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ABSTRACT

Four major component areas of the Hazard (Kentucky) Educational Region were sampled using questionnaires, tests, and interviews in an effort to assess the effects of a regional career education program. The community component, randomly selected to achieve a five percent representative sample, was examined for major variables associated with the understanding of, and commitment to career education exhibited by members of the community. All teachers who had participated in summer career education workshops (the professional staff development component) were sampled for knowledge of and attitudes toward career education, personal characteristics, and professional characteristics. The student component, group samplings of grades 4, 6, 8, 10, and 11, measured academic achievement, vocational maturity, self concepts, selected attitudes, knowledge of occupations, and motivational levels. All system career education coordinators and a sample of classroom teachers (the management component) were interviewed on goal clarification, support for project personnel, utilization of facilities, materials and human resources, and effective administrative procedures. The extensive findings are presented in table form and discussed at length. The recommendations made relate to the findings concerning each component. A bibliography, some of the instruments used, and sample career education policy statements from local school districts conclude the document. (NH)

EFFECTS OF A PROGRAM OF CAREER EDUCATION IN KENTUCKY'S EDUCATION REGION XII

Clayton P. Omvig

FINAL REPORT

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PREFACE

Presented in this report are the results of a research project designed to assess the effects of a regional Career Education program. Many Career Education programs have been funded in Kentucky and across the nation. However, few of these projects have included a research base.

The purpose of this project was to gather research data to use in evaluating the effects of the project as well as to gather some baseline data prior to implementation of a Career Education program. This evaluation should not be viewed as an effort to praise or condemn the Regional Career Education Staff of the Kentucky Valley Educational Cooperative, but to generate recommendations as to effective and ineffective practices and procedures.

The results of the study can be utilized by the state department of education for planning future Career Education efforts in the Commonwealth, by colleges of education for effecting changes in teacher education programs, and by the Kentucky Valley Educational Cooperative (Region XII) in evaluating their program and in generating recommendations for that program or for generalized recommendations to the state department of education.

Research data were gathered relative to four major components. These include: (1) Community, (2) Professional Staff Development, (3) Student, and (4) Project Management. The findings were presented in four separate chapters, one representing each component.

ACKNOWLEDGEMENTS

Without the support and assistance of the Career Education Staff of the Kentucky Valley Educational Cooperative, a project of this magnitude could not have been undertaken. This staff included: Dr. Elwood Cornett, Cooperative Director; Dr. Owen Collins, Project Director; Gordon Cook; Randolf Wicker; and Bill Burke. A very special thanks is offered to Mr. Bill Burke for his countless hours spent in organizing for and collecting student data.

To members of the Department of Vocational Education who cooperated in the conduct of the study, to Maynard Iverson who directed the Community Component and prepared that chapter of the report, to Bill Stilwell and Phil Nacke who provided assistance in questionnaire construction, and to Rodney Tulloch who assisted in student testing, sincere thanks are extended.

The efforts of the project consultants were also appreciated. These included Edward Thomas, Jim Kincheloe, Emanuel Mason, Linda Francis, and Fred Petrilla, who served as graduate assistant for the project.

Finally, to Mrs. Anne Mills, who spent many hours of her own time in typing and duplicating the final report, the project director's deepest appreciation is extended.

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CHAPTER 1

INTRODUCTION

Comprehensive Career Education, parts of which have appeared in education for a century or more, has caught the attention of educators. Career Education is a concept "whose time has arrived." Volumes have been written about it; numerous definitions of it have been formulated; pilot and demonstration projects have been developed, operated, and evaluated; and curricula have been developed or existing curricula modified to incorporate it. This approach to education is one which will be studied more and more in the future. A large investment in time and resources will be made at the local, state, and national levels in an effort to conceptualize more clearly Career Education and to develop models for implementation. Major efforts are already underway to determine if Career Education is a viable concept which should permeate the total educational system.

Credit has been frequently given to former U. S. Commissioner of Education, Sidney P. Marland for proposing Career Education. Marland defined the goals of Career Education as being to help each child who moves through school to increase his familiarity with the world of work and to help him to acquire "the knowledge necessary to obtain meaningful employment upon leaving school."[1] The concept should help students to develop positive attitudes toward work and to expose them to the occupational alternatives from which they might make choices.

Although most people think of Career Education as being relatively new, the foundations of Career Education go back several years. Early in this century

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[1]U. S. Office of Education, Career Education, (Washington, D.C.: Government Printing Office, 1971).

several educational philosophers and writers began to expound their views that occupational training, general educational programs, and guidance and counseling activities should be combined in order to provide an effective total educational program for students. Dewey viewed industrial education as a medium which could provide a basis around which students could learn the social and cultural relationships involved in the world of work. Dewey's philosophy was the basis of "Life Adjustment" education, an approach which was intended to eliminate the artificial barriers between school and the world in which people were expected to function. This approach taught problem-solving skills and attempted to help students learn to apply these skills in recurring real-life situations -- the two most persistent situations being the wise use of leisure time and the use of skills and knowledges to earn a living.[2] The Career Education concept embodies much of this type of thought.

