each student with the development of a personal plan to identify those occupational skills that are necessary for job entry. | 1.44 | .58 | 1.45 | .50 |
| 39. Assist students with the selection of occupational learning experiences to coincide with career objective. | 1.44 | .58 | 1.51 | .51 |
| 40. Use students' home resources to provide occupational learning experiences. | 1.96 | .69 | 1.43 | .50 |
| 41. Supervise the students' occupational learning experiences during the summer months. | 2.50 | .59 | 1.36 | .53 |
| 42. Teach students occupational skills in agriculture. | 1.39 | .58 | 1.19 | .40 |
| 43. Survey community to determine the demand for skills related to your teaching area. | 1.46 | .59 | 2.00 | .47 |
| 44. Coordinate the students' occupational learning experiences with local and/or state job demands. | 1.61 | .72 | 1.77 | .60 |
| 45. Assist students with job placement. | 1.46 | .66 | 1.68 | .63 |
| 46. Keep a record of skills development of your students. | 1.33 | .56 | 1.79 | .66 |
| 47. Use school facilities to provide occupational learning experiences for the students. | 1.13 | .45 | 1.34 | .52 |
| 48. Teach students occupational skills that are consistent with job demands. | 1.13 | .45 | 1.34 | .48 |
| 49. Provide students with learning experiences that can be used as a foundation for further skills development. | 1.13 | .45 | 1.28 | .45 |
| 50. Supervise the students' occupational experiences during the school year. | 1.67 | .76 | 1.43 | .50 |
| E. Guidance and Counseling | | | | |
| 51. Limit the enrollment in your classes. | 1.92 | .72 | 2.19 | .58 |
| 52. Provide students with information about agriculture careers. | 1.32 | .56 | 1.32 | .47 |
| 53. Determine who should enroll in vocational agriculture. | 2.04 | .81 | 2.06 | .64 |
| 54. Maintain current records of each student's progress toward his/her career objective. | 1.44 | .65 | 1.87 | .65 |
| 55. Visit prospective students and their parents to explain the vocational-agriculture program. | 2.25 | .74 | 1.94 | .60 |
| 56. Consult regularly the cumulative records of your students. | 1.79 | .66 | 2.04 | .55 |
| 57. Confer with individual students about their personal vocational problems. | 1.48 | .51 | 1.74 | .53 |
| 58. Develop a career development plan for each student. | 1.83 | .76 | 2.11 | .60 |

Table C-2.--Continued.

| Role Activity | Ornamental (N=27) | | Production (N=47) | |
|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. |
| F. Planning and Implementing the Adult Instructional Program | | | | |
| 59. Organize and teach adult classes. | 1.88 | .68 | 2.60 | .58 |
| 60. Organize classes for others to teach. | 2.41 | .67 | 2.54 | .59 |
| 61. Visit adult homes for instructional purposes. | 2.57 | .51 | 2.47 | .55 |
| 62. Organize field trips for adult groups. | 2.29 | .69 | 2.52 | .51 |
| 63. Call in specialists from companies to assist with adult instruction. | 2.17 | .78 | 2.50 | .55 |
| 64. Survey the community to determine adult learning needs. | 2.20 | .72 | 2.61 | .58 |
| 65. Plan a program for adults that will continue for one year. | 2.29 | .69 | 2.63 | .57 |
| 66. Organize recreational activities for adults participating in the program. | 2.52 | .59 | 2.67 | .47 |
| G. Working as an Educational Leader in the Community | | | | |
| 67. Represent the school in community agriculture activities. | 1.88 | .78 | 1.57 | .50 |
| 68. Determine community educational needs in your teaching area. | 2.04 | .75 | 1.79 | .66 |
| 69. Attend meetings held by community clientele. | 1.96 | .75 | 1.70 | .59 |
| 70. Involve citizens in planning the vocational-agriculture program. | 2.08 | .81 | 1.68 | .66 |
| 71. Participate in civic service organizations. | 1.84 | .75 | 1.94 | .64 |
| 72. Live in the school community. | 2.00 | .69 | 1.60 | .80 |
| H. Working as a Member of a Professional Staff | | | | |
| 73. Attend regularly local staff meetings. | 1.16 | .37 | 1.19 | .45 |
| 74. Attend school functions that include the total school. | 1.24 | .52 | 1.40 | .50 |
| 75. Work on teacher committees. | 1.24 | .44 | 1.68 | .63 |
| 76. Coordinate your program activities with other activities within the school. | 1.54 | .78 | 1.32 | .47 |
| 77. Seek suggestions from other teacher to improve the program. | 1.56 | .58 | 1.74 | .60 |
| 78. Assist in the development and implementation of school policies. | 1.48 | .59 | 1.62 | .64 |
| 79. Interpret school policies to persons in the community. | 1.80 | .76 | 1.74 | .67 |
| 80. Use administrators' suggestions to improve program. | 1.72 | .79 | 1.53 | .55 |
| 81. Assist other teachers in improving the quality of learning they provide for students. | 1.76 | .66 | 1.91 | .49 |

