AN ASSESSMENT OF THE RELATIONSHIPS BETWEEN LESSON TOPICS PRESENTLY TAUGHT AND LESSON TOPICS THAT SHOULD BE TAUGHT IN EXPLORATORY AGRICULTURE CLASSES IN VIRGINIA

by

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INTRODUCTION

Career education, a comparatively recent educational concept, was introduced in 1971 by Sidney Marland, then U. S. Commissioner of Education. Career education has been defined in a variety of ways by different individuals and groups. Basically, career education restructures the subject matter content of educational systems in a manner such that students are exposed to the world of work from an early age with the ultimate objective being the successful preparation for and development of a lifelong, productive career. Career education is not a course, but a concept to be woven into the educational system from grades K-12. Marland (1971:1) advocated career education as a program "designed to give every youngster a genuine choice as well as the intellectual and occupational skills necessary to back it up." Hoyt, et al., (1974) defined career education as:

> the total effort of public education and the community to help all individuals become familiar with the values of a work-oriented society, to integrate these values into their personal value systems, and to implement these values into their lives in such a way that work becomes possible, meaningful, and satisfying to each individual.

Although there are several models for implementing career education, many school based models generally follow the same general lines of emphasis and are sequented into five levels or phases (O'Kelly, 1972):

1. career awareness - grades K-5,
2. career exploration - grades 6-8,
3. career orientation - grades 9-10,
4. career preparation - grades 11-post high school,
5. job upgrading and retraining - adult years.

The career exploration phase is typically focused upon in the junior high or middle school. In this phase, students are provided experiences that will assist them in evaluating their interests, abilities, and needs as they relate to occupational roles (Essex, 1971). Students are also able to become aware of various career opportunities and to develop tentative plans to accomplish career goals. Learning activities are designed to provide realistic as well as simulated career exploration experiences in broad families of occupations. By offering students a wide variety of career information and experiences, the practitioners of career education hope to promote good career choices leading to career preparation for each student.

In keeping with the general structure of most career education models, the Virginia State Department of Education initiated exploratory programs to allow students to explore broad career areas in industrial arts, home economics, business, and agriculture. The purpose of exploratory classes in agriculture is to provide an approach whereby students can explore a wide range of career opportunities in the agricultural industry. Student involvement in actual and simulated work roles allows them to obtain experiences beneficial in making career choices. Classes also allow students to obtain knowledge and

experiences needed to tentatively choose careers and develop plans to begin preparing for the career of their choice.

Currently, there are 43 schools offering exploratory classes in agriculture in the Commonwealth of Virginia. These classes vary in length from 6 to 36 weeks. Even though there has been a tentative course guide prepared for exploratory classes in Virginia (Miller, 1974), the guide has not yet been presented to the State Department of Education for approval. Thus, content in the exploratory agriculture classes is determined mainly by the teacher in each of the schools. Because of the inconsistency in the length of exploratory courses and the lack of an approved course guide, little is known about the instructional content being taught in the exploratory agriculture classes on a statewide basis.

Miller (1973) reported in a study of the Exploratory Agriculture Programs in Virginia that the State Agricultural Science and Mechanics I and II curriculum committee had heard concerns voiced over the lack of a curriculum guide, resource materials, and overall guidance in the realm of exploratory agriculture classes. Agricultural Science and Mechanics I and II are courses in agriculture basically for grades eight and nine and follow the exploratory agriculture program in grade sequence. Based upon the findings of his study, Miller (1973) agreed with the concern voiced by the State Agricultural Science and Mechanics I and II Curriculum Committee and concluded that:

> There is a need for a substantial curriculum development effort for exploratory agriculture including the writing of objectives, the development of curriculum guides and the development of teaching materials.

A number of studies have been completed that evaluated the effectiveness of exploratory agriculture on various dependent variables. Dickerson (1975) investigated the effects of exploratory agriculture on occupational interest of eighth grade vocational agriculture students. Brown (1974) investigated the effect of a unit in career orientation on the vocational maturity of students. Sharma (1973) studied the influence of a curriculum in occupational exploration in agribusiness and natural resources on the occupational knowledge of ninth grade vocational agriculture students. A study by Maguire (1973) also investigated the effectiveness of a ninth grade career exploration curriculum on vocational agriculture students in Minnesota. Of these studies, Dickerson (1975) and Brown (1974) found slight differences between the experimental and control groups while Sharma (1973) and Maguire (1973) found no significant differences between the two groups. None of these studies measured the appropriateness of the instructional units to the commonly accepted objectives for exploratory agriculture. Furthermore, these studies did not attempt to assess whether the exploratory agriculture instructional units were actually being taught by the teachers. The limitations of these research efforts indicate that further studies need to be conducted that would assess the appropriateness of lesson topics in exploratory agriculture and that would also examine what lesson topics are currently being taught in exploratory agriculture.

THE PROBLEM

The situation which led to this study was the lack of knowledge relative to what is being taught and what should be taught in exploratory agriculture classes in the Commonwealth of Virginia. Thus, the purpose of this study was to identify the lesson topics that are being taught in exploratory agriculture classes in the Commonwealth of Virginia and compare these lesson topics to lesson topics that should be taught in exploratory agriculture classes as perceived by exploratory agriculture teachers, State Department of Education agricultural education supervisory staff, teacher educators in agriculture, and vocational directors in those school systems offering exploratory agriculture classes. Furthermore, the investigator deemed it important to compare responses of the groups relative to lesson topics that should be taught and the importance of those lesson topics.

RESEARCH QUESTIONS

Specific research questions for the study were:

1. What are the lesson topics being taught in exploratory agriculture classes in Virginia as reported by present teachers of exploratory agriculture?

2. What is the mean number of class periods spent on lesson topics being taught in exploratory agriculture classes in Virginia?

3. What are the lesson topics that should be taught and their relative importance in exploratory agriculture classes as

perceived by exploratory agriculture teachers, State Department of Education agricultural education supervisory staff, teacher educators in agriculture, and vocational directors in those school systems offering exploratory agriculture classes?

4. How do lesson topics being taught in exploratory agriculture classes compare to lesson topics that should be taught as perceived by exploratory agriculture teachers, State Department of Education agricultural education supervisory staff, teacher educators in agriculture, and vocational directors in those school systems offering exploratory agriculture classes?

5. Are there any differences, and if so where, in lesson topics that should be taught as perceived by exploratory agriculture teachers, joint state agricultural education staff, and vocational directors in those school systems offering exploratory agriculture classes?

6. Are there any differences, and if so where, in the relative importance of lesson topics that should be taught as perceived by exploratory agriculture teachers, State Department of Education agricultural education supervisory staff, teacher educators in agriculture, and vocational directors in those school systems offering exploratory agriculture classes?

NEED FOR THE STUDY

Agriculture in this nation has progressed from predominately small farms to a highly complex industry with work roles becoming

specialized. If students are to formulate realistic expectations and aspirations regarding future agricultural careers, they must begin making educational and vocational plans based upon the best facts available. One way for this to be accomplished is for schools to involve students in programs which allow them to evaluate their interests, abilities, and needs as they relate to occupational roles and career opportunities in agriculture. The development of such programs in the middle school is a vital component of the Career Education program emerging in Virginia schools.

The research conducted in this study was an attempt to assess the relationship between lesson topics that are being taught in exploratory agriculture classes in the Commonwealth of Virginia to lesson topics that should be taught in exploratory agriculture classes. The study should provide information useful in finalizing a state curriculum guide for exploratory classes in agriculture. Furthermore, the study may indicate in-service education needs of exploratory agriculture teachers and provide possible direction in preparing future teachers of exploratory agriculture.

ASSUMPTIONS

The following assumption was essential to the study: the lesson topics included in the instrument reflected a valid representation of appropriate topics.

LIMITATIONS

This study was limited to teachers of exploratory agriculture, State Department of Education agricultural education supervisory staff, teacher educators in agriculture, and vocational directors in those school systems offering exploratory agriculture in Virginia during the 1977-78 school year.

DEFINITIONS OF TERMS

The operational definitions of terms frequently used in this study were as follows:

1. Career Education -- the total effort of public education and the community to help all individuals become familiar with the values of a work-oriented society, to integrate these values into their personal values systems, and to implement these values into their lives in such a way that work becomes possible, meaningful, and satisfying to each individual (Hoyt, et al., 1974).

2. Lesson Topic -- a subpart of an instructional unit focusing upon a specific area of study.

3. Exploratory Agriculture Class -- a class for students in the middle grades designed to provide exploratory experiences in agricultural work roles.

4. Exploratory Agriculture Teachers -- an instructor of vocational agriculture, in Virginia, who is teaching in an exploratory agriculture class.

5. Joint State Agricultural Education Staff -- the combined staff comprised of State Department of Education agricultural education supervisory staff and teacher educators at Virginia Polytechnic Institute and State University and Virginia State College.

SUMMARY

In keeping with the general structure of most career education models, the Virginia State Department of Education initiated exploratory programs to allow students to explore broad areas in industrial arts, home economics, business, and agriculture. The exploratory program in agriculture allows students to explore a wide range of career opportunities in the agricultural industry. Currently, 43 schools are conducting exploratory classes in the state. Concern has been voiced over the lack of an approved curriculum guide, resource materials, and overall guidance given to these programs (Miller, 1973).

The purpose of this study was to assess the relationship between lesson topics reported as being taught in exploratory agriculture classes in the Commonwealth of Virginia to lesson topics that should be taught in exploratory classes in agriculture as perceived by exploratory agriculture teachers, State Department of Education agricultural education supervisory staff, teacher educators in agriculture, and vocational directors in those school systems offering exploratory classes. Such a study should provide information useful in finalizing a state curriculum guide for exploratory

agriculture classes. Furthermore, the study may indicate in-service education needs of exploratory agriculture teachers and provide possible direction in preparing future teachers of exploratory agriculture.

Chapter 2

REVIEW OF LITERATURE

A review of literature was undertaken to identify information pertinent to this study. Specifically, a search for relevant literature was concentrated in the following areas: (1) exploratory curricula, (2) research on exploratory courses, (3) career education at the middle school/middle grades level, (4) opinion measurement, and (5) curriculum development strategies.

EXPLORATORY CURRICULA

The purposes of exploratory agriculture are to provide students the opportunity to appraise themselves as well as to explore a wide range of career opportunities in the Agriculture Industry. Seven states were identified that have prepared curriculum guides to direct teachers in fulfilling the basic goals of career exploration. The investigator felt that a review of these guides would be beneficial in conducting this study.

Minnesota's guide for exploratory agriculture is entitled, "Exploring Agribusiness and Natural Resource Occupations" (1972). The approach outlined in this guide provides the student a broad understanding of the world of work in agriculture and is recommended for grades 7-10. An opportunity for self-appraisal and an exploration of agricultural occupations are the foci of the exploratory program. The

guide does not recommend that students formulate definite career objectives in the exploratory agriculture class. Rather, the opportunities existing in all agricultural occupations combined with a self-appraisal of each student's likes, dislikes, strengths, personal attributes and attitudes is the central theme of the exploratory agriculture curriculum. The program is designed to teach a limited amount of knowledge and skills and places primary emphasis on the individual student's analysis of himself or herself, job opportunities and job requirements.

The Minnesota guide recommends exploration into the following occupational areas:

1. agricultural production,
2. agricultural supplies,
3. agricultural mechanics,
4. agricultural products,
5. ornamental horticulture,
6. agricultural resources,
7. forestry.

Each agricultural occupation area is presented to provide the student with sufficient information so he/she will be able to describe the nature of agricultural employment, requirements for employment, opportunities for training, and employment opportunities.

The University of Illinois developed curriculum materials designed to provide activities that would increase students' knowledge of agricultural occupations, help them become familiar with personal

attributes, and enable them to develop more positive attitudes toward work. The unit was designed to be taught during a nine to twelve week instructional period. The first week of the instructional period includes an introduction and general overview of the occupational areas and career opportunities in agriculture. Various orientation experiences are suggested for the middle weeks, and the last week is designed for the students to develop tentative educational and occupational plans (Hemp, et al., 1973).

The exploratory agriculture program in Georgia provides the student the opportunity to enroll in a series of "mini-courses" offered during each quarter of an academic year (A Curriculum Guide, 1972). In agriculture, "mini-courses" are offered in four areas: horticulture, agribusiness sales and service, farming and ranching, and natural resources management. Learning experiences in the program emphasize occupational role playing by students in a realistic and/or simulated work environment. Activities such as constructing small structures, selling a product, or landscaping a portion of the school campus enable students to examine various work roles and acquire minor skills and knowledge related to an occupational area. The program provides young people with experiences which are purposeful and beneficial in selecting and planning for a career in agriculture.

The Work-Ed Program is a career education course developed in New Jersey for ninth grade students (Fraleigh, 1976). The program is divided into two major components, an area of basic skills in communication and an area of information and experience in Career Clusters.

The communications area emphasizes skill proficiency in teaching communications skills necessary to survive and to succeed in the world of work. The communications area is taught by English teachers and places emphasis upon human values, reading, oral skills, and writing skills for practical communications.

The second component of the course stresses exposure to eight separate Career Clusters to make students aware of the varied careers available to them in each area. In small groups to encourage individualization, the students are cycled through eight career clusters for 22 school days each. The eight clusters include agriculture, business, career guidance, carpentry, drafting, graphic arts, health careers and home economics. Fraleigh (1976) states that "the thrust of the 22 day unit in agriculture is to teach the student that agriculture is the solid base of any society, for as a society develops, the need for food and supplies increases." The agriculture unit stresses an understanding of this basic industry and the job opportunities available in the agricultural industry.

The state of Florida is moving toward a program structure in exploratory agriculture which embraces two levels (Beeman, 1972). Level I is designed for seventh graders and is nine weeks in length. Level I of the exploratory curriculum introduces the student to the world of work in agriculture. Upon completion of this level, it is hoped that the student will have an understanding of and appreciation for the world of work in agriculture.

Level II of the exploratory curriculum is one semester in length and is designed for eighth grade students. The goal of level II

is to develop an awareness of the occupational areas in agriculture and to explore and develop the leadership characteristics necessary for career development (Beeman, 1972).

Mississippi does not have a separate curriculum guide for exploratory agriculture, but does include a unit on "understanding careers in agriculture" in a curriculum guide for basic agriculture (Lee, 1972). The overall objective of the unit is to develop an understanding of the occupational opportunities available in agriculture and the requirements for employment in such occupations.

Ohio's "Career Orientation Program" for grades seven and eight is designed to present the relationship between education and the world of work. One objective of the program is to broaden the student's knowledge of the world of work and provide an opportunity to compare this knowledge to his/her interests and goals for the future. The program is not separated into specific courses but is intertwined throughout the subject areas to make all disciplines reflect the related aspects of occupations (Career Orientation Program, 1972). One section of the guide focuses on careers in agriculture. The objectives are to expose students to a variety of careers in the area of agriculture and to discover job opportunities within the community in the area of agriculture (Career Orientation Program, 1972).

RESEARCH ON EXPLORATORY AGRICULTURE COURSES

A review of related research was undertaken to assist in justifying the importance, rationale, and organization of this study.

Specifically, the review of related research was focused upon studies evaluating the effectiveness of exploratory agriculture classes on the commonly accepted objectives of exploratory agriculture.

Sharma (1973) conducted a study on 1254 students in Minneapolis-St. Paul, Minnesota that measured the influence of a new curriculum in occupational exploration in agribusiness and natural resources on the occupational knowledge of ninth grade vocational agriculture students. Sharma also studied the response of vocational agriculture teachers with respect to their acceptance and use of the new curriculum guide and found that: (1) ten percent of vocational agriculture departments in test schools did not have a copy of the new curriculum guide, (2) fifty-three percent of vocational agriculture teachers based 30 percent or more of instruction upon the new curriculum guide, and (3) on the average a vocational agriculture teacher spent one-third of his/her instructional time in occupational exploration of which 22 percent was used for out-of-class instructional activities.