Parsons also advocated an integrated approach to education in order to prepare students for life. His influence on vocational guidance was strong and long-lasting. He is credited with founding vocational guidance and his influence was a major factor in getting the public schools to accept guidance and industrial education as integral parts of their programs.[3]

Throughout the war years and the depression which separated them, various federal programs were instituted to give both adults and youth integrated educational programs which would help them gain both some general educational background as well as vocational training. Furthermore, various pieces of federal legislation -- from the Morill Act of 1862 to the 1968 Vocational Amendments --

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[2]Edwin L. Herr, Review and Synthesis of Foundations for Career Education, Preliminary Edition (Columbus, Ohio: ERIC Clearinghouse on Vocational and Technical Education, The Center for Vocational and Technical Education, The Ohio State University, March 1972), pp. 19-20.

[3]Ibid, pp. 17-18.

were addressed to the problem of making people not only employable, but also capable of becoming contributing members of society in general.[4]

The literature of the 1960's and 1970's was filled with references to the fact that piecemeal legislation and programs had not accomplished the objectives of education. What was needed was a total approach to education which would allow all persons to leave the education system with adequate preparation to accept immediate employment or go on to further training. All of this would be infused with programs and activities designed to help all persons make effective decisions, solve problems, and function responsibly in the society. The educational approach which has evolved to meet this challenge is the concept of Career Education.

What is Career Education? As Hoyt points out, Career Education is still an emerging concept and it has numerous designers and numerous proponents with different ideas about how it should be implemented. In the 1973 American Vocational Association Yearbook, he offers 19 "official" definitions of Career Education and several others formulated by prominent writers in the field.[5] He does think that there is general consensus that Career Education is a conscientious effort; that it is essentially a kindergarten through adulthood program for all persons; that it emphasizes education as preparation for a working life including vocational education as an important part, but not making Career Education a synonym for vocational education.[6] Hoyt also detects some areas of disagreement concering Career Education. He summarizes these as (1) disagreements as to the rationale for Career Education, (2) disagreements concerning the long-range goals of Career Education, and (3) disagreements about the control of Career

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[4] Ibid., pp. 17-18.

[5] Kenneth B. Hoyt, "Toward a Definition of Career Education," Career Education, The Third Yearbook of the American Vocational Association, Edited by Joel H. Magisos, (Washington D.C.: American Vocational Association, 1973).

[6] Ibid., p. 20.

Education -- whether it is a totally school-based function or whether the home and community should be involved.[7] Maybe there will never be total agreement in some of these areas, but the disagreements can be largely overcome. What is happening is that local educational agencies and state departments of education are making serious attempts to implement Career Education programs in light of their perceptions about what it is and what it should do. The educational programs of the various states and localities have always differed somewhat and there is no reason to believe that their Career Education programs will not also differ. The basic agreements as to who is to be served and, in general, what is to be done in terms of meeting the needs of people will keep such differences from becoming unsolvable problems.

As with any other new or revised concept in education, the Career Education concept and the questions associated with its implementation reveal a multitude of problems to be solved. This study was an attempt to isolate some of those problems and identify their implications concerning adopting Career Education.

Statement of the Problem

The U. S. Office of Education has established the development and implementation of Career Education models as one of the very few major priority areas. In fact, former U. S. Commissioner of Education, Sidney P. Marland, Jr. labeled Career Education as the major objective of the U. S. Office of Education and suggested that it would be a top priority for the forseeable future.[8]

In Kentucky, the state department of education has also designated the development of Career Education models as a priority item. Six school systems or regions

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[7] Ibid., pp. 20-24.

[8] Sidney P. Marland, Jr. "Career Education 300 Days Later," American Vocational Journal, 47 (February 1972), pp. 14-17.

in Kentucky have been operating exemplary or pilot projects in Career Education for two years or longer. A seventh implemented an educational program under the Career Education concept in the fall of 1973. All of these projects have been supported with vocational education funds through the Kentucky Bureau of Vocational Education and/or the U. S. Office of Education.

As a result of the commitment to Career Education exhibited by the state department of education, a real need existed in Kentucky for information on which to base the planning and evaluation of teacher education programs and procedures for implementing Career Education at the local level. Existing programs may have to be modified if Career Education is to operate effectively in Kentucky schools. Swanson points out that Career Education can only be implemented by beginning a massive program of inservice training for elementary and secondary teachers in the public schools.[9] He says that it is necessary to begin simultaneously a flow of adequately trained teachers from the teacher education institutions. Bottoms sees much of the responsibility for effecting implementation and changes in staff development as being that of the state department of education.[10] Career Education must infuse the entire teacher education process which includes the development of positive attitudes toward Career Education.