Table C-2.--Continued.

| Role Activity | Ornamental (N=27) | | Production (N=47) | |
|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. |
| I. Working as a Member of the Profession | | | | |
| 82. Establish active membership in the professional organizations (e.g., MATVA, AVA, NVATA). | 1.70 | .69 | 1.49 | .78 |
| 83. Take courses for college credit to improve professional skills. | 1.38 | .65 | 1.70 | .62 |
| 84. Participate in workshops designed to improve teaching skills in technical areas. | 1.33 | .56 | 1.34 | .48 |
| 85. Attend meetings of agriculture-teacher organizations. | 1.54 | .72 | 1.40 | .58 |
| 86. Identify prospective teachers. | 2.17 | .65 | 1.83 | .56 |
| 87. Assist neighboring agriculture teachers with teaching problems. | 1.92 | .83 | 1.74 | .64 |
| 88. Support legislation that improves the teaching profession. | 1.50 | .78 | 1.62 | .61 |
| 89. Work on local and/or state initiatives to improve vocational agriculture. | 1.67 | .82 | 1.74 | .71 |

Table C-3.--Percentage of time allocated to each program area by position group and standard deviation.

| Program Area | Ornamental (N=22) | | Production (N=38) | |
|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. |
| Planning and implementing the instructional program for secondary students | 50.82 | 21.65 | 47.05 | 20.67 |
| Advising a vocationally related youth organization | 2.50 | 3.92 | 18.89 | 9.12 |
| Supervising occupational experiences of your students | 9.77 | 10.66 | 12.29 | 6.49 |
| Serving in a guidance and counseling capacity for your students | 11.18 | 11.10 | 5.32 | 3.07 |
| Planning and implementing the adult instructional program | 4.00 | 6.65 | .71 | 1.35 |
| Working as an educational leader in the community | 5.77 | 11.32 | 3.87 | 3.95 |
| Working as a member of a professional staff | 7.95 | 8.22 | 4.47 | 7.98 |
| Working as a member of the profession | 5.68 | 7.91 | 3.32 | 3.56 |
| Other | 2.09 | 5.64 | 4.02 | 11.22 |

Table C-4.--Means for role perception by program area and position group.

| Program Area | Ornamental (N=27) | | Production (N=47) | |
|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. |
| Planning and implementing the instructional program for secondary students | 3.98 | .40 | 4.03 | .41 |
| Advising a vocationally related youth organization | 3.16 | 1.04 | 4.48 | .59 |
| Supervising occupational experiences of your students | 4.09 | .95 | 4.27 | .55 |
| Serving in a guidance and counseling capacity for your students | 3.85 | .75 | 3.86 | .55 |
| Planning and implementing the adult instructional program | 3.09 | .91 | 2.88 | .55 |
| Working as an educational leader in the community | 3.61 | .77 | 3.98 | .70 |
| Working as a member of a professional staff | 4.20 | .63 | 4.09 | .62 |
| Working as a member of the profession | 4.06 | .67 | 4.09 | .62 |

Table C-5.--Means for role execution by program area and position group.