The influences of curriculum and school location on student's knowledge of agricultural occupations were also studied. The results indicated that the new curriculum had no significant influences on the above factors on student's knowledge of agricultural occupations.

A study by Poulin (1972) measured the effects of a 15 week career orientation program on student vocational interest and occupational plans in two junior high schools in the Lewiston, Maine School District. The Ohio Vocational Interest Survey identified both vocational interest and occupational plans, while the General Aptitude

Test Battery measured aptitudes. Students participating in the study were pretested and posttested to determine if vocational interest and occupational plans were strengthened or more consistent with aptitudes as a result of career orientation. On the basis of his results, Poulin (1972) concluded that student vocational interest and occupational plans were not strengthened or more consistent with aptitudes as a result of career orientation.

A project directed by Williams, et al. (1972) was designed to evaluate a training package of films, simulation games, discussion questions, and posters designed to promote career awareness in junior high school students. Results of a pretest-posttest control group design indicated that the materials had a significant effect on increases in knowledge about different careers and positive attitudes about job favorability. Cochran, et al. (1972) and Jurgenson, et al. (1972) also obtained significant results in knowledge of occupations gained as a result of career information programs.

Lark (1973) reported a study designed to test a method of instruction which might help vocational agriculture teachers teach careers in agriculture. He reported that gains in scores from pre-test to posttest made by students were significant for each unit tested when compared with scores made by students in the control group. Recommendations made by Lark were congruent with conclusions drawn by Hoover (1964) and Phipps (1972) in that a necessary function of teachers of agricultural occupations is providing assistance in the guidance of students in the school system.

Maguire (1973) investigated the effectiveness of a new ninth grade career exploration curriculum on vocational agriculture students from 30 randomly selected schools in Minnesota. Two tests of knowledge of occupations were administered pre and post by the teachers participating in the study. No significant differences were found in posttest scores between experimental and control groups on knowledge of occupations. The new curriculum did not outperform the more traditional curriculum over the duration of the project. Maguire (1973) concluded that the curriculum guide should be reorganized to make it more attractive to teachers and students and that teachers should be offered in-service orientation to career education and the new curriculum to enable them to use it effectively.

Dickerson (1975) conducted a study to compare the interest in agricultural occupations of eighth grade students enrolled in a prevocational exploratory course in agriculture with interest of eighth grade students not enrolled in the course. Seven school systems and twelve exploratory agriculture classes participated in the study. The study showed that students who were pretested and enrolled in prevocational exploratory classes were significantly different with respect to levels of interest in agricultural occupations from those who were enrolled in other classes. The difference was associated with the interaction effects of pretesting and enrollment in the prevocational exploratory program. Dickerson (1975) also found that participation in the program did not significantly affect the students consistency of interest in agriculture nor their frequency of choosing agriculture as a preferred occupation.

Miller (1973) conducted a study of the exploratory agriculture program in Virginia and found that there were 24 exploratory agriculture teachers in Virginia at that time. A plurality of the teachers described their classes as a combination of career orientation and occupational exploration. Twenty percent described their classes as being occupational exploration. Fourteen percent described their classes as entailing the categories of career orientation and other areas. Only 10 percent described their program as having an emphasis on technical agriculture.

Miller also reported that the teachers of exploratory agriculture agreed that an exploratory agriculture program should:

1. allow students to become acquainted with many representative areas of work, not just those found in the local community,
2. be interdisciplinary in nature, exposing students to a wide variety of occupational possibilities,
3. provide an opportunity for each student to evaluate his own interests and abilities,
4. help the student develop a sound basis for selecting high school or post high school training and should encourage students to continue their education (Miller, 1973).

With regard to the development of an exploratory agriculture program, Miller (1973:16) reported the respondents agreeing that:

1. The instructional objectives need to be defined and written.
2. The technical agriculture subject matter should be kept at a minimum.
3. Curriculum guides and teaching materials need to be developed.
4. Various segments of the population should serve as resource persons in the development of the programs.

Teachers in the study felt qualified as exploratory agriculture teachers, but indicated that in-service training programs as well as university training programs need to be developed to improve the

existing program. Miller (1973:17) reported in his conclusions that there is a need for a substantial curriculum development effort for exploratory agriculture.

In response to the need for a curriculum guide for exploratory agriculture programs, Miller et al. (1974) developed a tentative curriculum guide. The guide includes an outline of instructional topics presented as follows: Major Areas, Units, and Problem Areas. The instructional areas presented in the guide are not intended to be taught within a specified time span, but rather are presented for the teachers review and subsequent selection of topics which could serve to meet the needs of the students enrolled in the class. The instructional topics outlined in the guide are exploratory and orientational in nature and the emphasis of the guide is to provide the students with an exploration of the world of work in agriculture. Major areas included in the guide are: the world of work, surveying occupations, agribusiness careers, planning ahead, and gaining experience.

CAREER EDUCATION AT THE MIDDLE SCHOOL LEVEL

The exploration phase of career education is focused upon in the middle school or middle grades. The concept that exploration and self-assessment are primary educational needs of the pre and early adolescent is a key to grasping the role of career exploration (Evans, et al., 1973:30). Bailey and Stadt (1973) listed the goals and rationale of this stage thusly (p. 364):

1. clarification of self concept,
2. understanding of the structure and interrelatedness of the American economic, occupational and technological system,

3. assuming responsibility for career planning,
4. development of individual inquiry and problem-solving skills,
5. development of socially responsible behavior and more mature social relationships,
6. appreciation of work as a valued and enduring social institution.

The crucial point in the exploration stage is at the end of middle school, when the student is confronted with the necessity of making a curriculum decision prior to entering high school (Bailey and Stadt, 1973). At this stage youth are becoming more conscious of the role that work will play in their lives. Their sensitivity to work and its relevance to them as persons in the process of becoming is accentuated (Herr and Cramer, 1972:165). This matter of choosing courses in high school is of significant importance to the middle school student. The intimate relationship between education and career, and the potential effects of this decision on later available options, suggests that choice of high school curriculum is, in a very real sense, as much a "career choice" as an educational one (Bailey and Stadt, 1973:363). Katz (1963:26) had this to say about choosing courses:

> There is some relationship between the high school course elected and a student's future educational and occupational level.

Career exploration programs provide the student with exposure to a wide variety of possible careers so that the young adult can make a career choice. However, career exploration is more than an exploration of occupational alternatives. The student at the middle school stage needs to explore and understand himself or herself. Ridenour

(1976) stated his feeling about career exploration thusly:

> Career exploration is a time for some actual exploring of a variety of occupations. It is a time of self-assessment and of consideration of the various types of careers available to the individual. The student should, by this time, be able to identify who he is and what his interests and abilities are, to make decisions and be prepared to adjust and change those decisions, to formulate some preferences for particular occupations, and to identify various lifestyles he may wish to pursue.
>
> Career exploration programs will assist the student in making critical career choices by providing them with visible "world of work" experiences, involving them in the decision-making processes, and having them participate in work experiences associated with their career choices.

Students in the career exploration programs should be given opportunities to investigate and to analyze a wide range of occupational roles and work tasks with respect to their own individual characteristics, abilities, and interests. Learning activities should be designed to provide realistic as well as simulated career exploration experiences in broad families of occupations (A Curriculum Guide ..., 1972).

Essex (1971:12) made these statements about the career exploration programs.

> The career exploration program must aid each child in his exploration by identifying areas of development and exploration and then prescribe what activities are likely to bring him exploratory experiences which will aid him in fulfilling his goals and needs.
>
> We learn and we explore through activities which are experiences. These activities normally flow through vicarious experiences (reading, watching films, field trips, listening to speakers, etc.) into simulated experiences (a replication of unadulterated experiences but in a controlled environment) through hands-on experiences (living through real experiences which are not controlled in an unnatural environment).

Bottoms and O'Kelly (1971:21-24) have stated that the career exploration program should allow students to accomplish these tasks or dimensions of career development:

1. understanding of self-characteristics,
2. occupational areas,
3. educational avenues,
4. educational and locational decisions,
5. economic and social values of work,
6. psychological and socialogical meaning of work.

Based upon these tasks, Bottoms and O'Kelly (1971) devised the following "Developmental Vocational Curriculum":

1. grade six (and earlier): orientation-acquiring of positive attitudes toward work and school and increased knowledge of relationship of the self to work,
2. grade 7: exploration and employability-making tentative choice of broad occupational areas for further exploration,
3. grade 8: exploration, employability and job preparation - choosing occupational clusters for in-depth exploration and for acquiring employability skills.

Johnson, Busacker, and Bowman (1961) contended that neither academically inclined students nor any others can excell in their studies or realize their full potentials later unless, at the junior high school level, they:

1. attain a fairly realistic understanding of themselves,
2. make decisions about their high school programs on bases other than misinformation, personal whim, or the choices of friends,
3. are spared the experience of floundering aimless for lack of thought regarding even tentative vocational goals,
4. are minimally distracted by problems of growth and development or handicapped by physical or emotional difficulties,
5. negotiate effectually the change to secondary school procedures, particularly in regard to independent study,
6. have ample opportunity to discover and nourish worthwhile interests.

Herr and Cramer (1972:165) stated that the years of junior high or middle school are by design transition years. These years represent

a period when exploration can be expected whether the school aids it or simply allows it to proceed unencumbered by information, models, and experiences. Unless the educational experiences provided students at this level are timely and immediate to the questions which students ask themselves, it is unlikely that the experiences will have a significant influence on student behavior or choice making.

OPINION MEASUREMENT

One method of assessing the attitudes of individuals toward exploratory agriculture is through the use of an opinionnaire. This investigator perceived that a review of literature involving opinion measurement would be a prerequisite to this study. Engelhart (1972) stated that the use of opinionnaires is of considerable value to administrative officers, counselors, and teachers involved in decision-making.

Lemon (1973) stated that the relationship between attitude and opinion is an analagous one in which there are not clear guidelines on which distinction can be based. Thurstone (1931) stated that opinion is simply a manifestation of an attitude, and the opinions can therefore be used to diagnose underlying predisposition.

According to Tuckman (1975), attitudes or opinions are typically measured by the use of scales. Tittle and Hill (1967) compared the effectiveness of five different types of attitude measurement in predicting behavior and they were able to demonstrate differences in efficiency between the different types of measures. Three types of

attitude scales (Likert, Thurstone, and Guttman) were used together with a semantic differential measure and a simple self-rating scale. The results indicated that the best prediction of behavior, as measured over the five indices, was accomplished by the Likert scale. Newcomb, Turner, and Converse (1965) stated that the Likert scale may come closest to the identification of an individual's attitude or opinion through the use of a positive-negative attitude continuum. The Likert scale requires an individual to indicate the direction and degree of affect he/she feels concerning an object, event, or possible state of affairs. A Likert scale used in an opinionnaire is a scale in which the interval between each point on the scale is assumed to be equal and the respondent is instructed to circle the letter or number indicating his or her opinion (Tuckman, 1972).

The combining of responses to a number of items or into single summaries or categories produces an "attitude scale." This method of combining an individual's response toward specific aspects of the same object would provide a reliable indication of the individual's generalized attitude or opinion toward a common object (Newcomb, Turner, and Converse, 1965). It was the belief of this investigator that the literature reviewed indicated that an opinionnaire utilizing the Likert technique would make it possible to measure the attitude of respondents toward the importance of lesson topics that they perceive should be taught in exploratory agriculture classes.

STRATEGIES FOR DETERMINING CURRICULUM CONTENT

The term curriculum has been given different meanings throughout the history of formal schooling. Finch (1976:9) defined curriculum as the sum of the learning activities and experiences that a student has under the auspices or direction of the school. Thompson (1973) stated that curriculum may also be viewed as a course of study and that a teacher who holds such a view considers his/her curriculum as being an outline of topics covered in the class. For purposes of this study, the latter definition will be used.

Finch (1976) presented the following strategies for determining curriculum content: the philosophical basis, introspection, the DACUM (Developing A Curriculum) approach, the function approach, task analysis, the critical incident technique, and the delphi technique. Smith (1957) grouped the strategies under four headings or procedures: judgmental, experimental, analytical, and consensual.

The philosophical basis for determining content is perhaps the most subjective strategy since a specific philosophy or set of philosophies serves as the basis for content decisions. Introspection is used by an individual or group to examine personal experiences and knowledges and incorporate these into a framework for the curriculum content. The DACUM approach utilizes some basic ideas associated with introspection in that it relies on experts employed in an occupational area to determine curriculum content and allows them to be guided through a systematic content determination process. The experts function as a group with all developmental activities taking

place when the members are together. The function approach to curriculum content determination focuses on identifying and unifying the functions and activities performed across an entire business or industry. This approach requires systematic data gathering, but enables more objective curriculum content information to be acquired. Task analysis focuses on the identification and verification of tasks performed by workers in a certain occupation or cluster of occupations. The critical incident technique is useful in identifying curriculum content related to worker values and attitudes while the delphi technique is useful in identifying curricular content in emerging occupations.

The problem of selecting a strategy for determining curriculum content is difficult and should take into account many factors. Finch (1976:41) made the following observations on determining curriculum content:

> Efforts made to determine content must take into account the various factors which can affect the entire process. The actual time and dollars available to determine what content should be included in a curriculum constitute potential constraints for the developer.

Internal and external pressures and concerns must also be examined to determine which content is valid and justifiable (Finch, 1976). The level at which content is provided needs to be examined in relation to the students served so that their needs are met. Other areas of concern include the educational setting, the occupational setting, and the various determination strategies which are available (Finch, 1976).

An examination of this study revealed the following constraints:

1. short time span,

2. small financial support,

3. level at which content will be provided,

4. objectives of career exploration program.

An examination of these factors eliminated all but two of the strategies for determining curriculum content, the philosophical basis and introspection. Of these two, introspection was used in this study because it is less subjective than the philosophical basis.

Finch (1976) described introspection as basically consisting of examining one's own thoughts and feelings about a certain area. The person or persons engaged in introspection ask themselves the basic question, "What do I feel should constitute the content of this curriculum?" Then a search is made of one's personal employment, teaching experience, and education to identify what might be most appropriate to include as curriculum content. Finch further offered the following summary of the introspection process.

> Introspection typically begins with an examination of ongoing vocational programs and literature related to these programs.
>
> Once the examination is complete, the developer considers what content might be best for the students, using subjective judgment as the decisive element. Consideration is given to both the education process and the result of that process from the perspective of an experienced vocational teacher. Eventually, a content outline is developed which serves as the basis for the curriculum.

Introspection often becomes a group process whereby several teachers develop their individual thoughts in regard to curriculum content and then meet to decide on curriculum content (Finch, 1976). This process also serves as a means of keeping personal bias to a minimum. Generally, curriculum developers use a combination of methods to arrive at

curriculum content or they use a variation of one approach to improve the selection process. In this study the advantages of survey research were added to the process of introspection in an effort to improve the selection of content. Kerlinger (1973:410-423) concluded that it was unsatisfactory to depend upon relatively hit-or-miss, so called representative samples based on "expert" judgments, and that survey research was a useful tool for educational fact finding. By adding survey research to the curriculum content selection process, the number of participants in the process will be greatly enlarged, thereby reducing bias.

SUMMARY

This chapter was concerned with a review of related literature and research in career exploration and specifically in career exploration in agriculture. Curriculum guides in exploratory agriculture from seven states were reviewed. These curriculum guides were designed to increase students' knowledge of agricultural occupations, help them become familiar with personal attributes and enable them to develop more positive attitudes toward work.

Related research which focused upon evaluating the effectiveness of exploratory agriculture classes was also reviewed. From this review of research studies, it was found that:

1. The majority of courses in exploratory agriculture have not accomplished the commonly accepted objectives of exploratory agriculture.

2. Of the 10 studies examined in this review, none measured the appropriateness of the lesson topics to the commonly accepted objectives of exploratory agriculture.

3. None of the 10 studies reviewed attempted to assess whether the exploratory curriculum was actually taught by the teachers.