The importance of the attitudinal component has been pointed out by Hoyt, et al.[11] They stress that one essential element in the development of Career Education programs is the attitude of professional educators toward work and education as preparation for work. The implication is that professional educators at the present time do not have desirable attitudes toward these two concepts.

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[9]Gordon I. Swanson, "Career Education: Barriers to Implementation," American Vocational Journal, 47 (March 1972), pp. 81-2.

[10]Gene Bottoms, "State Level Management for Career Education," American Vocational Journal, 47 (March 1972), pp. 89-92.

[11]Kenneth B. Hoyt et al., Career Education: What It Is and How to Do It, (Salt Lake City: Olympus Publishing Company, 1972).

Furthermore, these attitudes must be changed if Career Education is to become more than just a new name tacked onto what we are already doing.

Not only must we change the attitudes of professional educators already in the field, but we must drastically change out teacher education programs in the colleges and universities if prospective teachers are to exhibit positive attitudes toward Career Education and possess the necessary competencies to teach in a system which emphasizes the Career Education concept.

There existed then a contrasting state of affairs relative to teacher attitudes toward Career Education. On the one hand, planners and evaluators of pre-service and in-service teacher education programs needed information about the current status of teacher attitudes toward the various aspects of Career Education. On the other hand, there existed no information about teacher attitudes toward Career Education.

One problem undertaken in this study was to ascertain what constitutes an effective Professional Staff Development Component for Career Education, including teacher attitude, school climate, and teacher characteristics.

Another area of concern was the implementation of a Career Education program in the community itself. Minor changes can be made in an educational program and the community may not even be aware that changes have occurred. But, Career Education will not be looked upon as a minor change, for if the program changes affected are to be permanent, community support and commitment will be necessary. Citizen advisory committees will play an important role; public relations will be of utmost importance; and community resources will have to be utilized. Therefore, a second problem which was addressed in the study was, how effective has the Hazard project been in securing community involvement; what should this involvement be; and what procedures were the most effective?

All educational programs should ultimately be evaluated as to their effects on students. A third research problem then was, "what was the effect of a

Career Education program on such student variables as: attitude toward school and others, achievement level, occupational interests, level of occupational aspiration, knowledge about occupations, self-concept, and absenteeism?"

A fourth area for investigation in this study was that of project management. If resources are not properly managed, the prospects of project success are greatly diminished. Therefore, this study also investigated project management, not in an effort to praise or condemn the project staff of the Kentucky Valley Educational Cooperative, but to generate recommendations as to effective and ineffective practices and procedures for optimum utilization of resources.

It was felt that the best approach to answering the research questions outlined above was to separate the project into four phases, each concerned with one of the components of the Hazard Region Career Education project -- the Community, Professional Staff Development, Student, and Project Management components. Each phase of the study was directed toward analyzing the effects of and/or the procedures used to implement Career Education in the Region. The research procedures utilized and the resulting findings are discussed separately for each component.

Variables Active in the Problem

Community Component

Within the Community Component, the major variables which were active were associated with the understanding of, and commitment to Career Education exhibited by members of the community. Demographic variables assumed to be active were sex, educational background, marital status, and number of children in the family.

Professional Staff Development Component

Analyzing the effects of any educational program necessarily involves the consideration of knowledge and attitude factors. Not only must those affected have knowledge of the program, but they must have generally favorable attitudes toward the concept if the program is to approach maximum effectiveness. This is no less true for Career Education as a concept or as a program to be implemented than for other types of educational approaches.

Attitudes toward Career Education exhibited by various segments of the population have been the subject of some recent studies.

Ohamneson conducted a study of the opinions of high school teachers relative to Career Education.[12] His study of a stratified random sample of 900 California teachers was directed initially toward determining if traditional vocational teachers (Agriculture, Home Economics, Industrial Education, and Business and Office Education), general education teachers (Physical Education, Industrial Arts, Music, and Art), and academic teachers (English, Social Science, Foreign Language, Science, and Mathematics) differed in their opinion. He found that there were really only two appropriate groupings -- Industrial Arts teachers responded in a manner similar to traditional vocational teachers and general academic teachers responded similarly. Thus, comparisons were made between two teacher groups: vocational (including Industrial Arts) and non-vocational (comprised of general and academic teachers).

Ohamneson found that there was a significant difference between the two groups with respect to the area of teacher/classroom activities. Vocational

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[12] Greg Ohamneson, "High School Teacher Opinions of Career Education," Journal of Industrial Teacher Education II (Spring 1974).

teachers indicated that they supported Career Education, were capable of providing it, and were in actuality providing Career Education activities to students. Responses for non-vocational teachers were significantly lower in all three areas -- should be involved, can be involved, and are involved in Career Education activities. The two groups did not differ in their opinions about whether schools should be, were capable of being, and actually were engaged in school/community Career Education. "Teachers agreed that schools were presently failing to respond to the extensive need for school/community Career Education."[13]

Teachers with four or more years of non-teaching work experience had more favorable opinions of Career Education than those who had less experience. Among non-vocational teachers, those who had prior knowledge of or experiences with Career Education gave greater support to teacher/classroom practices than the "uninformed" ones.