| Program Area | Ornamental (N=27) | | Production (N=47) | |
|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. |
| Planning and implementing the instructional program for secondary students | 1.63 | .24 | 1.61 | .19 |
| Advising a vocationally related youth organization | 2.05 | .83 | 1.26 | .34 |
| Supervising occupational experiences of your students | 1.38 | .55 | 1.50 | .30 |
| Serving in a guidance and counseling capacity for your students | 1.62 | .61 | 1.90 | .30 |
| Planning and implementing the adult instructional program | 2.02 | .89 | 2.57 | .43 |
| Working as an educational leader in the community | 1.81 | .77 | 1.71 | .46 |
| Working as a member of a professional staff | 1.38 | .58 | 1.57 | .32 |
| Working as a member of the profession | 1.46 | .69 | 1.60 | .43 |

Table C-6.--Overall means and standard deviations for each program area concerning role perception, role execution, time allocation, and importance attached to each program area.

| Program Area | Role Perception | | Role Execution | | Percentage of Time Allocated to Each Area | | Importance Attached to Program Area | |
|---|---|---|---|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| Planning and implementing the instructional program for secondary students | 4.02 | .41 | 1.63 | .21 | 48.43 | 20.93 | 4.78 | .58 |
| Advising a vocationally related youth organization | 4.00 | 1.01 | 1.55 | .68 | 12.88 | 11.07 | 3.93 | 1.26 |
| Supervising occupational experiences of your students | 4.21 | .73 | 1.46 | .41 | 11.36 | 8.27 | 4.19 | .90 |
| Serving in a guidance and counseling capacity for your students | 3.86 | .63 | 1.84 | .46 | 7.47 | 7.61 | 3.93 | .88 |
| Planning and implementing the adult instructional program | 2.96 | .71 | 2.37 | .69 | 1.19 | 4.41 | 2.59 | 1.20 |
| Working as an educational leader in the community | 3.85 | .75 | 1.75 | .59 | 4.57 | 7.50 | 3.72 | 1.06 |
| Working as a member of a professional staff | 4.15 | .56 | 1.51 | .44 | 5.75 | 8.18 | 4.04 | .97 |
| Working as a member of the profession | 4.08 | .64 | 1.56 | .54 | 4.18 | 5.62 | 4.08 | 1.08 |
| Other | | | | | 3.32 | 9.55 | | |

Table C-7.--Overall means and standard deviations for each role activity for role perception and role execution.

| Role Activity | Role Perception (N=74) | | Role Execution (N=74) | |
|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. |
| B. Planning and Implementing the Instructional Program for Secondary Students | | | | |
| 10. Develop a written course of study for each class taught at the beginning of the year. | 4.10 | .78 | 1.57 | .50 |
| 11. Conduct field trips to enhance classroom instruction. | 4.57 | .64 | 1.57 | .58 |
| 12. Use advisory committee to plan instructional programs at least one year in advance. | 4.03 | .92 | 1.76 | .62 |
| 13. Visit the homes of all your agriculture students. | 3.68 | 1.37 | 1.91 | .76 |
| 14. Provide instruction on current technology (e.g., computers). | 4.34 | .75 | 1.63 | .70 |
| 15. Teach classes other than agriculture. | 2.47 | 1.21 | 2.00 | .85 |
| 16. Involve students in activities of the local fairs. | 3.85 | 1.12 | 1.74 | .76 |
| 17. Provide students with instruction in reading, writing, and arithmetic while teaching. | 3.91 | 1.00 | 1.48 | .58 |
| 18. Develop acceptable social conduct among students. | 4.57 | .64 | 1.15 | .36 |
| 19. Constantly evaluate and record student progress on objectives of each unit taught. | 4.30 | .72 | 1.38 | .52 |
| 20. Teach nonvocational classes in agriculture. | 2.90 | 1.10 | 2.34 | .61 |
| 21. Teach problem-solving techniques. | 4.38 | .73 | 1.40 | .52 |
| 22. Collect specimens for teaching. | 4.35 | .78 | 1.40 | .52 |
| 23. Develop materials for teaching. | 4.45 | .72 | 1.38 | .49 |
| 24. Order teaching supplies. | 4.70 | .54 | 1.27 | .48 |
| 25. Conduct annual inventory of supplies and equipment. | 4.39 | .75 | 1.43 | .53 |
| 26. Discuss budgeting for the vocational-agriculture program with principal and/or superintendent. | 4.38 | .81 | 1.51 | .60 |
| 27. Have the advisory committee evaluate the vocational-agriculture program annually. | 4.23 | .90 | 1.65 | .61 |
| 28. Provide primary maintenance for facilities and equipment. | 3.73 | 1.09 | 1.60 | .57 |
| 29. Teach classes during the summer months. | 2.95 | 1.08 | 2.41 | .68 |
| C. Advising Youth Organization | | | | |
| 30. Encourage all class members to become members of a vocationally related youth organization (e.g., FFA, Horticulture Club). | 4.00 | 1.24 | 1.54 | .75 |
| 31. Involve members in local, state, or national activities of the youth organization. | 4.04 | 1.19 | 1.56 | .77 |
| 32. Prepare members of the organization for competitive contests. | 4.04 | 1.12 | 1.60 | .78 |
| 33. Work toward developing leadership among members. | 4.38 | .98 | 1.36 | .61 |
| 34. Assist the members with development of an annual program of activities. | 4.03 | 1.10 | 1.63 | .74 |