4. Miller (1973) conducted a study of the exploratory agriculture program in Virginia and concluded that there is a need for a substantial curriculum development effort for exploratory agriculture classes in Virginia.

The exploration phase of career education is focused upon in the middle school. Herr and Cramer (1972) stated that youth at this stage are becoming more conscious of the role that work will play in their lives. According to Ridenour (1976) career exploration is a time for some actual exploring of occupations and a time of self-assessment. Essex (1971) stated that the career exploration program must aid each child in his exploration by identifying areas of development and exploration and then prescribe what activities are likely to bring him exploratory experiences which will aid him in fulfilling his goals and needs.

One method of assessing the attitudes of individuals toward exploratory agriculture is through the use of an opinionnaire. Lemon (1973) stated that the relationship between attitude and opinion is an analagous one in which there are no clear guidelines on which distinction can be based. According to Tuckman (1975), attitudes or opinions are typically measured by the use of scales.

Strategies for determining curriculum content were reviewed. Finch (1976) presented the following strategies: the philosophical basis, introspection, the DACUM approach, the function approach, task analysis, the critical incident technique, and the delphi technique. Generally, curriculum developers use a combination of methods to arrive at curriculum content or they use a variation of one approach to improve the selection process.

Chapter 3

RESEARCH METHODOLOGY

The purpose of this chapter was to describe the population, the design of the study, the development of the instrument, the procedures used in data collection, and the statistical tools utilized in the analysis of data.

DESCRIPTION OF THE POPULATION

The population for this study was the teachers of exploratory agriculture classes in Virginia; the State Department of Education agricultural education supervisory staff in Virginia; teacher educators in agricultural education at Virginia Polytechnic Institute and State University and Virginia State College; and vocational directors in those school systems offering exploratory agriculture classes.

Identification of the teachers of exploratory agriculture was made by obtaining a list of schools and teachers from Mr. Julian Campbell, State Supervisor of Agricultural Education. The list was comprised of 50 agricultural teachers.

A list of teacher educators in agricultural education at Virginia Polytechnic Institute and State University was obtained from Dr. James Clouse, Program Leader for Agricultural Education; and teacher educators at Virginia State College were identified by Dr. M. A. Fields, Chairman, Department of Agriculture. A total of 11 teacher educators were identified for the study.

Identification of the state supervisory staff was made by obtaining a list of the supervisors from Mr. Julian Campbell. Eight supervisors of agricultural education were identified for the study.

Vocational directors of local school systems invited to participate in the study were those directors in schools having classes in exploratory agriculture. Fifteen vocational directors were identified for the study. The names of these directors were obtained from the State Directory of Education.

The total population for the study was 84 individuals. Warmbrod (1965:107) recommended that when the population is 100 or less, the entire population should be included in the study. Therefore, all 84 persons identified (Appendix A) were invited to participate in the study.

INSTRUMENTATION

The instruments used in this study were developed to identify lesson topics presently being taught in exploratory agriculture and lesson topics that should be taught in exploratory agriculture classes in Virginia. A review of literature related to exploratory agriculture classes revealed no instrument had been developed to examine the questions raised by this research. Thus, to complete this phase of the study, research instruments were developed to obtain data crucial to the successful completion of this research.

Construction of the Instruments

Two instruments were developed for purposes of this study; one for teachers of exploratory agriculture classes and one for supervisors of agricultural education, teacher educators, and vocational directors. A comprehensive list of possible lesson topics was selected from pertinent research and curriculum development efforts in agricultural education on career exploration. Through this process, the investigator identified the lessons which might be included in exploratory agriculture classes and combined the lessons into a list manageable for this research effort. This list of lesson topics was included on both instruments.

To further refine and revise the lesson topics and to give content validity to the instrument, a panel of experts (Appendix B) was asked to review the list. The purpose of this review was to add missing lesson topics, delete irrelevant lesson topics, and improve wording of vague or lengthy lesson topics. The revision that followed then formed the lesson inventory used for this study. The panel of experts consisted of two career development specialists, one teacher of exploratory agriculture, one agricultural teacher educator, one supervisor of vocational agriculture, and one vocational director of a county school system. The panel of experts were not participants in the study.

Teacher instrument. The instrument developed for teachers consisted of two parts, a background information section and a lesson inventory section. In order to describe the nature of the exploratory

agriculture classes in Virginia, background information about the teachers and their instructional programs was obtained. Therefore, the background information section of the teacher survey instrument was used to collect the following information from each teacher:

1. supervisory area in which the school is located,
2. school population,
3. length in weeks of exploratory agriculture classes,
4. full-time or part-time exploratory agriculture teacher,
5. average exploratory agriculture class size,
6. grade levels involved,
7. percentage of girls and boys in exploratory agriculture classes,
8. other exploratory classes offered in school,
9. length of class period,
10. facilities utilized in exploratory agriculture classes,
11. teacher certificate held,
12. years of teaching experience of instructors.

The lesson inventory section of the teacher survey instrument consisted of a listing of all the lesson topics selected from the literature, lessons added by the panel of experts, and lessons suggested by the pilot test respondents. The information needed from the lesson inventory section of the instrument for a study of this type was:

1. Should the lesson be taught in exploratory agriculture classes?

2. Does the teacher teach the lesson?

3. What is the importance of those lessons which should be taught in exploratory agriculture classes?

4. What is the number of class periods spent on each lesson topic?

The instrument contained four columns. Teachers were asked to check column one for lesson topics they perceived should be taught in exploratory agriculture classes. For each lesson topic they perceived should be taught, teachers were asked to rate the importance of each lesson topic to an exploratory agriculture class in column two. The questionnaire technique utilizing a summated rating scale was used to determine the teachers perception of the importance of lessons. The scale used in this study was a Likert scale containing a five-point rating. Respondents indicated their rating of the importance of each item by encircling the number best representing their perception:

1 = much below average importance,

2 = below average importance,

3 = about average importance,

4 = above average importance,

5 = much above average importance.

In column three, teachers were asked to check lesson topics they are presently teaching in their exploratory classes. Furthermore, teachers were asked to record the amount of time, in class periods, they spend on each lesson in column four.

Instrument for supervisors, teacher educators and vocational directors. The survey instrument developed for supervisors, teacher educators and vocational directors consisted of only one part, the lesson inventory section. The lesson inventory was identical to the one developed for teachers, however, the respondents were asked to provide the following information:

1. Should the lesson be taught in an exploratory agriculture class?

2. Of those lessons which should be taught, what is the importance of each lesson to an exploratory agriculture class?

Supervisors, teacher educators and vocational directors were instructed to go through the complete lesson inventory placing a checkmark in the column headed "Should be Taught" for all lesson topics they perceived as important to exploratory agriculture classes. At the time the respondents checked lesson topics that should be taught, they were also instructed to rate the importance of that lesson to an exploratory agriculture class on a summated rating scale identical to the one described in the teacher survey instrument.

Pilot Test

Since the instruments used in this study were developed by the investigator, pilot testing was necessary to obtain feedback concerning the communicability of lesson topics, the clarity of directions, the need for additional lesson topics, and to add content validity to the instrument.

Three teachers of exploratory agriculture, one supervisor of vocational agriculture, one agricultural teacher educator, and one vocational director of a county school system were selected and asked to participate in the pilot testing of the opinionnaires (Appendix C). Wiersma (1975) notes that:

> The group need not be a random sample of prospective respondents, but the members of the group should be familiar with the variables under study and should be in a position to make valid judgments about the items (p. 141).

Reliability of Instruments

Ary, et al. (1972:204) presents four commonly used methods of estimating the reliability of a test. These are test-retest, equivalent forms, split-half, and Kuder-Richardson Formula 21. The first three of these are based on correlational procedures while the latter is based on the proportion of subjects who get the item right or wrong. After examining each of the techniques for estimating the reliability of an instrument, the investigator decided the test-retest method would be most appropriate.

According to Ary, et al. (1972:204) the test-retest method of estimating reliability is accomplished by administering the test to the same group on two occasions within a time interval of 20 days and then correlating the paired scores. The coefficient of correlation between the scores of the subjects on the two administrations of the test, would give an indication of its reliability. The reliability of the opinionnaire used in this study was estimated by administrating the instrument to a class of senior students enrolled in EDVT 4030, Methods

in Teaching Vocational Agriculture during Winter Quarter, 1978 at Virginia Polytechnic Institute and State University. A second administration of the opinionnaire was given two weeks following the first administration and Pearson Product Moment Correlation Coefficients were calculated on the responses. Reliability for the section pertaining to lesson topics that should be taught in exploratory agriculture classes was estimated to be .78 and reliability on the section pertaining to the importance of lesson topics was .74.

Validity of Instruments

According to Sax (1974:434) content validity is easily determined on Likert scales by rewriting and revising items until a panel of experts agree that they are clear and unambiguous. Content validity was obtained by having the panel of experts (Appendix B) review the opinionnaire and provide written evaluations. The panel provided comments on clarity, design and format, and completeness of the inventory of lesson topics. The panel recommended changes relative to the clarity of four items and the repetition of three items. The panel of experts also recommended one change in the design of the opinionnaire and the addition of one lesson topic.

DATA COLLECTION PROCEDURES

Teachers of exploratory agriculture classes, supervisors, teacher educators, and vocational directors were mailed the appropriate survey instrument and a stamped envelope, addressed to the investigator.

Included with the instrument was a cover letter (Appendix D) from the investigator explaining the purpose of the study and encouraging the teachers to complete and return the opinionnaire. Potential respondents were assured that their individual replies would remain anonymous and confidential. However, a coding system was devised to identify non-response participants.

A personal telephone call was made to all non-respondents two weeks after mailing the original opinionnaire. A second opinionnaire, cover letter, and a stamped, self-addressed envelope were mailed to those participants who indicated that they had not received or had misplaced the original opinionnaire. Two weeks later, a post card reminder was mailed to the remaining non-participants. Eighty-nine percent of the 84 opinionnaires were returned after four weeks. These 75 opinionnaires provided the researcher with an adequate representation of raw data. As Wiersma (1975) notes: "generally 75 percent is considered a good rate of return" (p. 144).

STATISTICAL METHODS

Information collected from the survey instruments was transferred to IBM cards and analyzed by computer, utilizing the equipment of the Computer Center at Virginia Polytechnic Insitute and State University. The Comprehensive Questionnaire Analysis Program (Frary, 1977) and the Statistical Package for the Social Sciences (SPSS), a system of computer programs (Nie, et al., 1975) were used in the statistical analysis.

Descriptive statistics were utilized to summarize the data pertaining to the characteristics of teachers in exploratory agriculture classes and their instructional programs. The following statistical procedures were used to analyze the research questions asked in this study.

Research Question One - Frequency counts and percentages were calculated for each of the lesson topics presently taught in exploratory agriculture classes.

Research Question Two - Means were calculated for the amount of time spent on each lesson topic presently taught in exploratory agriculture classes.

Research Question Three - Frequency counts and percentages were calculated for the lesson topics that should be taught in exploratory agriculture classes as perceived by the participants in the study. Means were calculated on the importance of the lesson topics to an exploratory agriculture class. In deciding whether a lesson should be considered for inclusion in the analysis of the data, the criterion used was .5 (or 50 percent) of the respondents answering postively that the lesson topic should be taught in exploratory agriculture classes.

Research Question Four - Frequency counts and percentages were used to compare lesson topics presently taught in exploratory agriculture classes to lesson topics that should be taught as perceived by the participants in the study.

Research Question Five - Chi Square test of independence was used to determine if differences exist among the groups

participating in the study in their perception of lesson topics that should be taught in exploratory agriculture classes. In order to use Chi Square, it was necessary to combine one group with the supervisors to obtain numbers large enough so that no more than 20 percent of the cells would have less than five respondents. The logical group to combine with the supervisors was teacher educators since these two groups form the Joint State Agricultural Education Staff.

Research Question Six - The extent of difference between the means of lessons on the importance scale was measured by substracting the lowest mean for any group from the highest mean for any group. For purposes of this study, a difference greater than 1.0 was considered an important difference.

Chapter 4

PRESENTATION OF DATA AND DATA ANALYSIS

This chapter was concerned with the presentation of data and data analysis. Specifically, this chapter contained sections on descriptive data of the population and major findings of the study.

DESCRIPTIVE DATA OF POPULATION

The population of this study consisted of 50 teachers of exploratory agriculture, 11 teacher educators, 8 agricultural education supervisors, and 15 vocational directors. Eighty-nine percent, or 75, of the potential respondents marked and returned the opinionnaire in useable form. The percentage of returns by respondent groups were: teachers, 84 percent (N = 42); teacher educators, 100 percent (N = 11); supervisors, 100 percent (N = 8); and vocational directors, 93 percent (N = 14).

Demographic data were not essential to the study but certain descriptive data were collected on exploratory agriculture classes and teachers in order to obtain a better understanding of the exploratory agriculture classes in Virginia. The descriptive data on exploratory agriculture classes were reported in Table I.

The Appalachian Area, with 17, had the most exploratory agriculture teachers while the Eastern Area, with one, had the least number of exploratory agriculture teachers. The mean number of exploratory

TABLE I

DESCRIPTIVE DATA ON EXPLORATORY AGRICULTURE CLASSES AND TEACHERS

		Number of Teachers	Percent
I.	Location of teachers by State Supervisory Areas		
	A. Appalachian Area	17	40.5
	B. Blue Ridge Area	4	9.5
	C. Central Area	9	21.4
	D. Eastern Area	1	2.4
	E. Northern Area	5	11.9
	F. Southside Area	5	11.9
	G. No Response	1	2.4
II.	Mean number of exploratory agriculture teachers per school	1.33	
III.	Average number of students per school	633.56	
IV.	Length of Exploratory Agriculture Classes		
		Number of Teachers	Percent
	A. 4 weeks	2	4.8
	B. 6 weeks	5	11.9
	C. 7 weeks	3	7.1
	D. 9 weeks	5	11.9
	E. 12 weeks	3	7.1

TABLE I (Continued)

		Number of Teachers	Percent
	F. 18 weeks	20	47.6
	G. 24 weeks	1	2.4
	H. 36 weeks	2	4.8
	I. No Response	1	2.4
V.	Number of class meetings per week (42 teachers reported)	5	
VI.	Average length of class periods in minutes	51.63	
VII.	Average number of students per class	17.95	
VIII.	Sex of students in exploratory agriculture		Percent
	A. Male		69.7
	B. Female		30.3
IX.	Teaching experience		Years
	A. Mean		8.14
	B. Mode		1.00

TABLE I (Continued)

X.	Time devoted to exploratory agriculture		
		Number of Teachers	Percent
	A. Full-time	15	35.7
	B. Part-time	27	64.2
XI.	Teacher certificate held by respondents		
		Number of Teachers	Percent
	A. Collegiate Certificate	4	9.5
	B. Collegiate Professional	24	57.1
	C. Postgraduate Professional	14	33.3
XII.	Grade levels involved		
		Number of Teachers	Percent
	A. Seventh grade only	22	52.3
	B. Eighth grade only	11	26.1
	C. Seventh and eighth grades	6	14.2
	D. Sixth, seventh and eighth grades	3	7.1
XIII.	Average number of exploratory programs being offered in the school other than agriculture	2.98	

TABLE I (Continued)

XIV. Facilities used	Number of Teachers	Percent
A. Share facilities	29	69.0
B. Have separate facilities	13	30.9

agriculture teachers per school was found to be 1.33 teachers and the average number of students per school was calculated to be 633.

The length of exploratory agriculture classes ranged from four to 36 weeks, with nearly 48 percent of the teachers reporting classes to be 18 weeks in length. All of the teachers reported that their classes met five time per week and the average length of class was 51.63 minutes.

The average class size for exploratory agriculture was almost 18 students. Of the students enrolled in exploratory agriculture classes, approximately 70 percent were boys and 30 percent were girls.