Baker utilized a 30-item Likert-type scale to collect data relative to the attitudes of vocational teachers, academic teachers, and members of the general public toward Career Education.[14] The instrument was administered to 30 vocational teachers (representing the traditional vocational service areas), 21 randomly-selected teachers of academic subjects (such as Mathematics and History), and 26 selected community members (representing the public -- businessmen, professionals, tradesmen, and semi-skilled workers).

The analysis of variance was used to separately analyze the thirty statements. For each individual statement, each of the three groups was considered as a treatment group and a combination of the remaining two groups resulting in three comparisons per statement. When the general public sample was considered as a

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[13] Ibid., p. 20.

[14] G.E. Baker, "Attitudes of Vocational Teachers, Academic Teachers and the General Public Toward Career Education," Journal of Industrial Teacher Education 10 (Fall 1972).

treatment group, their attitudes differed significantly from the combined group on six items. The public felt that (1) Career Education was already a part of the high school curriculum, (2) the general high school curriculum should be taken by those not planning to go to college, (3) the college preparatory curriculum was the most flexible type of curriculum, (4) vocational education was for low-ability students, (5) the need for vocational education was not increasing, and (6) any student who was capable and able to pay for it should go to college.[15]

Vocational teachers differed from the combined group of academic teachers and public citizens on two statements. They felt that the need for college education was not increasing, and did not agree that teachers should necessarily encourage their more capable students to attend college. Vocational teachers also differed from the group of public representatives on another statement. Public citizens felt that certain high school courses were required for college entry while vocational teachers felt they were not. Academic teachers also disagreed with the public about college attendance. Where the public felt that capable and financially able students should go to college, the academic teachers expressed significantly less agreement with the statement.[16]

Given the localized nature of the research and the small sample sizes, the results of Baker's study cannot be widely generalized. However, if, as he suggests, there may be reason to hypothesize bias toward various elements of the curriculum (vocational education versus college preparatory), then the influence of such attitudes could affect the success of Career Education programs. If, in fact, such biases are widespread, then much effort would be needed to inform the public and teachers concerning the rationale for Career Education.

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[15] Ibid., p. 26.

[16] Ibid., p. 27.

Professional staff attitudes toward Career Education were indirectly identified in a study conducted recently in Western Kentucky. Harryman directed a project during the 1972-73 school year to analyze the problems encountered in implementing and operating Career Education programs in Kentucky Vocational Region III. The study involved two rounds of interviews with 151 teachers -- one interview at the end of the first semester and the second at the end of the school year.[17]

The interview analysis revealed that the following problems were most frequently encountered:

1. There was not sufficient time for teachers to plan individually or cooperatively for Career Education during the normal school day.
2. There was not enough total faculty involvement so that ideas could be shared and materials developed.
3. Teachers felt that some educational goals and objectives were not embodied within the Career Education concept.
4. Teachers felt frustrated by the lack of a clear and unambigious definition of Career Education and its content.[18]

In addition, teachers in rural areas encountered such problems as:

1. Difficulty in obtaining local citizens to act as resource persons in the classroom.
2. Difficulty in finding suitable locations to visit for field trips.
3. Difficulty in financing transportation for field trips.[19]

Many teachers felt that Career Education was needed but that the attitudes of many others, evidenced by lack of involvement, were causing implementation problems.

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[17] Norman D. Ehresman, M. Eugene Harryman, and Dorothy DeMars, "Analysis of Problems Encountered by Classroom Teachers Associated with their Involvement in the Kentucky Regional Career Education Development Project," (Bowling Green, Kentucky: Western Kentucky University, Office of Educational Research, June 28, 1973).

[18] Ibid., pp. 67-74.

[19] Ibid., pp. 67-74.

The importance of attitudes seems to be well-documented in the literature. Knowledge of Career Education was another variable which was active in the problem. Also, several personal and professional characteristics of the teachers were variables which needed to be accounted for in the data collection and analysis. Thus, the major variables within the Professional Staff Development Component were:

1. Knowledge of Career Education
2. Attitude toward Career Education
3. Personal Characteristics
   - Sex
   - Age
4. Professional Characteristics
   - Teaching Experience
   - Grade Level Taught
   - Subject Taught
   - Professional Preparation for Career Education.

Student Component

The literature concerning Career Education is growing rapidly. Much has been written about the historical and philosophical bases for Career Education. Numerous curriculum guides have begun to appear. Descriptions of pilot or demonstration project activities abound. However, reports on the effects of Career Education have not appeared in great quantity. It is expected that such reports will begin to constitute a larger portion of the literature as more and more research and evaluation projects reach completion.