Table C-7.--Continued.

| Role Activity | Role Perception (N=74) | | Role Execution (N=74) | |
|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. |
| 35. Be responsible for ensuring each member is placed on an active committee. | 3.72 | 1.04 | 1.85 | .69 |
| 36. Assist officers with record keeping. | 3.78 | 1.12 | 1.70 | .74 |
| 37. Teach students about the youth organization as part of the instructional program. | 4.05 | 1.17 | 1.55 | .73 |
| D. Supervising the Occupational Experience Program | | | | |
| 38. Assist each student with the development of a personal plan to identify those occupational skills that are necessary for job entry. | 4.33 | .67 | 1.44 | .53 |
| 39. Assist students with the selection of occupational learning experiences to coincide with career objective. | 4.33 | .71 | 1.49 | .53 |
| 40. Use students' home resources to provide occupational learning experiences. | 4.11 | .97 | 1.61 | .62 |
| 41. Supervise the students' occupational learning experiences during the summer months. | 3.95 | 1.20 | 1.75 | .77 |
| 42. Teach students occupational skills in agriculture. | 4.59 | .60 | 1.26 | .47 |
| 43. Survey community to determine the demand for skills related to your teaching area. | 4.05 | .85 | 1.82 | .57 |
| 44. Coordinate the students' occupational learning experiences with local and/or state job demands. | 4.00 | .87 | 1.71 | .64 |
| 45. Assist students with job placement. | 4.10 | .85 | 1.61 | .64 |
| 46. Keep a record of skills development of your students. | 4.14 | .79 | 1.63 | .66 |
| 47. Use school facilities to provide occupational learning experiences for the students. | 4.53 | .67 | 1.27 | .51 |
| 48. Teach students occupational skills that are consistent with job demands. | 4.48 | .65 | 1.27 | .48 |
| 49. Provide students with learning experiences that can be used as a foundation for further dkills development. | 4.54 | .61 | 1.23 | .45 |
| 50. Supervise the students' occupational experiences during the school year. | 4.35 | .87 | 1.51 | .61 |
| E. Guidance and Counseling | | | | |
| 51. Limit the enrollment in your classes. | 3.66 | 1.11 | 2.10 | .64 |
| 52. Provide students with information about agricultural careers. | 4.59 | .72 | 1.32 | .50 |
| 53. Determine who should enroll in vocational agriculture. | 3.62 | 1.08 | 2.06 | .69 |
| 54. Maintain current records of each student's progress toward his/her career objective. | 4.00 | .79 | 1.72 | .68 |
| 55. Visit prospective students and their parents to explain the vocational-agriculture program. | 3.64 | 1.11 | 2.04 | .66 |
| 56. Consult regularly the cumulative records of your students. | 3.64 | .93 | 1.96 | .60 |
| 57. Confer with individual students about their personal vocational problems. | 3.96 | .85 | 1.65 | .54 |
| 58. Develop a career development plan for each student. | 3.75 | .91 | 2.01 | .67 |