Exploratory agriculture teachers have been teaching a mean of slightly more than eight years while the mode for years of teaching experience was one year. Nearly 36 percent, or 15, of the teachers reported they were full-time teachers of exploratory agriculture while about 64 percent, or 27, reported they taught exploratory agriculture part-time. About 10 percent of the teachers have Collegiate Certificates, 57 percent have Collegiate Professional Certificates and 33 percent have Postgraduate Professional Certificates.

Grade levels involved in exploratory agriculture classes ranged from the sixth to the eighth grade with 52 percent of the classes being seventh grade only; 26 percent being eighth grade only; 14 percent being seventh and eighth grade; and 7 percent being sixth, seventh, and eighth grades. The average number of exploratory programs being offered in the schools other than agriculture was found to be nearly three programs. Sixty nine percent, or 29, of the teachers share the same facilities as those used for high school vocational

agriculture classes. The remaining 31 percent of the teachers stated they have separate facilities for use by the exploratory agriculture classes.

MAJOR FINDINGS

The purpose of this study was to assess the relationship between lesson topics presently taught to lesson topics that should be taught in exploratory agriculture classes in Virginia as perceived by teachers of exploratory agriculture, teacher educators, State Department of Education supervisors of agricultural education, and vocational directors. Six research questions were developed for the study. The analyses of the six research questions were presented in the following discussion.

Analysis of Research Question Number 1

What are the lesson topics being taught in exploratory agriculture classes in Virginia as reported by present teachers of exploratory agriculture? The lesson topics being taught in exploratory agriculture classes in Virginia as reported by teachers of exploratory agriculture were recorded in Table II. None of the lesson topics were taught by 100 percent of the teachers and two of the lesson topics listed on the opinionnaire, "Preparing letters of application" and "Preparing personal data sheets," were not taught by any teacher. Additional lesson topics were added by 52 percent, or 22, of the teachers and since these topics were similar, they were grouped under the topic, "technical agriculture."

TABLE II

RESPONSE FREQUENCIES, PERCENTAGES, AND MEAN NUMBER OF CLASS PERIODS SPENT ON LESSON TOPICS IN EXPLORATORY AGRICULTURE AS REPORTED BY TEACHERS OF EXPLORATORY AGRICULTURE

	Lesson Topic	Teachers Response Frequency and Percent N = 42	Mean Number of Class Periods Spent on Lesson Topic[a]
1.	Exploring the importance of work in our economy.	30 (71)	2.37
2.	Determining the importance of preparing for work.	27 (64)	1.93
3.	Understanding the business and industrial world.	9 (21)	1.89
4.	Exploring the occupational world.	18 (43)	3.17
5.	Understanding the importance of planning for a career.	25 (60)	2.04
6.	Understanding important values for workers to possess.	16 (38)	1.50
7.	Determining interest, aptitudes, and abilities of workers.	12 (29)	1.75
8.	Exploring personality traits of workers.	8 (19)	1.75
9.	Exploring personal qualities of workers.	10 (24)	1.60
10.	Determining employment qualifications.	13 (31)	2.00
11.	Locating job opportunities.	12 (29)	1.67
12.	Securing part-time employment.	6 (14)	1.50
13.	Completing job application forms.	6 (14)	1.33
14.	Preparing letters of application.	0	-
15.	Preparing personal data sheets.	0	-
16.	Making arrangements for an interview.	4 (10)	1.25
17.	Interviewing for a job.	7 (17)	1.43
18.	Understanding attitudes and employer-employee expectations.	9 (21)	1.67
19.	Getting along with co-workers.	15 (36)	1.87

TABLE II (Continued)

	Lesson Topic	Teachers Response Frequency and Percent N = 42	Mean Number of Class Periods Spent on Lesson Topic[a]
20.	Exploring unions and professional organizations.	8 (19)	1.38
21.	Determining the responsibilities of supervisors.	3 (7)	1.00
22.	Terminating a job.	2 (5)	1.00
23.	Developing personal characteristics through the FFA.	29 (69)	3.31
24.	Classifying jobs according to the Dictionary of Occupational Titles.	4 (10)	2.00
25.	Understanding how jobs are changing.	14 (33)	1.93
26.	Identifying interesting occupations.	21 (50)	2.29
27.	Understanding the meaning of agriculture and agribusiness.	32 (76)	2.72
28.	Identifying important historical events in the development of agriculture.	18 (43)	2.50
29.	Exploring the importance of agriculture and agribusiness in the community, state and nation.	26 (62)	2.62
30.	Exploring the occupational opportunities in agriculture.	32 (76)	3.53
31.	Grouping agricultural careers for study.	19 (45)	2.47
32.	Exploring agricultural supplies and services occupations.	30 (71)	1.87
33.	Exploring agricultural mechanics occupations.	30 (71)	2.37
34.	Exploring agricultural production occupations.	32 (76)	2.28
35.	Exploring horticultural occupations.	30 (71)	2.17
36.	Exploring agricultural products processing and marketing occupations.	28 (67)	2.14
37.	Exploring natural resources and forestry occupations.	30 (71)	2.27
38.	Developing educational and career decision making skills.	16 (38)	2.25

TABLE II (Continued)

	Lesson Topic	Teachers Response Frequency and Percent N = 42	Mean Number of Class Periods Spent on Lesson Topic[a]
39.	Assessing personal abilities.	10 (24)	1.40
40.	Assessing personal interests.	14 (33)	1.57
41.	Identifying personal goals.	14 (33)	1.21
42.	Identifying occupational goals.	13 (31)	1.23
43.	Identifying the level of education needed to reach established goals.	17 (40)	1.47
44.	Identifying the technical preparation needed to reach established goals.	12 (29)	1.17
45.	Developing oneself to meet established goals.	9 (21)	1.22
46.	Determining where educational experience and technical preparation can be obtained.	14 (33)	1.43
47.	Preparing a plan of action to reach established goals.	8 (19)	1.25
48.	Exploring supervised occupational experience programs.	19 (45)	2.53
49.	Planning for the experience program.	17 (40)	2.47
50.	Technical agriculture.[b]	22 (52)	40.00

[a] Sum of the class periods reported by teachers divided by the number of teachers reporting.

[b] Lesson topics added by respondents.

The lesson topics taught by the largest number of teachers were "Understanding the meaning of agribusiness," "Exploring the occupational opportunities in agriculture," and "Exploring agricultural production occupations." Each of the preceding lesson topics were taught by 76 percent, or 32, of the teachers. Lesson topics taught by the least number of teachers were "Classifying jobs according to the Dictionary of Occupational Titles," "Making arrangements for an interview," "Determining the responsibilities of supervisors," and "Terminating a job" with each being taught by ten, ten, seven, and five percent of the teachers respectively.

Analysis of Research Question Number 2

What is the mean number of class periods spent on lesson topics being taught in exploratory agriculture classes in Virginia? The mean number of class periods spent on lesson topics was also recorded in Table II. This mean represented only the teachers responding that they taught the lesson topic. The greatest number of class periods spent in any area was on lesson topics added under "technical agriculture," with a mean of 40 class periods. The large means for class periods spent on specific topics identified on the opinionnaire were for the following topics: "Understanding the meaning of agriculture and agribusiness," (2.72 class periods); "Exploring the importance of agriculture and agribusiness in the community, state, and nation," (2.62 class periods); "Exploring supervised occupational experience programs," (2.53 class periods); and "Identifying important

historical events in the development of agriculture," (2.50 class periods). No teachers responded to lesson topics on "Preparing letters of application" and "Preparing personal data sheets." The lower means for class periods were spent on the following lesson topics: "Identifying occupational goals," (1.23 class periods); "Developing oneself to meet established goals," (1.22 class periods); "Identifying personal goals," (1.21 class periods); "Determining the responsibilities of supervisors," (1.00 class period); and "Terminating a job," (1.00 class period).

Analysis of Research Question Number 3

What are the lesson topics that should be taught and their relative importance in exploratory agriculture classes as perceived by exploratory agriculture teachers, State Department of Education agricultural education supervisory staff, teacher educators in agriculture, and vocational directors in those school systems offering exploratory agriculture classes? Frequency counts and percentages were calculated for the lesson topics that should be taught in exploratory agriculture classes and means were calculated on the importance of these lesson topics to an exploratory agriculture class. The responses for teachers, teacher educators, supervisors, and vocational directors for all lesson topics included on the opinionnaire were recorded in Table III (Appendix E). In deciding whether a lesson topic should be considered for inclusion in the analysis of the data, the criterion used

was .5 (or 50 percent) of the respondents answering positively that the lesson topic should be taught in exploratory agriculture classes.

The means on the importance of lesson topics were determined by summing the importance ratings and dividing by the number of responses to that lesson topic. The importance scale ranged from one to five as shown below:

1 = much below average importance,

2 = below average importance,

3 = average importance,

4 = above average importance,

5 = much above average importance.

Eleven lesson topics did not meet the preceding criteria and were not included in the analysis of data. Lesson topics meeting the established criteria and the mean importance of the lesson topics were recorded in Table IV. Lesson topics receiving the greatest number of positive responses were: "Understanding the meaning of agriculture," with 92 percent positive responses; "Exploring the occupational opportunities in agriculture," with 92 percent positive responses; "Developing personal characteristics through the FFA," with 89 percent positive responses; and "Exploring agricultural production occupations," with 89 percent positive responses. The mean importance of each lesson topic was 4.17, 4.30, 4.07, and 4.07 respectively.

Lesson topics receiving the least number of positive responses were: "Determining employment qualification," with 57 percent positive responses; "Developing oneself to meet established goals," with

TABLE IV

RESPONSE FREQUENCIES, PERCENTAGES, AND MEANS ON THE IMPORTANCE OF LESSON TOPICS THAT SHOULD BE TAUGHT IN EXPLORATORY AGRICULTURE AS PERCEIVED BY MORE THAN FIFTY PERCENT OF RESPONDENTS

Lesson Topic	Teachers N = 42		Teacher Educators N = 11		Supervisors N = 8		Voc. Directors N = 14		Total N = 75	
	Response Frequency and Percent	Mean[a]	Response Frequency and Percent	Mean[a]	Response Frequency and Percent	Mean[a]	Response Frequency and Percent	Mean[a]	Response Frequency and Percent	Mean[a]
1. Exploring the importance of work in our economy.	35 (83)	3.94	9 (82)	4.22	7 (87)	3.29	14 (100)	4.43	65 (87)	4.02
2. Determining the importance of preparing for work.	34 (81)	4.12	10 (91)	4.30	6 (75)	2.83	14 (100)	4.43	64 (85)	4.19
3. Understanding the business and industrial world.	19 (45)	3.05	5 (45)	3.80	6 (75)	3.00	12 (86)	3.67	42 (56)	3.31
4. Exploring the occupational world.	29 (69)	3.90	7 (64)	3.57	5 (62)	3.20	12 (86)	3.83	53 (71)	3.77
5. Understanding the importance of planning for a career.	32 (76)	4.06	9 (82)	4.22	7 (87)	3.57	12 (86)	4.17	60 (80)	4.05
6. Understanding important values for workers to possess.	24 (57)	3.67	10 (91)	4.30	6 (75)	4.00	13 (93)	4.00	53 (71)	3.91
7. Determining interest, aptitudes, and abilities.	23 (55)	3.65	8 (73)	4.00	6 (75)	3.50	9 (64)	3.56	46 (61)	3.67
8. Exploring personal qualities of workers.	23 (55)	2.87	7 (64)	3.86	6 (75)	3.33	8 (57)	3.38	44 (59)	3.18
9. Determining employment qualifications.	21 (50)	3.52	8 (73)	4.25	6 (75)	3.33	8 (57)	3.25	43 (57)	3.58
10. Locating job opportunities.	25 (60)	3.52	6 (55)	3.67	6 (75)	3.33	9 (64)	3.89	46 (61)	3.59
11. Completing job application forms.	21 (50)	2.95	7 (64)	4.14	4 (50)	3.75	8 (57)	3.50	40 (53)	3.35
12. Understanding attitudes and employer-employee expectations.	21 (50)	2.95	9 (82)	4.11	3 (37)	3.67	10 (71)	4.10	43 (57)	3.51

TABLE IV (Continued)

Lesson Topic	Teachers N = 42		Teacher Educators N = 11		Supervisors N = 8		Voc. Directors N = 14		Total N = 75	
	Response Frequency and Percent	Mean[a]	Response Frequency and Percent	Mean[a]	Response Frequency and Percent	Mean[a]	Response Frequency and Percent	Mean[a]	Response Frequency and Percent	Mean[a]
13. Getting along with co-workers.	24 (57)	3.81	9 (82)	4.22	6 (75)	4.17	11 (79)	4.18	50 (66)	4.00
14. Developing personal characteristics through the FFA.	39 (93)	3.90	11 (100)	4.36	7 (87)	4.14	10 (71)	4.40	67 (89)	4.07
15. Understanding how jobs are changing.	21 (50)	3.48	9 (82)	3.56	7 (87)	3.00	10 (71)	3.70	47 (63)	3.47
16. Identifying interesting occupations.	28 (67)	3.96	8 (73)	3.88	6 (75)	3.17	11 (79)	4.18	53 (71)	3.91
17. Understanding the meaning of agriculture.	38 (90)	4.16	10 (91)	4.20	8 (100)	4.13	13 (93)	4.23	69 (92)	4.17
18. Identifying important historical events in the development of agriculture.	32 (76)	3.31	7 (64)	3.00	5 (62)	3.20	12 (86)	3.33	56 (75)	3.27
19. Exploring the importance of agriculture and agribusiness in the community, state and nation.	32 (76)	4.09	11 (100)	4.09	8 (100)	4.25	13 (93)	4.08	64 (85)	4.11
20. Exploring the occupational opportunities in agriculture.	36 (86)	4.25	11 (100)	4.45	8 (100)	4.25	14 (100)	4.36	69 (92)	4.30
21. Grouping agricultural careers for study.	27 (64)	3.70	10 (91)	3.90	6 (75)	3.17	14 (100)	3.86	57 (76)	3.72
22. Exploring agricultural supplies and services occupations.	35 (83)	4.11	10 (91)	4.30	7 (87)	3.71	13 (93)	3.92	65 (87)	4.06
23. Exploring agricultural mechanics occupations.	35 (83)	4.14	10 (91)	4.30	7 (87)	3.71	13 (93)	4.00	65 (87)	4.09
24. Exploring agricultural production occupations.	37 (88)	4.11	10 (91)	4.30	7 (87)	3.71	13 (93)	4.00	67 (89)	4.07
25. Exploring horticultural occupations.	35 (83)	4.06	10 (91)	4.40	7 (87)	3.71	13 (93)	4.00	65 (87)	4.09
26. Exploring agricultural products processing and marketing occupations.	33 (79)	4.00	9 (82)	4.44	7 (87)	3.71	13 (93)	4.00	62 (83)	4.03

TABLE IV (Continued)

Lesson Topic	Teachers N = 42		Teacher Educators N = 11		Supervisors N = 8		Voc. Directors N = 14		Total N = 75	
	Response Frequency and Percent	Mean[a]	Response Frequency and Percent	Mean[a]	Response Frequency and Percent	Mean[a]	Response Frequency and Percent	Mean[a]	Response Frequency and Percent	Mean[a]
27. Exploring natural resources and forestry occupations.	35 (83)	4.06	10 (91)	4.40	7 (87)	3.71	13 (93)	4.00	65 (87)	4.06
28. Developing educational and career decision making skills.	24 (57)	3.58	8 (73)	4.13	5 (62)	3.60	11 (79)	3.91	48 (64)	3.75
29. Assessing personal abilities.	21 (50)	3.29	11 (100)	4.00	6 (75)	4.17	11 (79)	4.18	49 (65)	3.76
30. Assessing personal interests.	22 (52)	3.64	11 (100)	4.09	7 (87)	4.14	9 (64)	4.00	49 (65)	3.76
31. Identifying personal goals.	24 (57)	3.63	9 (82)	4.11	8 (100)	4.00	10 (71)	4.00	51 (68)	3.84
32. Identifying occupational goals.	23 (55)	3.65	9 (82)	3.89	6 (75)	3.83	9 (64)	4.00	47 (63)	3.79
33. Identifying the level of education needed to reach established goals.	22 (52)	3.86	10 (91)	3.80	6 (75)	3.33	9 (64)	4.00	47 (63)	3.77
34. Identifying the technical preparation needed to reach established goals.	20 (48)	3.75	9 (82)	3.78	6 (75)	3.50	10 (71)	4.00	45 (60)	3.78
35. Developing oneself to meet established goals.	18 (43)	3.44	8 (73)	4.13	6 (75)	3.67	9 (64)	4.22	41 (55)	3.78
36. Determining where educational experience and technical preparation can be obtained.	20 (48)	3.95	10 (91)	3.70	6 (75)	3.17	11 (79)	3.55	47 (63)	3.70
37. Preparing a plan of action to reach established goals .	18 (43)	3.78	9 (82)	4.00	5 (62)	3.80	12 (86)	3.75	44 (59)	3.82
38. Exploring supervised occupational experience programs.	25 (60)	3.92	9 (82)	3.89	7 (87)	3.57	9 (64)	3.44	50 (67)	3.78
39. Planning for the experience program.	33 (79)	3.91	9 (82)	3.78	6 (75)	3.33	8 (57)	3.13	56 (75)	3.67

[a]Mean for those persons responding positively to that lesson topic and based upon the following scale: 1 = much below average importance, 2 = below average importance, 3 = average importance, 4 = above average importance, 5 = much above average importance.