An example of an evaluative research report was identified. The Minnesota Research Coordinating Unit for Vocational Education designed and implemented a comprehensive system of formative and summative evaluation of Career Education projects in the state.[20] The formative evaluation was directed toward assessing

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[20] Brandon B. Smith, A System for Evaluating Career Education in Minnesota: 1972-73, Final Report (Minneapolis: University of Minnesota, Minnesota Research Coordinating Unit for Vocational Education, January 1974), pp. 7-10.

the processes used to implement Career Education in seven school districts. The summative evaluation was directed toward the assessment of student outcomes (in terms of cognitive achievement).

A feedback system was implemented as part of the formative evaluation. Project directors and participating teachers provided monthly reports of their activities which related to the implementation of Career Education. Project directors reported the amount and type of support activities they provided. Teachers reported the amount of time spent on various types of Career Education instruction.

The findings from the formative evaluation showed that project directors spent approximately 17% of their time in such Career Education activities as:

(1) Attending and/or making presentations to various meetings at local, state, and national levels.

(2) Preparing and distributing promotional literature about Career Education.

(3) Providing in-service training for teachers.

(4) Purchasing and developing curriculum or instructional material.

(5) Organizing career guidance services.[21]

Teachers spent an average of 2.43% of their time conducting Career Education activities.[22] The teachers used a variety of instructional techniques (most frequently audio-visual presentations, outside resource persons, and career games) to emphasize three major concepts: self-awareness, occupation/industries, and work roles.

The summative evaluation involved the administration of specially-developed tests to assess the impact of Career Education on student achievement. Experimental

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[21] Ibid., pp. 7-10.

[22] Ibid., pp. 10-15.

and control groups were identified and the tests administered. The data analysis revealed that the tests were equally reliable for both experimental and control groups.[23] Reliability coefficients were higher for older age groups. Some differences in achievement were identified between the groups, but the differences were small and not consistently in favor of one group.[24] When the seven Career Education projects were considered alone, no significant differences were detected among grade levels.[25]

The lack of impact on student achievement was interpreted as a probable result of teachers spending too little time on Career Education activities or inappropriate means of selecting the control groups. It was suggested that better methods be employed in selecting experimental and control groups and that more time be spent in providing identifiable Career Education instruction in the classroom.

Although the results of the Minnesota study were disappointing, it was an indication that serious evaluation efforts are being undertaken to analyze the effects of Career Education programs in terms of student achievement.

In this study, several student related variables were assumed to be operating. Thus, the study was structured in such a manner that the following variables could be measured and utilized in the data analysis:

1. Academic achievement levels
2. Vocational maturity levels
3. Self-concepts
4. Attitudes toward others
5. Attitudes toward school

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[23] Ibid., pp. 37-40.

[24] Ibid., pp. 40-44

[25] Ibid., pp. 44-46

6. Attitudes toward selected school subjects

7. Knowledge of occupations

8. Motivational levels.

Several of these variables are obvious ones for measurement and consideration. The second, vocational maturity, was one which has not appeared frequently in Career Education studies, but was considered important in this study.

Crites asserts that career maturity is much like other types of maturity. It develops over a period of time as does intellectual, physical, and social maturity. The time period spans roughly the upper elementary and high school years. Crites has formulated a model of career maturity which states that the degree of career development is affected by (1) Consistency of Career Choices, (2) Realism of Career Choices, (3) Career Choice Competencies, and (4) Career Choice Attitudes.[26] The first two dimensions relate to the content of career choice while the remaining two relate to the process of career choice. Crites feels that the two process dimensions are especially compatible with the general objectives or proposed outcomes of Career Education.

Management Component

Variables active in the Management Component were neither easy to define nor to measure. However, through personal interview techniques, data were gathered relative to the following variables:

1. Goal clarification by the project administration.

2. Support for project personnel by project administration

3. Utilization of physical facilities and materials

4. Utilization of human resources

5. Effective administrative procedures

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[26] John O. Crites, "Career Maturity and Career Education," Criteria Number 7 (1974), p. 1

Community Component

The overall objective of the study of the community segment was to evaluate the extent and effectiveness of community participation in the Hazard Career Education project and to identify implications for improvement of Career Education efforts in Kentucky.

The specific objectives of this segment of the study were:

1. To determine the effectiveness of various programs, procedures and techniques in securing general public understanding of Career Education in the Hazard Region by assessing public understnading of Career Education at the termination of the project.
2. To determine the effectiveness of programs, procedures, and methods in securing general public commitment to Career Education in the Hazard Region by assessing public commitment to Career Education at the termination of the project.
3. To determine the effectiveness of securing minority group (primarily socio-economic) understanding and commitment to Career Education in the Hazard Region by (1) identifying minority groups in the Hazard Region, (2) assessing minority group understanding of and commitment to Career Education at the time of termination of the project.
4. To determine the most effective procedures in securing resource persons from the Hazard community by: (1) identifying procedures for securing resource persons from the community, and (2) determining which procedures were most effective.
5. To determine the extent of advisory committee use in implementing Career Education in the Hazard Region by: (1) identifying levels of advisory committees used by the various schools and (2) ascertaining the effectiveness of these advisory groups.