Table C-7.--Continued.

| Role Activity | Role Perception (N=74) | | Role Execution (N=74) | |
|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. |
| F. Planning and Implementing the Adult Instructional Program | | | | |
| 59. Organize and teach adult classes. | 3.11 | .90 | 2.35 | .70 |
| 60. Organize classes for others to teach. | 2.92 | .88 | 2.50 | .61 |
| 61. Visit adult homes for instructional purposes. | 2.75 | .98 | 2.50 | .53 |
| 62. Organize field trips for adult groups. | 3.04 | .98 | 2.44 | .58 |
| 63. Call in specialists from companies to assist with adult instruction. | 3.22 | .98 | 2.39 | .65 |
| 64. Survey the community to determine adult learning needs. | 2.99 | .91 | 2.47 | .65 |
| 65. Plan a program for adults that will continue for one year. | 2.92 | .92 | 2.51 | .63 |
| 66. Organize recreational activities for adults participating in the program. | 2.64 | .81 | 2.62 | .52 |
| G. Working as an Educational Leader in the Community | | | | |
| 67. Represent the school in community agriculture activities. | 4.07 | .88 | 1.68 | .62 |
| 68. Determine community educational needs in your teaching area. | 3.88 | .88 | 1.87 | .70 |
| 69. Attend meetings held by community clientele. | 3.86 | .92 | 1.79 | .65 |
| 70. Involve citizens in planning the vocational-agriculture program. | 3.80 | 1.02 | 1.82 | .74 |
| 71. Participate in civic service organizations. | 3.78 | .90 | 1.90 | .67 |
| 72. Live in the school community. | 3.71 | 1.11 | 1.72 | .78 |
| H. Working as a Member of a Professional Staff | | | | |
| 73. Attend regularly local staff meetings. | 4.58 | .60 | 1.18 | .42 |
| 74. Attend school functions that include the total school. | 4.38 | .75 | 1.35 | .51 |
| 75. Work on teacher committees. | 4.19 | .87 | 1.53 | .60 |
| 76. Coordinate your program activities with other activities within the school. | 4.26 | .74 | 1.39 | .60 |
| 77. Seek suggestions from other teachers to improve the program. | 4.04 | .78 | 1.68 | .60 |
| 78. Assist in the development and implementation of school policies. | 4.16 | .76 | 1.57 | .62 |
| 79. Interpret school policies to persons in the community. | 3.74 | .92 | 1.76 | .70 |
| 80. Use administrators' suggestions to improve program. | 4.18 | .88 | 1.60 | .64 |
| 81. Assist other teachers in improving the quality of learning they provide for students. | 3.80 | .76 | 1.86 | .54 |

Table C-7.--Continued.

| Role Activity | Role Perception (N=74) | | Role Execution (N=74) | |
|---|---|---|---|---|
| | Mean | S.D. | Mean | S.D. |
| I. Working as a Member of the Profession | | | | |
| 82. Establish active membership in the professional organizations (e.g., MATVA, AVA, NVATA). | 3.97 | 1.00 | 1.56 | .75 |
| 83. Take courses for college credit to improve professional skills. | 4.16 | .92 | 1.60 | .65 |
| 84. Participate in workshops designed to improve teaching skills in technical areas. | 4.39 | .81 | 1.34 | .51 |
| 85. Attend meetings of agriculture-teacher organizations. | 4.24 | .81 | 1.45 | .63 |
| 86. Identify prospective teachers. | 3.68 | .80 | 1.94 | .61 |
| 87. Assist neighboring agriculture teachers with teaching problems. | 3.89 | .88 | 1.80 | .71 |
| 88. Support legislation that improves the teaching profession. | 4.26 | .81 | 1.58 | .67 |
| 89. Work on local and/or state initiatives to improve vocational agriculture. | 4.04 | .91 | 1.72 | .74 |

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