55 percent positive responses; and "Completing job application forms," with 53 percent positive responses. The mean importance of each lesson topic was 3.58, 3.78, and 3.35 respectively.

The rank order of means on the importance of lesson topics that should be taught in exploratory agriculture classes as reported by more than fifty percent of respondents was reported in Table V. Means reported on the importance of lesson topics are for those individuals responding positively to that lesson topic. Lesson topics ranked highest on the list were: "Exploring the occupational opportunities in agriculture," "Determining the importance of preparing for work," and "Understanding the meaning of agriculture," with means of 4.30, 4.19, and 4.17 respectively. Lesson topics ranked lowest on the list of topics in order of importance were: "Understanding the business and industrial world," "Identifying important historical events in the development of agriculture," and "Exploring personal qualities of workers," with means of 3.31, 3.27, and 3.18 respectively.

Analysis of Research Question Number 4

How do lesson topics being taught in exploratory agriculture classes compare to lesson topics that should be taught as perceived by exploratory agriculture teachers, State Department of Education agricultural education supervisory staff, teacher educators in agriculture, and vocational directors in those school systems offering exploratory agriculture classes? A comparison of lesson topics presently taught in exploratory agriculture classes to lesson topics that should

TABLE V

RANK ORDER OF MEANS ON THE IMPORTANCE OF LESSON TOPICS THAT SHOULD BE TAUGHT IN EXPLORATORY AGRICULTURE CLASSES AS REPORTED BY MORE THAN FIFTY PERCENT OF RESPONDENTS

	Lesson Topic	Mean[a]
1.	Exploring the occupational opportunities in agriculture.	4.30
2.	Determining the importance of preparing for work.	4.19
3.	Understanding the meaning of agriculture.	4.17
4.	Exploring the importance of agriculture and agribusiness in the community, state and nation.	4.11
5.	Exploring agricultural mechanics occupations.	4.09
6.	Exploring horticultural occupations.	4.09
7.	Exploring agricultural production occupations.	4.07
8.	Developing personal characteristics through the FFA.	4.07
9.	Exploring agricultural supplies and service occupations.	4.06
10.	Exploring natural resources and forestry occupations.	4.06
11.	Understanding the importance of planning for a career.	4.05
12.	Exploring agricultural products processing and marketing occupations.	4.03
13.	Exploring the importance of work in our economy.	4.02
14.	Getting along with co-workers.	4.00

TABLE V (Continued)

	Lesson Topic	Mean[a]
15.	Understanding important values for workers to possess.	3.91
16.	Identifying interesting occupations.	3.91
17.	Identifying personal goals.	3.84
18.	Preparing a plan of action to reach established goals.	3.82
19.	Identifying occupational goals.	3.79
20.	Exploring supervised occupational experience programs.	3.78
21.	Developing oneself to meet established goals.	3.78
22.	Identifying the technical preparation needed to reach established goals.	3.78
23.	Identifying the level of education needed to reach established goals.	3.77
24.	Exploring the occupational world.	3.77
25.	Assessing personal abilities.	3.76
26.	Assessing personal interests.	3.76
27.	Developing educational and career decision-making skills.	3.75
28.	Grouping agricultural careers for study.	3.70
29.	Determining where educational experience and technical preparation can be obtained.	3.70
30.	Planning for the experience program.	3.67

TABLE V (Continued)

	Lesson Topic	Mean[a]
31.	Determining interest, aptitudes, and abilities.	3.67
32.	Locating job opportunities.	3.59
33.	Determining employment qualifications.	3.58
34.	Understanding attitudes and employer-employee expectations.	3.51
35.	Understanding how jobs are changing.	3.47
36.	Completing job application forms.	3.35
37.	Understanding the business and industrial world.	3.31
38.	Identifying important historical events in the development of agriculture.	3.27
39.	Exploring personal qualities of workers.	3.18

[a]Mean for those persons responding positively to that lesson topic and based upon the following scale: 1 = much below average importance, 2 = below average importance, 3 = average importance, 4 = above average importance, 5 = much above average importance.

be taught in exploratory agriculture classes was made and the results were recorded in Table VI. The percentage difference in frequency counts for the two groups was used as the basis for comparison. Thirty of the 39 lesson topics that should be taught in exploratory agriculture as perceived by more than fifty percent of the respondents had frequency counts of 20 percent or higher when compared to frequency counts for lesson topics presently taught by teachers of exploratory agriculture. Lesson topics with the largest amount of differences were: "Assessing personal abilities," (44 percent difference); "Preparing a plan of action to reach established goals," (40 percent difference); "Completing job application forms," (39 percent difference); and "Understanding attitudes and employer-employee expectation," (36 percent difference). The least amount of difference (13 percent) was recorded for the lesson topic, "Exploring agricultural production occupations."

Analysis of Research Question Number 5

Are there differences, and if so where, in lesson topics that should be taught as perceived by exploratory agriculture teachers, joint state agricultural education staff and vocational directors in those school systems offering exploratory agriculture classes? Chi Square test of independence was used to determine if differences existed among the groups participating in the study in their perception of lesson topics that should be taught in exploratory agriculture classes. Two groups, teacher educators and supervisors,

TABLE VI

RESPONSE FREQUENCIES, PERCENT RESPONDING AND RANK ORDER OF PERCENT DIFFERENCE BY RESPONDENTS FOR LESSON TOPICS PRESENTLY TAUGHT BY TEACHERS OF EXPLORATORY AGRICULTURE AND LESSON TOPICS THAT SHOULD BE TAUGHT IN EXPLORATORY AGRICULTURE AS PERCEIVED BY MORE THAN FIFTY PERCENT OF ALL RESPONDENTS

	Lesson Topic	Lesson Topics Presently Taught By Teachers Response Frequency and Percent N = 42	Lesson Topics That Should Be Taught Response Frequency and Percent N = 75	Percent Difference[a]
1.	Assessing personal abilities.	10 (24)	51 (68)	44
2.	Preparing a plan of action to reach established goals.	8 (19)	44 (59)	40
3.	Completing job application forms.	6 (14)	40 (53)	39
4.	Understanding attitudes and employer-employee expectations.	9 (21)	43 (57)	36
5.	Understanding the business and industrial world.	9 (21)	42 (56)	35
6.	Determining interest, aptitudes, and abilities.	12 (29)	48 (64)	35
7.	Exploring personal qualities of workers.	10 (24)	44 (59)	35
8.	Assessing personal interests.	14 (33)	51 (68)	35
9.	Developing oneself to meet established goals.	9 (21)	41 (55)	34
10.	Getting along with co-workers.	15 (36)	52 (69)	33
11.	Understanding important values for workers to possess.	16 (38)	53 (71)	33
12.	Locating job opportunities.	12 (29)	46 (61)	32
13.	Identifying important historical events in the development of agriculture.	18 (43)	56 (75)	32
14.	Identifying personal goals.	14 (33)	49 (65)	32
15.	Identifying occupational goals.	13 (31)	47 (63)	32
16.	Grouping agricultural careers for study.	19 (45)	57 (76)	31
17.	Identifying the technical preparation needed to reach established goals.	12 (29)	45 (60)	31

TABLE VI (Continued)

	Lesson Topic	Lesson Topics Presently Taught By Teachers Response Frequency and Percent N = 42	Lesson Topics That Should Be Taught Response Frequency and Percent N = 75	Percent Difference[a]
18.	Understanding how jobs are changing.	14 (33)	47 (63)	30
19.	Determining where educational experience and technical preparation can be obtained.	14 (33)	47 (63)	30
20.	Exploring the occupational world.	18 (43)	53 (71)	28
21.	Determining employment qualifications.	13 (31)	43 (57)	26
22.	Developing educational and career decision making skills.	16 (38)	48 (64)	26
23.	Exploring the importance of agriculture and agribusiness in the community, state, and nation.	26 (62)	64 (85)	23
24.	Identifying the level of education needed to reach established goals.	17 (40)	47 (63)	23
25.	Exploring supervised occupational experience programs.	19 (45)	50 (67)	22
26.	Identifying interesting occupations.	21 (50)	53 (71)	21
27.	Planning for the experience program.	17 (40)	46 (61)	21
28.	Determining the importance of preparing for work.	27 (64)	64 (85)	21
29.	Developing personal characteristics through the FFA.	29 (69)	67 (89)	20
30.	Understanding the importance of planning for a career	25 (60)	60 (80)	20
31.	Exploring the importance of work in our economy.	30 (71)	65 (87)	16
32.	Understanding the meaning of agriculture.	32 (76)	69 (92)	16
33.	Exploring the occupational opportunities in agriculture.	32 (76)	69 (92)	16
34.	Exploring agricultural supplies and services occupations.	30 (71)	65 (87)	16
35.	Exploring agricultural mechanics occupations.	30 (71)	65 (87)	16
36.	Exploring horticultural occupations.	30 (71)	65 (87)	16

TABLE VI (Continued)

	Lesson Topic	Lesson Topics Presently Taught By Teachers Response Frequency and Percent N = 42	Lesson Topics That Should Be Taught Response Frequency and Percent N = 75	Percent Difference[a]
37.	Exploring agricultural products processing and marketing occupations.	28 (67)	62 (83)	16
38.	Exploring natural resources and forestry occupations.	30 (71)	65 (87)	16
39.	Exploring agricultural production occupations.	32 (76)	67 (89)	13

[a]Difference between response frequency for all respondents and response frequency for lesson topics presently taught by exploratory agriculture teachers.

were combined in order to obtain numbers large enough to calculate Chi Square values. Chi Square values for each of the lesson topics were recorded in Table VII. Chi Square values significant at the .05 level were found on the following twelve lesson topics:

1. Understanding the business and industrial world,
2. Understanding important values for workers to possess,
3. Developing personal characteristics through the FFA,
4. Understanding how jobs are changing,
5. Assessing personal abilities,
6. Assessing personal interests,
7. Identifying personal goals,
8. Identifying the level of education needed to reach established goals,
9. Identifying the technical preparation needed to reach established goals,
10. Developing oneself to meet established goals,
11. Determining where educational experience and technical preparation can be obtained,
12. Preparing a plan of action to reach established goals.

Chi Square values could not be calculated for 11 of the topics because of zeroes or low numbers in some of the cells. Two of these topics had differences large enough to be noted. The topics were "Exploring the importance of agriculture and agribusiness in the community, state, and nation," and "Grouping agricultural careers for

TABLE VII

CHI SQUARE TEST OF SIGNIFICANT DIFFERENCE BY RESPONDENT GROUPS ON LESSON TOPICS THAT SHOULD BE TAUGHT IN EXPLORATORY AGRICULTURE CLASSES AS PERCEIVED BY MORE THAN FIFTY PERCENT OF RESPONDENTS

Lesson Topic	Teachers Response Frequency and Percent N = 42	State Staff[a] Response Frequency and Percent N = 19	Voc. Directors Response Frequency and Percent N = 14	Chi Square[b]
1. Exploring the importance of work in our economy.	35 (83)	16 (84)	14 (100)	--
2. Determining the importance of preparing for work.	34 (81)	16 (84)	14 (100)	--
3. Understanding the business and industrial world.	19 (45)	11 (58)	12 (86)	7.02[c]
4. Exploring the occupational world.	29 (69)	12 (63)	12 (86)	2.09
5. Understanding the importance of planning for a career.	32 (76)	16 (84)	12 (86)	--
6. Understanding important values for workers to possess.	24 (57)	16 (84)	13 (93)	8.71[c]
7. Determining interest, aptitudes, and abilities of workers.	23 (55)	14 (74)	9 (64)	2.03
8. Exploring personal qualities of workers.	23 (55)	13 (68)	8 (57)	1.02
9. Determining employment qualifications.	21 (50)	14 (74)	8 (57)	3.00
10. Locating job opportunities.	25 (60)	12 (63)	9 (64)	0.13
11. Completing job application forms.	21 (50)	11 (58)	8 (57)	0.43
12. Understanding attitudes and employer-employee expectations.	21 (50)	12 (63)	10 (71)	2.32

TABLE VII (Continued)

Lesson Topic	Teacher Response Frequency and Percent N = 42	State Staff[a] Response Frequency and Percent N = 19	Voc. Directors Response Frequency and Percent N = 14	Chi Square[b]
13. Getting along with co-workers.	24 (57)	15 (79)	11 (79)	2.47
14. Developing personal characteristics through the FFA.	39 (93)	18 (95)	10 (71)	5.84[c]
15. Understanding how jobs are changing.	21 (50)	16 (84)	10 (71)	7.11[c]
16. Identifying interesting occupations.	28 (67)	14 (74)	11 (79)	0.83
17. Understanding the meaning of agriculture and agribusiness.	38 (90)	18 (95)	13 (93)	--
18. Identifying important historical events in the development of agriculture.	32 (76)	12 (63)	12 (86)	2.28
19. Exploring the importance of agriculture and agribusiness in the community, state and nation.	32 (76)	19 (100)	13 (93)	--
20. Exploring the occupational opportunities in agriculture.	36 (86)	19 (100)	14 (100)	--
21. Grouping agricultural careers for study.	27 (64)	16 (84)	14 (100)	--
22. Exploring agricultural supplies and services occupations.	35 (83)	17 (89)	13 (93)	--
23. Exploring agricultural mechanics occupations.	35 (83)	17 (89)	13 (93)	--
24. Exploring agricultural production occupations.	37 (88)	17 (89)	13 (93)	0.25
25. Exploring horticultural occupations.	35 (83)	17 (89)	13 (93)	--
26. Exploring agricultural products processing and marketing occupations.	33 (79)	16 (84)	13 (93)	--

TABLE VII (Continued)

Lesson Topic	Teachers Response Frequency and Percent N = 42	State Staff[a] Response Frequency and Percent N = 19	Voc. Directors Response Frequency and Percent N = 14	Chi Square[b]
27. Exploring natural resources and forestry occupations.	35 (83)	17 (89)	13 (93)	--
28. Developing educational and career decision making skills.	24 (57)	13 (68)	11 (79)	2.30
29. Assessing personal abilities.	21 (50)	17 (89)	11 (79)	10.33[c]
30. Assessing personal interests.	22 (52)	18 (95)	9 (64)	10.37[c]
31. Identifying personal goals.	24 (57)	17 (89)	10 (71)	6.37[c]
32. Identifying occupational goals.	23 (55)	15 (79)	9 (64)	3.29
33. Identifying the level of education needed to reach established goals.	22 (52)	16 (84)	9 (64)	5.68[c]
34. Identifying the technical preparation needed to reach established goals.	20 (48)	15 (79)	10 (71)	6.29[c]
35. Developing oneself to meet established goals.	18 (43)	14 (74)	9 (64)	5.66[c]
36. Determining where educational experience and technical preparation can be obtained.	20 (48)	16 (84)	11 (79)	9.35[c]
37. Preparing a plan of action to reach established goals.	18 (43)	14 (74)	12 (86)	10.32[c]
38. Exploring supervised occupational experience programs.	25 (60)	16 (84)	9 (64)	3.63
39. Planning for the experience program.	33 (79)	15 (79)	8 (57)	3.35

a. The State Department of Education supervisory staff and teacher educators at Virginia Polytechnic Institute and State University and Virginia State College.

b. Chi Square values were not calculated for some topics because of small cell size.

c. Significant at the .05 level.

study," with percentage differences in response frequencies of 24 and 36 percent respectively.