Professional Staff Development Component

Certain professional staff development objectives were identified. They were:

1. To assess the relative effectiveness of in-service programs and a activities in increasing the knowledge level of staff members concerning Career Education.
2. To assess the relative effectiveness of in-service programs and activities in creating, among professional staff members, favorable attitudes toward Career Education.
3. To identify personnel characteristics which foster the implementation and expansion of Career Education within schools.
4. To identify personnel development techniques and strategies which are most effective with personnel.
5. To identify (1) problems encountered by personnel in implementing Career Education as a part of the on-going educational process, and (2) identify the techniques and procedures used to overcome the problems encountered.

Student Component

The overall objective of this section of the study was to assess the effects of Career Education programs, services, and activities on students. The specific objectives were:

1. To determine the effect of the Career Education program on student academic achievement.
2. To determine the effect of the Career Education program on the vocational maturity of students.
3. To determine the effect of the Career Education program on the self concepts of students.

4. To determine the effect of the Career Education program on the attitude of students toward school and others.
5. To determine the effect of the Career Education program on student's knowledge concerning occupations.
6. To determine the effect of the Career Education program on student absenteeism.
7. To determine the effect of the Career Education program on student motivation.
8. To determine the effect of the Career Education program on student occupational aspirations.

Project Management Component

The overall objective of this component was to assess the extent to which the program managers and the management procedures were effective in (1) setting and clarifying goals, (2) utilizing resources, (3) facilitating production, and (4) countering deviations within the operation which held potential for obstructing the achievement of goals.

Specific objectives to be attained in determining the effectiveness of the management of the project included:

1. To determine the extent to which project goals were articulated and clarified to all persons concerned with the achievement of them.
2. To determine the extent to which project managers were supportive in facilitating the work of all persons responsible to them.
3. To determine the extent to which project managers utilized physical facilities and materials in carrying out the project.
4. To determine the extent to which project managers utilized human resources, both within and outside the school system, in carrying out the project.

5. To determine the procedures and techniques used in carrying out the project and to identify those which appear to be unusually effective or ineffective in the achievement of goals.

Hypotheses

Hypotheses were tested in two phases of the study -- the Professional Staff Development and Student Components. For the Professional Staff Development Component, the following hypotheses were tested:

Null Hypothesis 1: There are no significant differences among personnel of different age groups in attitudes toward Career Education.

Null Hypothesis 2: There is no significant difference between vocational personnel and non-vocational personnel in attitudes toward Career Education.

Null Hypothesis 3: There are no significant differences among elementary, junior high, and secondary teachers in attitudes toward Career Education.

Null Hypothesis 4: There is no significant difference between teachers in Career Education exemplary or pilot schools and other teachers in attitudes toward Career Education.

Null Hypothesis 5: There is no significant difference between educators in various positions in attitudes toward Career Education.

Null Hypothesis 6: There is no significant difference between educators who teach in urban schools and teachers who teach in rural schools in attitudes toward Career Education.

Null Hypothesis 7: There are no significant differences among personnel of different age groups in level of knowledge concerning Career Education.

Null Hypothesis 8: There is no significant difference between vocational personnel and non-vocational personnel in level of knowledge concerning Career Education.

Null Hypothesis 9: There are no significant differences among elementary, junior high, and secondary teachers in level of knowledge concerning Career Education.

Null Hypothesis 10: There is no significant difference between teachers in Career Education exemplary or pilot schools and other teachers in level of knowledge concerning Career Education.

Null Hypothesis 11: There is no significant difference between educators in various positions relative to level of knowledge concerning Career Education.

Null Hypothesis 12: There is no significant difference between teachers who teach in urban schools and teachers who teach in rural schools in level of knowledge concerning Career Education.

Within the Student Component of the study, these hypotheses were tested:

Null Hypothesis 1: There is no significant difference in basic academic skills between a group of students who participated in a Career Education program and a group which participated in a traditional educational program during the 1973-74 school year.

Null Hypothesis 2: There is no significant difference in vocational maturity levels between a group of students who participated in a Career Education program and a group which participated in a traditional educational program during the 1973-74 school year.

Null Hypothesis 3: There is no significant difference in motivational levels between a group of students who participated in a Career Education program and a group which participated in a traditional educational program during the 1973-74 school year.

Null Hypothesis 4: There is no significant difference in attitudes toward self, classmates, reading, school, math, and citizenship between a group of students who participated in a Career Education program and a group which participated in a traditional educational program during the 1973-74 school year.