Analysis of Research Question Number 6

Are there any differences, and if so where, in the relative importance of lesson topics that should be taught as perceived by exploratory agriculture teachers, State Department of Education agricultural education supervisory staff, teacher educators in agriculture, and vocational directors in those school systems offering exploratory agriculture classes? The extent of difference on the importance of lesson topics that should be taught in exploratory agriculture classes as perceived by more than 50 percent of the respondents was measured by substracting the lowest mean for any group from the largest mean for any group. The mean differences for each of the lesson topics were recorded in Table VIII. For purposes of this study, a difference greater than 1.0 was considered an important difference. The topics meeting the preceding criteria were: "Completing job application forms," "Understanding attitudes and employer-employee expectations," "Exploring the importance of work in our economy," and "Identifying interesting occupations," with mean differences of 1.19, 1.16, 1.14 and 1.01 respectively.

The smallest amount of difference between the means of any groups was found for the following topics: "Preparing a plan of action to reach established goals," with a mean difference of 0.25;

TABLE VIII

MEANS AND MEAN DIFFERENCES ON THE IMPORTANCE OF EXPLORATORY AGRICULTURE LESSON TOPICS THAT SHOULD BE TAUGHT IN EXPLORATORY AGRICULTURE CLASSES AS PERCEIVED BY MORE THAN FIFTY PERCENT OF RESPONDENTS

	Lesson Topic	Mean for Teachers[a] N = 42	Mean for Teacher Educators[a] N = 11	Mean for Supervisors[a] N = 8	Mean for Voc. Directors[a] N = 14	Mean Difference[b]
1.	Exploring the importance of work in our economy.	3.94	4.22	3.29	4.43	1.14
2.	Determining the importance of preparing for work.	4.12	4.30	3.83	4.43	0.60
3.	Understanding the business and industrial world.	3.05	3.80	3.00	3.67	0.80
4.	Exploring the occupational world.	3.90	3.57	3.20	3.83	0.70
5.	Understanding the importance of planning for a career.	4.06	4.22	3.57	4.17	0.65
6.	Understanding important values for workers to possess.	3.67	4.30	4.00	4.00	0.63
7.	Determining interest, aptitudes, and abilities of workers.	3.65	4.00	3.50	3.56	0.50
8.	Exploring personal qualities of workers.	2.87	3.86	3.33	3.38	0.99
9.	Determining employment qualifications.	3.52	4.25	3.33	3.25	1.00
10.	Locating job opportunities.	3.52	3.67	3.33	3.89	0.56
11.	Completing job application forms.	2.95	4.14	3.75	3.50	1.19
12.	Understanding attitudes and employer-employee expectations.	2.95	4.11	3.67	4.10	1.16

TABLE VIII (Continued)

Lesson Topic	Mean for Teachers[a] N = 42	Mean for Teacher Educators[a] N = 11	Mean for Supervisors[a] N = 8	Mean for Voc. Directors[a] N = 14	Mean Difference[b]
13. Getting along with co-workers.	3.81	4.22	4.17	4.18	0.41
14. Developing personal characteristics through the FFA.	3.90	4.36	4.14	4.40	0.50
15. Understanding how jobs are changing.	3.58	3.56	3.00	3.70	0.70
16. Identifying interesting occupations.	3.96	3.88	3.17	4.18	1.01
17. Understanding the meaning of agriculture and agribusiness.	4.16	4.20	4.13	4.23	0.10
18. Identifying important historical events in the development of agriculture.	3.31	3.00	3.20	3.33	0.33
19. Exploring the importance of agriculture and agribusiness in the community, state and nation.	4.09	4.09	4.25	4.08	0.17
20. Exploring the occupational opportunities in agriculture.	4.25	4.45	4.25	4.36	0.20
21. Grouping agricultural careers for study.	3.70	3.90	3.17	3.86	0.73
22. Exploring agricultural supplies and services occupations.	4.11	4.30	3.71	3.92	0.59
23. Exploring agricultural mechanics occupations.	4.14	4.30	3.71	4.00	0.59
24. Exploring agricultural production occupations.	4.11	4.30	3.71	4.00	0.59
25. Exploring horticultural occupations.	4.06	4.40	3.71	4.00	0.69
26. Exploring agricultural products processing and marketing occupations.	4.00	4.44	3.71	4.00	0.73
27. Exploring natural resources and forestry occupations.	4.06	4.40	3.71	4.00	0.69

TABLE VIII (Continued)

Lesson Topic	Mean for Teachers[a] N = 42	Mean for Teacher Educators[a] N = 11	Mean for Supervisors[a] N = 8	Mean for Voc. Directors[a] N = 14	Mean Difference[b]
28. Developing educational and career decision making skills.	3.58	4.13	3.60	3.91	0.55
29. Assessing personal abilities.	3.29	4.00	4.17	4.18	0.89
30. Assessing personal interests.	3.64	4.09	4.14	4.00	0.50
31. Identifying personal goals.	3.63	4.11	4.00	4.00	0.48
32. Identifying occupational goals.	3.65	3.89	3.83	4.00	0.35
33. Identifying the level of education needed to reach established goals.	3.86	3.80	3.33	4.00	0.67
34. Identifying the technical preparation needed to reach established goals.	3.75	3.78	3.50	4.00	0.50
35. Developing oneself to meet established goals.	3.44	4.13	3.67	4.22	0.78
36. Determining where educational experience and technical preparation can be obtained.	3.95	3.70	3.17	3.55	0.78
37. Preparing a plan of action to reach established goals.	3.78	4.00	3.80	3.75	0.25
38. Exploring supervised occupational experience programs.	3.92	3.89	3.57	3.44	0.48
39. Planning for the experience program.	3.91	3.78	3.33	3.13	0.78

[a]Mean for those persons responding positively to that lesson topic and based upon the following scale: 1 = much below average importance, 2 = below average importance, 3 = average importance, 4 = above average importance, 5 = much above average importance.

[b]The largest mean for any group minus the smallest mean.

"Exploring the importance of agriculture and agribusiness in the community, state and nation," with a mean difference of 0.17 and "Understanding the meaning of agriculture and agribusiness," with a mean difference of 0.10.

Chapter 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

SUMMARY

The purpose of this study was to identify the lesson topics that are being taught in exploratory agriculture classes in the Commonwealth of Virginia and compare these lesson topics to lesson topics that should be taught in exploratory agriculture classes as perceived by exploratory agriculture teachers, State Department of Education agricultural education supervisory staff, teacher educators in agriculture, and vocational directors in those school systems offering exploratory agriculture classes. Furthermore, the investigator deemed it important to compare responses of the groups relative to lesson topics that should be taught and the importance of those lesson topics.

Research Questions

Specific research questions for the study were:

1. What are the lesson topics being taught in exploratory agriculture classes in Virginia as reported by present teachers of exploratory agriculture?

2. What are the mean number of class periods spent on lesson topics being taught in exploratory agriculture classes in Virginia?

3. What are the lesson topics that should be taught and their relative importance in exploratory agriculture classes as

perceived by exploratory agriculture teachers, State Department of Education agricultural education supervisory staff, teacher educators in agriculture, and vocational directors in those school systems offering exploratory agriculture classes?

4. How do lesson topics being taught in exploratory agriculture classes compare to lesson topics that should be taught as perceived by exploratory agriculture teachers, State Department of Education agricultural education supervisory staff, teacher educators in agriculture, and vocational directors in those school systems offering exploratory agriculture classes?

5. Are there any differences, and if so where, in lesson topics that should be taught as perceived by exploratory agriculture teachers, joint state agricultural education staff and vocational directors in those school systems offering exploratory agriculture classes?

6. Are there any differences, and if so where, in the relative importance of lesson topics that should be taught as perceived by exploratory agriculture teachers, State Department of Education agricultural education supervisory staff, teacher educators in agriculture, and vocational directors in those school systems offering exploratory agriculture classes?

Procedure

The population for this study was the teachers of exploratory agriculture classes in Virginia, the State Department of Education agricultural education supervisory staff in Virginia, teacher educators

in agricultural education at Virginia Polytechnic Institute and State University and Virginia State College, and vocational directors in those school systems offering exploratory agriculture classes. Eighty nine percent, or 75, of the potential respondents marked and returned the opinionnaire in useable form. The percent returns by respondent groups were: teachers, 84 percent (N = 42); teacher educators, 100 percent (N = 11); supervisors, 100 percent (N = 8); and vocational directors, 93 percent (N = 14).

Two instruments were developed for purposes of this study; one for teachers of exploratory agriculture and one for teacher educators, supervisors and vocational directors. A comprehensive list of possible lesson topics was selected from pertinent research and curriculum development efforts in agricultural education on career exploration. Through this process, the investigator identified lesson topics that might be taught in exploratory agriculture classes and combined the lesson topics into a list manageable for this research effort. This list of lesson topics was refined by a panel of experts and organized into an opinionnaire which was then pilot tested. All appropriate recommendations, suggestions, and comments were incorporated into the final opinionnaire.

The opinionnaire consisted of 49 lesson topics. The teachers were asked to respond to the lesson topics in four ways. First, the teachers were asked to indicate if the lesson topic should be taught in exploratory agriculture classes. Secondly, the teachers were asked to indicate the importance of the lesson topics that they perceived

should be taught using a Likert scale ranging from one (much below average importance) to five (much above average importance). Thirdly, teachers were asked to indicate if they taught the lesson topic and fourthly, to give the number of class periods spent on lesson topics taught. Teacher educators, supervisors, and vocational directors were asked to indicate if the lesson topic should be taught in exploratory agriculture classes and to give the importance of lesson topics that should be taught on a Likert scale identical to the one described for teachers.

The reliability of the opinionnaire was estimated by using the test-retest method of estimating reliability using a class of senior students majoring in agricultural education at Virginia Polytechnic Institute and State University. Reliability for the section pertaining to lesson topics that should be taught in exploratory agriculture classes was estimated to be .78 and reliability on the section pertaining to the importance of lesson topics was .74.

Data were collected by mailing the opinionnaires to participants and a cover letter explaining the purpose of the study and a return-addressed envelope were enclosed. A personal telephone call was made to all non-respondents two weeks after mailing the original opinionnaire. Two weeks later, a post card reminder was mailed to the remaining non-respondents.

The data were analyzed at the Computer Center of Virginia Polytechnic Institute and State University. The analyses of the data were in relation to the specific research questions developed for the

study. Statistical techniques used in analyzing the data included frequencies, percentages, means, Chi Squares, and mean differences.

Findings

This study provided information relative to the relationship between lesson topics presently taught to lesson topics that should be taught in exploratory agriculture classes as perceived by teachers of exploratory agriculture, agricultural teacher educators, State Department of Education supervisory staff in agricultural education, and vocational directors. Six research questions were developed for the the study. The analyses of the six research questions were presented in the following discussion.

Research Question Number 1. The lesson topics being taught in exploratory agriculture classes in Virginia as reported by teachers of exploratory agriculture were recorded in Table II in Chapter 4. None of the 49 lesson topics on the opinionnaire were taught by 100 percent of the teachers. Two lesson topics, "Preparing letters of application" and "Preparing personal data sheets," were not taught by any of the teachers. The remaining lesson topics were taught by as few as five percent of the teachers on the topic, "Terminating a job" to a high of 76 percent on the topics, "Exploring the occupational opportunities in agriculture" and "Understanding the meaning of agriculture and agribusiness." Additional lesson topics in technical agriculture were grouped and added to the list of lesson topics under the heading "technical agriculture."

Research Question Number 2. The mean number of class periods spent on lesson topics were also recorded in Table II in Chapter 4. The greatest number of class periods spent in any area was on lesson topics added under "technical agriculture," with a mean of 40 class periods. The mean number of class periods spent on a specific lesson topic was largest for the lesson topic, "Exploring the occupational opportunities in agriculture," with a mean of 3.53 class periods. The mean number of class periods spent on lesson topics ranged from one period to 3.53 periods with the majority of the topics falling in the range from 1.25 to 2.50 class periods. None of the teachers responded to lesson topics on "Preparing letters of application" and "Preparing personal data sheets."

Research Question Number 3. Lesson topics and the mean importance of lesson topics that should be taught in exploratory agriculture as perceived by more than 50 percent of respondents were recorded in Table IV in Chapter 4. The lesson topics receiving the greatest number of positive responses were "Understanding the meaning of agriculture" and "Exploring the occupational opportunities in agriculture" with 92 percent positive responses. The lesson topic receiving the least number of positive responses was "Completing job application forms" with 53 percent positive responses. Eleven of 49 lesson topics did not meet the criteria of 50 percent of the respondents answering positively that the lesson topic should be taught in exploratory agriculture classes.

The rank order of means on the importance of lesson topics that should be taught in exploratory agriculture classes as reported by more than fifty percent of respondents was recorded in Table V. Means reported on the importance of lesson topics were for those individuals responding positively to that lesson topic. Lesson topics ranked highest on the list were "Exploring the occupational opportunities in agriculture," "Determining the importance of preparing for work," and "Understanding the meaning of agriculture" with means of 4.30, 4.19, and 4.17 respectively. Lesson topics ranked lowest on the list in order of importance were "Understanding the business and industrial world," "Identifying important historical events in the development of agriculture," and "Exploring personal qualities of workers" with means of 3.31, 3.27, 3.18 respectively.

Research Question Number 4. A comparison of lesson topics presently taught in exploratory agriculture classes to lesson topics that should be taught in exploratory agriculture classes was made and the results were recorded in Table VI. The percentage difference in frequency counts for the two groups was used as the basis for comparison. Thirty of the 39 lesson topics that should be taught in exploratory agriculture as perceived by more than fifty percent of the respondents had differences in frequency counts of 20 percent or higher when compared to frequency counts for lesson topics presently taught by teachers of exploratory agriculture. Lesson topics with the largest amount of differences were "Assessing personal abilities," (44 percent difference); "Preparing a plan of action to reach established goals," (40

percent difference); "Completing job application forms," (39 percent difference); and "Understanding attitudes and employer-employee expectation," (36 percent difference). The least amount of difference (13 percent) was recorded for the lesson topic, "Exploring agricultural production occupations."

Research Question Number 5. Chi Square test of significant difference was used to determine if differences existed among the groups participating in the study in their perception of lesson topics that should be taught in exploratory agriculture classes. Two groups, teacher educators and supervisors, were combined in order to obtain numbers large enough to calculate Chi Square values. Chi Square values for each of the lesson topics were recorded in Table VII in Chapter 4. Chi Square values significant at the .05 level were found on the following twelve lesson topics:

1. Understanding the business and industrial world,
2. Understanding important values for workers to possess,
3. Developing personal characteristics through the FFA,
4. Understanding how jobs are changing,
5. Assessing personal abilities,
6. Assessing personal interests,
7. Identifying personal goals,
8. Identifying the level of education needed to reach established goals,
9. Identifying the technical preparation needed to reach established goals,

10. Developing oneself to meet established goals,

11. Determining where educational experience and technical preparation can be obtained,

12. Preparing a plan of action to reach established goals.

Chi Square values could not be calculated for 11 of the topics because of zeroes or low numbers in some of the cells. Two of these topics had differences large enough to be noted.

Research Question Number 6. The extent of difference on the importance of lesson topics that should be taught in exploratory agriculture classes as perceived by more than 50 percent of the respondents was measured by substracting the lowest mean for any group from the largest mean for any group. The mean differences for each of the lesson topics were recorded in Table VIII in Chapter 4. For purposes of this study, a difference greater than 1.0 was considered an important difference. The topics meeting the preceding criteria were: "Completing job application forms," "Understanding attitudes and employer-employee expectations," "Exploring the importance of work in our economy," and "Identifying interesting occupations" with mean differences of 1.19, 1.16, 1.14, and 1.01 respectively.

The smallest amount of difference between the means of any groups was .10 for the lesson topic, "Understanding the meaning of agriculture and agribusiness."

CONCLUSIONS

The conclusions reached are based upon the results of the study and, as such, are bound by the assumptions and limitations as stated in Chapter 1. The conclusions drawn are as follows:

1. Exploratory agriculture teachers in Virginia are not implementing the commonly accepted objectives for exploratory agriculture.

2. Exploratory agriculture teachers in Virginia are not adequately prepared to teach exploratory agriculture classes.

3. Inadequate guidelines from the State Department of Education are given to teachers of exploratory agriculture and local administrators concerning curriculum content and length of exploratory agriculture classes.

4. The disproportiately high number of inexperienced teachers in middle/junior high school programs and the high turnover rate of exploratory agriculture teachers are creating instability in what is being taught in exploratory agriculture classes.

5. Lesson topics related to locating and securing employment are inappropriate at the career exploration level.

6. Exploratory agriculture teachers are not teaching lesson topics that representative curriculum guides and professional agricultural educators say should be taught in exploratory agriculture classes.

7. Current teaching calendars in exploratory agriculture reflect too much emphasis is being placed on technical agriculture topics.

8. Sex role stereotyping is a possible cause for fewer girls than boys enrolling in exploratory agriculture classes.

RECOMMENDATIONS

Based upon the findings of this study and the conclusions drawn, the following recommendations are offered.

1. The findings of this study should be made available to the Joint Agricultural Education Staff in Virginia for their information and use in planning and evaluating exploratory agriculture classes.

2. The exploratory agriculture curriculum committee should give considerable attention to the findings of this study in the finalization of a state curriculum guide for exploratory agriculture classes.

3. The Joint Agricultural Education Staff in Virginia should give attention to the in-service needs of exploratory agriculture teachers for the purpose of developing an understanding of career exploration.

4. The Joint Agricultural Education Staff in Virginia should provide in-service education to assist exploratory agriculture teachers in the selection of appropriate lesson topics for exploratory agriculture classes.

5. The Agricultural Education Program Area at Virginia Polytechnic Institute and State University should explore the possibility of providing educational training in the area of career exploration to prospective middle school agriculture teachers.

6. Research is needed to determine the number of weeks that should be spent in exploratory agriculture classes in order to have an effective program.

7. Research is needed to determine the effectiveness of the exploratory agriculture classes in preparing students to make educational and career choices in line with the K-12 career education concept.

8. Teachers of exploratory agriculture need to be encouraged to recruit more females into exploratory agriculture classes.

9. The Joint Agricultural Education Staff in Virginia should determine reasons why there is an imbalance of exploratory agriculture teachers in supervisory areas throughout the state.

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APPENDIXES

APPENDIX A

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APPENDIX D

COVER LETTERS TO PARTICIPANTS

COLLEGE OF EDUCATION

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Blacksburg, Virginia 24061

DIVISION OF VOCATIONAL & TECHNICAL EDUCATION

As a part of my doctoral program in Vocational and Technical Education at Virginia Polytechnic Institute and State University, I am conducting a study that might be of interest and value to you and other educators with an interest in exploratory agriculture programs. The research in which I am engaged is an assessment of the relationship between lesson topics presently taught to lesson topics that should be taught in exploratory agriculture classes in Virginia. The results of this study should provide information useful in finalizing a state curriculum guide for exploratory agriculture. Furthermore, the study may indicate in-service needs of exploratory agriculture teachers and provide possible direction in preparing future teachers of exploratory agriculture.

The completion of a curriculum guide for exploratory agriculture is of utmost importance. Please do your part in this endeavor by completing the enclosed questionnaire. All responses will be treated confidentially and only group information will be used in the analysis of data. No reference will ever be made regarding an individual's responses.

In order that the study may proceed on schedule, I would appreciate it if you would complete and return the questionnaire as soon as possible. A stamped, addressed envelope has been enclosed for your convenience in returning the completed questionnaire.

Thank you for your cooperation in the completion of this study.

Sincerely,

Charles P. Griner
Instructor

/bg

Enclosures

COLLEGE OF EDUCATION

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Blacksburg, Virginia 24061

DIVISION OF VOCATIONAL & TECHNICAL EDUCATION

February 13, 1978

As a part of my doctoral program in Vocational and Technical Education at Virginia Polytechnic Institute and State University, I am conducting a study that might be of interest and value to you and future teachers of exploratory agriculture. The research in which I am engaged is an assessment of the relationship between lesson topics presently taught to lesson topics that should be taught in exploratory agriculture classes in Virginia. The results of this study should provide information useful in finalizing a state curriculum guide for exploratory agriculture. Futhermore, the study may indicate in-service needs of exploratory agriculture teachers and provide possible direction in preparing future teachers of exploratory agriculture.

The completion of a curriculum guide for exploratory agriculture is of utmost importance. Please do your part in this endeavor by completing the brief information page and follow the directions for completing the questionnaire. All responses will be treated confidentially and only group information will be used in the analysis of data. No reference will ever be made regarding an individual's responses.

In order that the study may proceed on schedule, I would appreciate it if you would complete and return the questionnaire as soon as possible. A stamped, addressed envelope has been enclosed for your convenience in returning the completed questionnaire.

Thank you for your cooperation in the completion of this study.

Sincerely,

Charles P. Griner
Instructor

/bg

Enclosures

APPENDIX E

RESPONSE FREQUENCIES, PROPORTIONS, AND MEANS ON THE IMPORTANCE OF LESSON TOPICS THAT SHOULD BE TAUGHT IN EXPLORATORY AGRICULTURE AS PERCEIVED BY RESPONDENTS

TABLE III

RESPONSE FREQUENCIES, PERCENTAGES, AND MEANS ON THE IMPORTANCE OF LESSON TOPICS THAT SHOULD BE TAUGHT IN EXPLORATORY AGRICULTURE AS PERCEIVED BY RESPONDENTS

Lesson Topic	Teachers N = 42		Teacher Educators N = 11		Supervisors N = 8		Voc. Directors N = 14		Total N = 75	
	Response Frequency and Percent	Mean[a]	Response Frequency and Percent	Mean[a]	Response Frequency and Percent	Mean[a]	Response Frequency and Percent	Mean[a]	Response Frequency and Percent	Mean[a]
1. Exploring the importance of work in our economy.	35 (83)	3.94	9 (82)	4.22	7 (87)	3.29	14 (100)	4.43	65 (87)	4.02
2. Determining the importance of preparing for work.	34 (81)	4.12	10 (91)	4.30	6 (75)	3.83	14 (100)	4.43	64 (85)	4.19
3. Understanding the business and industrial world.	19 (45)	3.05	5 (45)	3.80	6 (75)	3.00	12 (86)	3.67	42 (56)	3.31
4. Exploring the occupational world.	29 (69)	3.90	7 (64)	3.57	5 (62)	3.20	12 (86)	3.83	53 (71)	3.77
5. Understanding the importance of planning for a career.	32 (76)	4.06	9 (82)	4.22	7 (87)	3.57	12 (86)	4.17	60 (80)	4.05
6. Understanding important values for workers to possess.	24 (57)	3.67	10 (91)	4.30	6 (75)	4.00	13 (93)	4.00	53 (71)	3.91
7. Determining interest, aptitudes, and abilities.	23 (55)	3.65	8 (73)	4.00	6 (75)	3.50	9 (64)	3.56	46 (61)	3.67
8. Exploring personality traits of workers.	16 (38)	2.56	7 (64)	4.00	5 (62)	3.60	9 (64)	3.33	37 (49)	3.16
9. Exploring personal qualities of workers.	23 (55)	2.87	7 (64)	3.86	6 (75)	3.33	8 (57)	3.38	44 (59)	3.18
10. Determining employment qualifications.	21 (50)	3.52	8 (73)	4.25	6 (75)	3.33	8 (57)	3.25	43 (57)	3.58
11. Locating job opportunities.	25 (60)	3.52	6 (55)	3.67	6 (75)	3.33	9 (64)	3.89	46 (61)	3.59
12. Securing part-time employment.	19 (45)	2.89	6 (55)	3.00	3 (37)	3.67	9 (64)	3.11	37 (49)	3.03

TABLE III (Continued)

Lesson Topic	Teachers N = 42		Teacher Educators N = 11		Supervisors N = 8		Voc. Directors N = 14		Total N = 75	
	Response Frequency and Percent	Mean[a]	Response Frequency and Percent	Mean[a]	Response Frequency and Percent	Mean[a]	Response Frequency and Percent	Mean[a]	Response Frequency and Percent	Mean[a]
13. Completing job application forms.	21 (50)	2.95	7 (64)	4.14	4 (50)	3.75	8 (57)	3.50	40 (53)	3.35
14. Preparing letters of application.	15 (36)	2.27	6 (55)	3.83	4 (50)	3.75	8 (57)	2.88	33 (44)	2.88
15. Preparing personal data sheets.	14 (33)	2.21	6 (55)	3.67	3 (37)	3.33	6 (43)	2.82	29 (39)	2.76
16. Making arrangements for an interview.	14 (33)	2.36	6 (55)	3.83	2 (25)	4.00	7 (50)	3.29	29 (39)	2.76
17. Interviewing for a job.	19 (45)	2.95	7 (64)	4.00	2 (25)	5.00	7 (50)	3.29	35 (47)	3.34
18. Understanding attitudes and employer-employee expectations.	21 (50)	2.95	9 (82)	4.11	3 (37)	3.67	10 (71)	4.10	43 (57)	3.51
19. Getting along with co-workers.	24 (57)	3.81	9 (82)	4.22	6 (75)	4.17	11 (79)	4.18	50 (66)	4.00
20. Exploring unions and professional organizations.	16 (38)	2.88	5 (45)	2.50	2 (25)	3.00	7 (50)	2.86	30 (40)	2.83
21. Determining the responsibilities of supervisors.	13 (31)	2.31	6 (55)	3.00	2 (25)	2.50	5 (36)	2.80	26 (35)	2.58
22. Terminating a job.	15 (36)	2.13	6 (55)	3.17	2 (25)	2.50	7 (50)	3.29	30 (40)	2.63
23. Developing personal characteristics through the FFA.	39 (93)	3.90	11 (100)	4.36	7 (87)	4.14	10 (71)	4.40	67 (89)	4.07
24. Classifying jobs according to the Dictionary of Occupational Titles.	11 (26)	2.36	5 (45)	2.80	2 (25)	3.00	6 (43)	3.33	24 (32)	2.75
25. Understanding how jobs are changing.	21 (50)	3.48	9 (82)	3.56	7 (87)	3.00	10 (71)	3.70	47 (63)	3.47
26. Identifying interesting occupations.	28 (67)	3.96	8 (73)	3.88	6 (75)	3.17	11 (79)	4.18	53 (71)	3.91

TABLE III (Continued)

Lesson Topic	Teachers N = 42		Teacher Educators N = 11		Supervisors N = 8		Voc. Directors N = 14		Total N = 75	
	Response Frequency and Percent	Mean[a]	Response Frequency and Percent	Mean[a]	Response Frequency and Percent	Mean[a]	Response Frequency and Percent	Mean[a]	Response Frequency and Percent	Mean[a]
27. Understanding the meaning of agriculture and agribusiness.	38 (90)	4.16	10 (91)	4.20	8 (100)	4.13	13 (93)	4.23	69 (92)	4.17
28. Identifying important historical events in the development of agriculture.	32 (76)	3.31	7 (64)	3.00	5 (62)	3.20	12 (86)	3.33	56 (75)	3.27
29. Exploring the importance of agriculture and agribusiness in the community, state and nation.	32 (76)	4.09	11 (100)	4.09	8 (100)	4.25	13 (93)	4.08	64 (85)	4.11
30. Exploring the occupational opportunities in agriculture.	36 (86)	4.25	11 (100)	4.45	8 (100)	4.25	14 (100)	4.36	69 (92)	4.30
31. Grouping agricultural careers for study.	27 (64)	3.70	10 (91)	3.90	6 (75)	3.17	14 (100)	3.86	57 (76)	3.72
32. Exploring agricultural supplies and services occupations	35 (83)	4.11	10 (91)	4.30	7 (87)	3.71	13 (93)	3.92	65 (87)	4.06
33. Exploring agricultural mechanics occupations.	35 (83)	4.14	10 (91)	4.30	7 (87)	3.71	13 (93)	4.00	65 (87)	4.09
34. Exploring agricultural production occupations.	37 (88)	4.11	10 (91)	4.30	7 (87)	3.71	13 (93)	4.00	67 (89)	4.07
35. Exploring horticultural occupations.	35 (83)	4.06	10 (91)	4.40	7 (87)	3.71	13 (93)	4.00	65 (87)	4.09
36. Exploring agricultural products processing and marketing occupations.	33 (79)	4.00	9 (82)	4.44	7 (87)	3.71	13 (93)	4.00	62 (83)	4.03
37. Exploring natural resources and forestry occupations.	35 (83)	4.06	10 (91)	4.40	7 (87)	3.71	13 (93)	4.00	65 (87)	4.06
38. Developing education and career decision making skills.	24 (57)	3.58	8 (73)	4.13	5 (62)	3.60	11 (79)	3.91	48 (64)	3.75
39. Assessing personal abilities.	21 (50)	3.29	11 (100)	4.00	6 (75)	4.17	11 (79)	4.18	49 (65)	3.76
40. Assessing personal interests.	22 (52)	3.64	11 (100)	4.09	7 (87)	4.14	9 (64)	4.00	49 (65)	3.76

TABLE III (Continued)

Lesson Topic	Teachers N = 42		Teacher Educators N = 11		Supervisors N = 8		Voc. Directors N = 14		Total N = 75	
	Response Frequency and Percent	Mean[a]	Response Frequency and Percent	Mean[a]	Response Frequency and Percent	Mean[a]	Response Frequency and Percent	Mean[a]	Response Frequency and Percent	Mean[a]
41. Identifying personal goals.	24 (57)	3.63	9 (82)	4.11	8 (100)	4.00	10 (71)	4.00	51 (68)	3.84
42. Identifying occupational goals.	23 (55)	3.65	9 (82)	3.89	6 (75)	3.83	9 (64)	4.00	47 (63)	3.79
43. Identifying the level of education needed to reach established goals.	22 (52)	3.86	10 (91)	3.80	6 (75)	3.33	9 (64)	4.00	47 (63)	3.77
44. Identifying the technical preparation needed to reach established goals.	20 (48)	3.75	9 (82)	3.78	6 (75)	3.50	10 (71)	4.00	45 (60)	3.78
45. Developing oneself to meet established goals.	18 (43)	3.44	8 (73)	4.13	6 (75)	3.67	9 (64)	4.22	41 (55)	3.78
46. Determining where educational experience and technical preparation can be obtained.	20 (48)	3.95	10 (91)	3.70	6 (75)	3.17	11 (79)	3.55	47 (63)	3.70
47. Preparing a plan of action to reach established goals.	18 (43)	3.78	9 (82)	4.00	5 (62)	3.80	12 (86)	3.75	44 (59)	3.82
48. Exploring supervised occupational experience programs.	25 (60)	3.92	9 (82)	3.89	7 (87)	3.57	9 (64)	3.44	50 (67)	3.78
49. Planning for the experience program.	33 (79)	3.91	9 (82)	3.78	6 (75)	3.33	8 (57)	3.13	56 (75)	3.67
50. Technical agriculture.[b]	27 (64)	4.48	-	-	-	-	-	-	27 (36)	4.48

[a]Mean for those persons responding positively to that lesson topic and based upon the following scale: 1 = much below average importance, 2 = below average importance, 3 = average importance, 4 = above average importance, 5 = much above average importance.