Null Hypothesis 5: There is no significant difference in level of occupational aspiration between a group of students who participated in a Career Education program and a group which participated in a traditional educational program during the 1973-74 school year.

Hypotheses 1-4 were tested at individual grade levels. Hypothesis 5 was tested at only one grade level (Grade 10). Sub-hypotheses were also tested, since data were analyzed separately by grade level.

Description of the Region

The Hazard Education Region (XII) is located in the Southeastern part of Kentucky and comprises eight county and three independent school districts. The county systems include Letcher, Perry, Knott, Breathitt, Leslie, Lee, Owsley, and Wolfe. The three independent districts are Jackson, Jenkins, and Hazard, Kentucky. The regional office is located in Hazard, Kentucky. (Figure 1, p. 39)

CHAPTER 2

PROCEDURE

Population and Sample

Community Component

The population for the Community Component included all adult residents of the Hazard Educational Region (approximately 20,000). Proportionate sampling was utilized in order to achieve a five percent representative sampling of the residents in the region. The 1,000 names were selected randomly from telephone directories. This sample was considered sufficient to ascertain the community opinion concerning Career Education. Questionnaires, including return-addressed, stamped envelopes were mailed to the sample group. A telephone follow-up of non-respondents was conducted in order to double-check validity of the response.

Professional Staff Development Component

Since the purpose of the Professional Staff Development Component was to access the effects of the Career Education program on participating teachers as well as to get information from them concerning problems and successful practice, the population included all professional personnel who had participated in the summer Career Education workshops at Hazard or Jackson.

Some teachers, although they attended the workshops, did not actively participate in the year's Career Education program. This group was encouraged not to respond to follow-up questionnaires, since they weren't in a position to provide the necessary data.

Therefore, the final sample was those teachers who had actively participated in both the summer workshops and the subsequent year's activities.

Student Component

The population for the Student Component was all elementary and secondary students from the entire education region. Because of the large number of students who participated, a sample necessarily was chosen to participate in the study.

Several sampling methods were considered, but problems were inherent in all. The total population could not be tested. Proportionate sampling from all grades in all schools was not feasible due to cost and increase of testing only 2 or 3 students from every class.

After much deliberation, a group sampling technique was selected. Further, it was decided that not all grades would be used. The Kentucky State Testing Program was found to gather data on 4th, 8th, and 11th grade students each year. The same procedure was followed in this study, although the sixth grade was added as a group from whom to collect additional data from the Career Maturity Inventory, and the 10th grade for occupational aspiration data.

Eight fourth grade classes were selected to participate in the study. Four were chosen to represent the Career Education group and four were chosen as a control group. The Career Education group came from teachers who had attended the summer workshops and who had made a commitment to the following year's Career Education activities. The control group was chosen in such a way as to equate, to the extent possible, the student and teacher variables such as age, experience, socio-economic level, and achievement. These teachers had not participated in the summer workshops and were not expected to become involved with Career Education during the following year.

The sixth and eighth grade samples were chosen similarily to the fourth grade. The eleventh grade groups were total grades from selected high schools. The workshop rosters were analyzed and four high schools were selected. Two

had teachers from nearly all subject areas participating in the Career Education activities. The other two had no one, or possibly just one teacher participating. Thus, the Career Education and control groups were selected.

Project Management Component

Data relative to the Project Management Component were gathered from the Regional Career Education Staff, from all System Career Education Coordinators, and from a sample of classroom teachers.

As assessment of the effectiveness of the organization and management procedures was ascertained from the coordinators and teachers. Management strategy was obtained by interviewing the regional staff themselves.

Data Collection and Instrumentation

Community Component

Data were collected with specially-developed instruments for this phase of the study. One instrument was developed for use in collecting data from principals of participating schools in the Hazard Region regarding administrative practices for securing community involvement in Career Education. These "Key Educators" were asked to provide information concerning their perceptions of (1) public knowledge about and interest in Career Education, (2) public relations and information dissemination activities of the project, (3) means of securing and extent of involvement of resource persons in the community, and (4) extent of usage and effectiveness of advisory committees.

The instrument utilized for collecting this data was entitled Career Education Questionnaire for Key Educators in the Hazard Region (Appendix A.) It was developed by persons directing this phase of the study. The instrument was reviewed by project directors of the several Career Education projects across the state of Kentucky. Those administrators indicated their

reactions and it was decided that the final version of the questionnaire would effectively gather the needed information.

The questionnaire which was developed for use in gathering data from members of the community was called Public Awareness of Career Education (PACE) (Appendix B.) The questionnaire had two versions, (a yellow for odd-numbered respondents and blue for even-numbered individuals.) Each consisted of 28 items concerning Career Education. This instrument was developed and revised in the same manner as the questionnaire described above with the addition of a curriculum specialist at the university who reviewed the instrument for readability at the level of the populace being surveyed. One version of the instrument was sent to one-half the sample and the alternate form to the other half. The scale provided for responses in a five-point Likert-type arrangement. Possible responses ranged from "Strongly Agree," to "Strongly Disagree." The questionnaire also contained a section for gathering demographic data on respondents.