[b]Lesson topics added by respondents.

APPENDIX F

EXPLORATORY AGRICULTURE PROGRAM SURVEY FOR TEACHERS

EXPLORATORY AGRICULTURE
PROGRAM SURVEY

Compiled by
Charles P. Griner

February, 1978

EXPLORATORY AGRICULTURE PROGRAM SURVEY

Directions for Completing Questionnaire

1. Column 1 of this questionnaire contains a list of lesson topics that might be included in an exploratory agriculture class. Please respond to these lesson topics by completing the questionnaire in the following manner.

2. Place a check (✓) in Column 2 for each lesson topic that you believe should be taught in an exploratory agriculture class. Please disregard any constraints that might be imposed upon your school and only consider whether or not the lesson topic should be taught in an exploratory agriculture class.

3. For the topics you checked in Column 2 circle your rating on the 5-point scale in Column 3. For this column, please rate the importance of lesson topics to an exploratory agriculture class. Use a rating of "1" if the topic is much below average importance in comparison to other topics, "2" for below average importance, "3" for average importance, "4" for above average importance, and "5" for much above average importance.

4. Place a check (✓) in Column 4 for lesson topics that you currently include in your teaching calendar for your exploratory agriculture class. Please consult your teaching calendar for assistance in answering this column. If a lesson topic you teach is not listed anywhere on the lesson topic inventory, write it on the blank lines at the end of the questionnaire.

5. Place in Column 5 the number of class periods that you spend on each lesson topic that you teach in your exploratory agriculture class. Please consult your teaching calendar for assistance in answering this column.

EXPLORATORY AGRICULTURE PROGRAM SURVEY

DIRECTIONS: Please complete the following general questions about your exploratory agriculture classes. This information will be considered confidential.

1. Agricultural Education state supervisory area_____.
2. Number of teachers of exploratory agriculture in your school (including yourself) _____.
3. School size: (number of students in your school) _____.
4. Length of exploratory agriculture classes (6 wks., 9 wks., etc.) _____.
5. Number of class meetings per week _____.
6. Average class size: _____students.
7. Percentage by sex of students in exploratory agriculture:

   _____ percent boys

   _____ percent girls
8. Length of class period: _____ minutes.
9. Including this year, how many years have you been an agricultural teacher? _____.
10. Are you a full-time or part-time exploratory agriculture teacher? (check one)

    _____ full-time

    _____ part-time
11. Grade levels involved (check appropriately):

    _____A. Sixth grade

    _____B. Seventh grade

    _____C. Eighth grade

    _____D. Ninth grade
12. Other exploratory programs offered in your school (check appropriately):

    _____A. Business Education

    _____B. Home Economics Education

    _____C. Distributive Education

    _____D. Trade and Industrial Education

    _____E. Industrial Arts Education

    _____F. Other: _____

    _____G. None
13. Facilities utilized in exploratory agriculture (check appropriately):

    _____ A. Share agricultural facilities with middle or high school.

    _____ B. Separate agricultural facilities from middle or high school.
14. Teacher's preparation: (check one)

    _____ A. Collegiate certificate (Bachelors Degree in Agriculture or related area).

    _____ B. Collegiate professional certificate (Bachelors Degree in Agricultural Education).

    _____ C. Postgraduate professional certificate (Masters Degree or higher in Agricultural Education).

TOPICAL OUTLINE

Column 1 Lesson Topics	Column 2 Check (✓) if Lesson Should Be Taught	Column 3 Importance Scale* Complete this Column for each Lesson Checked in Column 2. (Circle One)	Column 4 Check (✓) if Presently Taught	Column 5 Indicate the Number of Class Periods Spent on Lessons Presently Taught
1. Exploring the importance of work in our economy.		1 2 3 4 5		
2. Determining the importance of preparing for work.		1 2 3 4 5		
3. Understanding the business and industrial world.		1 2 3 4 5		
4. Exploring the occupational world.		1 2 3 4 5		
5. Understanding the importance of planning for a career.		1 2 3 4 5		
6. Understanding important values for workers to possess.		1 2 3 4 5		
7. Determining interest, aptitudes, and abilities of workers.		1 2 3 4 5		
8. Exploring personality traits of workers.		1 2 3 4 5		
9. Exploring personal qualities of workers.		1 2 3 4 5		
10. Determining employment qualifications.		1 2 3 4 5		
11. Locating job opportunities.		1 2 3 4 5		
12. Securing part-time employment.		1 2 3 4 5		
13. Completing job application forms.		1 2 3 4 5		
14. Preparing letters of application.		1 2 3 4 5		
15. Preparing personal data sheets.		1 2 3 4 5		
16. Making arrangements for an interview.		1 2 3 4 5		
17. Interviewing for a job.		1 2 3 4 5		
18. Understanding attitudes and employer-employee expectations.		1 2 3 4 5		
19. Getting along with co-workers.		1 2 3 4 5		
20. Exploring unions and professional organizations.		1 2 3 4 5		
21. Determining the responsibilities of supervisors.		1 2 3 4 5		
22. Terminating a job.		1 2 3 4 5		
23. Developing personal characteristics through the FFA		1 2 3 4 5		
24. Classifying jobs according to the Dictionary of Occupational Titles		1 2 3 4 5		
25. Understanding how jobs are changing.		1 2 3 4 5		
26. Identifying interesting occupations.		1 2 3 4 5		
27. Understanding the meaning of agriculture and agribusiness.		1 2 3 4 5		
28. Identifying important historical events in the development of agriculture.		1 2 3 4 5		

* Importance Scale: 1-Much below average importance; 2-Below average importance; 3-Average importance; 4-Above average importance; 5-Much above average importance

TOPICAL OUTLINE

Column 1 Lesson Topics	Column 2 Check (✓) if Lesson Should Be Taught	Column 3 Importance Scale* Complete this Column for each Lesson Checked in Column 2. (Circle One)	Column 4 Check (✓) if Presently Taught	Column 5 Indicate the Number of Class Periods Spent on Lessons Presently Taught
29. Exploring the importance of agriculture and agribusiness in the community, state and nation.		1 2 3 4 5		
30. Exploring the occupational opportunities in agriculture.		1 2 3 4 5		
31. Grouping agricultural careers for study.		1 2 3 4 5		
32. Exploring agricultural supplies and services occupations.		1 2 3 4 5		
33. Exploring agricultural mechanics occupations.		1 2 3 4 5		
34. Exploring agricultural production occupations.		1 2 3 4 5		
35. Exploring horticultural occupations.		1 2 3 4 5		
36. Exploring agricultural products processing and marketing occupations.		1 2 3 4 5		
37. Exploring natural resources and forestry occupations.		1 2 3 4 5		
38. Developing educational and career decision making skills.		1 2 3 4 5		
39. Assessing personal abilities.		1 2 3 4 5		
40. Assessing personal interests.		1 2 3 4 5		
41. Identifying personal goals.		1 2 3 4 5		
42. Identifying occupational goals.		1 2 3 4 5		
43. Identifying the level of education needed to reach established goals.		1 2 3 4 5		
44. Identifying the technical preparation needed to reach established goals.		1 2 3 4 5		
45. Developing oneself to meet established goals.		1 2 3 4 5		
46. Determining where educational experience and technical preparation can be obtained.		1 2 3 4 5		
47. Preparing a plan of action to reach established goals.		1 2 3 4 5		
48. Exploring supervised occupational experience programs.		1 2 3 4 5		
49. Planning for the experience program.		1 2 3 4 5		
50. Other (Please list)		1 2 3 4 5		
51.		1 2 3 4 5		
52.		1 2 3 4 5		
53.		1 2 3 4 5		
54.		1 2 3 4 5		
55.		1 2 3 4 5		

* Importance Scale:
1-Much below average importance
2-Below average importance
3-Average importance
4-Above average importance
5-Much above average importance

Thank you.

APPENDIX G

EXPLORATORY AGRICULTURE PROGRAM SURVEY FOR TEACHER EDUCATORS, SUPERVISORS, AND VOCATIONAL DIRECTORS

EXPLORATORY AGRICULTURE
PROGRAM SURVEY

Compiled by
Charles P. Griner

February, 1978

EXPLORATORY AGRICULTURE PROGRAM SURVEY

Directions for Completing Questionnaire

1. Column 1 of this questionnaire contains a list of lesson topics that might be included in an exploratory agriculture class. Please respond to these lesson topics by completing the questionnaire in the following manner.

2. Place a check (✓) in Column 2 for each lesson topic that you believe <u>should</u> be taught in an exploratory agriculture class. Please disregard any constraints that might be imposed upon the school and only consider whether or not the lesson topic <u>should</u> be taught in an exploratory agriculture class.

3. For the topics you checked in Column 2 circle your rating on the 5-point scale in Column 3. For this column, please rate the importance of lesson topics to an exploratory agriculture class. Use a rating of "1" <u>if the topic is much below average importance in comparison to other topics</u>, "2" for below average importance, "3" for average importance, "4" for above average importance, and "5" for much above average importance.

TOPICAL OUTLINE

Column 1 Lesson Topics	Column 2 Check (✓) if Lesson Should Be Taught	Column 3 Importance Scale* Complete this Column for each Lesson Checked in Column 2. (Circle One)
1. Exploring the importance of work in our economy.		1 2 3 4 5
2. Determining the importance of preparing for work.		1 2 3 4 5
3. Understanding the business and industrial world.		1 2 3 4 5
4. Exploring the occupational world.		1 2 3 4 5
5. Understanding the importance of planning for a career.		1 2 3 4 5
6. Understanding important values for workers to possess.		1 2 3 4 5
7. Determining interest, aptitudes, and abilities of workers.		1 2 3 4 5
8. Exploring personality traits of workers.		1 2 3 4 5
9. Exploring personal qualities of workers.		1 2 3 4 5
10. Determining employment qualifications.		1 2 3 4 5
11. Locating job opportunities.		1 2 3 4 5
12. Securing part-time employment.		1 2 3 4 5
13. Completing job application forms.		1 2 3 4 5
14. Preparing letters of application.		1 2 3 4 5
15. Preparing personal data sheets.		1 2 3 4 5
16. Making arrangements for an interview.		1 2 3 4 5
17. Interviewing for a job.		1 2 3 4 5
18. Understanding attitudes and employer-employee expectations.		1 2 3 4 5
19. Getting along with co-workers.		1 2 3 4 5
20. Exploring unions and professional organizations.		1 2 3 4 5
21. Determining the responsibilities of supervisors.		1 2 3 4 5
22. Terminating a job.		1 2 3 4 5
23. Developing personal characteristics through the FFA		1 2 3 4 5
24. Classifying jobs according to the Dictionary of Occupational Titles		1 2 3 4 5
25. Understanding how jobs are changing.		1 2 3 4 5
26. Identifying interesting occupations.		1 2 3 4 5
27. Understanding the meaning of agriculture and agribusiness.		1 2 3 4 5
28. Identifying important historical events in the development of agriculture.		1 2 3 4 5

* Importance Scale: 1-Much below average importance
2-Below average importance
3-Average importance
4-Above average importance
5-Much above average importance

TOPICAL OUTLINE

Column 1 Lesson Topics	Column 2 Check (✓) if Lesson Should Be Taught	Column 3 Importance Scale* Complete this Column for each Lesson Checked in Column 2. (Circle One)
29. Exploring the importance of agriculture and agribusiness in the community, state and nation.		1 2 3 4 5
30. Exploring the occupational opportunities in agriculture.		1 2 3 4 5
31. Grouping agricultural careers for study.		1 2 3 4 5
32. Exploring agricultural supplies and services occupations.		1 2 3 4 5
33. Exploring agricultural mechanics occupations.		1 2 3 4 5
34. Exploring agricultural production occupations.		1 2 3 4 5
35. Exploring horticultural occupations.		1 2 3 4 5
36. Exploring agricultural products processing and marketing occupations.		1 2 3 4 5
37. Exploring natural resources and forestry occupations.		1 2 3 4 5
38. Developing educational and career decision making skills.		1 2 3 4 5
39. Assessing personal abilities.		1 2 3 4 5
40. Assessing personal interests.		1 2 3 4 5
41. Identifying personal goals.		1 2 3 4 5
42. Identifying occupational goals.		1 2 3 4 5
43. Identifying the level of education needed to reach established goals.		1 2 3 4 5
44. Identifying the technical preparation needed to reach established goals.		1 2 3 4 5
45. Developing oneself to meet established goals.		1 2 3 4 5
46. Determining where educational experience and technical preparation can be obtained.		1 2 3 4 5
47. Preparing a plan of action to reach established goals.		1 2 3 4 5
48. Exploring supervised occupational experience programs.		1 2 3 4 5
49. Planning for the experience program.		1 2 3 4 5
50. Other (Please list)		1 2 3 4 5
51.		1 2 3 4 5
52.		1 2 3 4 5
53.		1 2 3 4 5
54.		1 2 3 4 5
55.		1 2 3 4 5

* Importance Scale: 1-Much below average importance
2-Below average importance
3-Average importance
4-Above average importance
5-Much above average importance

Thank you.

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AN ASSESSMENT OF THE RELATIONSHIPS BETWEEN LESSON TOPICS PRESENTLY TAUGHT AND LESSON TOPICS THAT SHOULD BE TAUGHT IN EXPLORATORY AGRICULTURE CLASSES IN VIRGINIA

by

Charles Paul Griner

(ABSTRACT)

Purpose

This study was undertaken to identify the lesson topics that are being taught in exploratory agriculture classes in Virginia and compare these lesson topics to lesson topics that should be taught in exploratory agriculture classes as perceived by exploratory agriculture teachers, State Department of Education agricultural education supervisory staff, teacher educators in agriculture, and vocational directors in those school systems offering exploratory agriculture classes.

Population

The population of this study consisted of 50 teachers of exploratory agriculture, 11 teacher educators, 8 agricultural education supervisors, and 15 vocational directors. Eighty-nine percent, or 75, of the potential respondents marked and returned the opinionnaire in useable form.

Procedure

Two instruments were developed for purposes of this study; one for teachers of exploratory agriculture classes and one for agricultural

education supervisors, agricultural teacher educators and vocational directors. A list of possible lesson topics that might be taught in exploratory agriculture was selected from a review of literature on exploratory agriculture and this list of lesson topics was included on both instruments. The instruments were evaluated by a panel of experts and pilot tested.

Respondents were asked to check lesson topics that should be taught in exploratory agriculture classes, and to rate the importance of those lesson topics to an exploratory agriculture class on a 1 - 5 point Likert scale. Teachers were also asked to check lesson topics they are presently teaching and to record the amount of time, in class periods, they spend on each lesson topic.

Summary of Findings

None of the 49 lesson topics on the opinionnaire were taught by 100 percent of the teachers, and two lesson topics were not taught by any teacher. Additional lesson topics in technical agriculture were added by 52 percent of the teachers. The lesson topic taught by the largest number of teachers (N = 32) was "Understanding the meaning of agriculture and agribusiness," and the largest mean number of class periods (2.72 class periods) was also spent on this topic. Respondents indicated that 39 of the lesson topics on the opinionnaire should be taught in exploratory agriculture classes. The lesson topic ranked the highest on mean importance was "Exploring the occupational opportunities in agriculture" with a mean importance of 4.30. Thirty of the 39 lesson topics that should be taught in exploratory agriculture had

frequency counts of 20 percent when compared to frequency counts for lesson topics presently taught by exploratory agriculture teachers. There were significant differences at the .05 level on 12 lesson topics when comparing the respondent groups on this perception of lesson topics that should be taught. On a comparison of the mean importance of lesson topics among the respondent groups, differences large enough to be of importance was found on four of the lesson topics.

Major Recommendation

The exploratory agriculture curriclum committee should give considerable attention to the findings of this study in the finalization of a state curriculum guide for exploratory agriculture classes.