Professional Staff Development Component

In order to achieve the objectives specified for this component, two instruments were used to collect data concerning teachers. The instruments generally provided information relative to several of the outlined objectives rather than being aimed at individual objectives.

A Teacher Questionnaire for the Hazard Career Education Project was developed by the research project staff. The instrument contained a section which asked for the following types of background information concerning the teachers: (Appendix C.).

1. Sex
2. Age
3. Years of teaching experience

4. Years of full-time employment outside education
5. Grade primarily taught
6. Subject primarily taught
7. Participation in 1973 summer Career Education workshops

The second section requested teachers to assign rank orders (from most effective to least effective) to six lists of items concerned with the Career Education effort. The first list dealt with the rank ordering of persons who had contributed to the teachers' increased knowledge and understanding of Career Education. The second list concerned activities which had lead to increased knowledge and understanding of Career Education among teachers. The third list was concerned with assessing the effectiveness of various teaching methods or strategies in conveying Career Education concepts to students. Since the use of resource persons has been considered vital to the Career Education effort, the fourth item contained a listing of methods of securing such persons for classes. Item five was designed to assess the effectiveness of various approaches or methods or activities in motivating students. The final item in this section concerned the teachers' perceptions of the relative importance of several factors which could determine the success of the Career Education program.

Section III of the instrument was directed chiefly at determining teachers' perception regarding the community involvement component of the Career Education project. Special emphasis was given to determining teachers perception about whether various groups had become knowledgeable about Career Education or displayed favorable attitudes toward Career Education.

Section IV requested teachers to identify (1) rewarding experiences encountered, (2) problems encountered, and (3) techniques or procedures utilized

to overcome problems and/or suggested techniques and procedures for overcoming unsolved problems.

Section IV also listed 26 potential problems which could affect the success of Career Education. The teachers were asked to indicate the extent to which each affected their own situations. Responses were, (1) No Problem, (2) Little Effect, (3) Some Effect, and (4) Much Effect. This listing was adapted by the project staff from an interview scale developed in a project directed by Dr. Eugene Harryman at Western Kentucky University.[1]

Data were collected with the Teacher Questionnaire at the end of the 1973-74 school year. Teacher responses to the questionnaire provided information relative to all five objectives specified for the Professional Staff Development Component of the study.

The Career Education Information Inventory (CEII) was prepared in 1972 by staff members of the Kentucky Research Coordinating Unit of the University of Kentucky.[2] It consists of 72 statements about (1) the concept of Career Education, (2) its place in the total educational program, and (3) implementation considerations. Respondents were asked to indicate their degree of agreement with each item on a five-point Likert-type scale ranging from "Strongly Agree" to "Strongly Disagree."

The original instrument was developed from a list of items extracted from curriculum guides related to the world of work. The original list of items

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[1]Norman D. Ehresman, M. Eugene Harryman, and Dorothy DeMars, Analysis of Problems Encountered by Classroom Teachers Associated with their Involvement in the Kentucky Regional Career Education Development Project, (Bowling Green, Kentucky: Western Kentucky University, June 28, 1973).

[2]Alfred J. Mannebach, et al. Career Education Information Inventory, (Lexington, Kentucky: University of Kentucky, College of Education, Kentucky Research Coordinating Unit for Vocational Education, March, 1972).

was reviewed and edited by the developers. A tentative questionnaire (along with editorial remarks and suggestions) was used as the basis for the 72-item questionnaire.

The CEII was administered in a pretest-posttest scheme to professional staff members. The pretesting was completed prior to the initiation of the Career Education programs in the schools and prior to the conduct of workshops and seminars on Career Education held in the Region. Posttesting was accomplished at the end of the 1973-74 school year.

Student Component

Data were collected in a pretest-posttest design corresponding to Campbell and Stanley's Nonequivalent Control Group Design (Design #10).[3] This design is widely used in educational research and involves pretesting and posttesting experimental and control groups where the subjects are not randomly assigned, but constitute intact groups (classes). The design controls for "the main effects of history, maturation, testing, and instrumentation."[4] It can be represented as follows:

Experimental	T_1	X	T_2
Control	T_3		T_4

It has been suggested that this design satisfies most research design requirements in assessing the effects of Career Education on student attitude or achievement.[5]

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[3] D. T. Campbell and J. C. Stanley, Experimental and Quasic-Experimental Designs for Research, (Chicago: Rand-McNally, 1963).

[4] Career Education 1973: A Plan for Evaluating Student Growth, (New York: Career Education, 1973), p. 20.

[5] Ibid., p. 19.

To assess the effects of Career Education on students, in accordance with the objectives of the Student Component phase of the study, the following variables were measured:

1. Career maturity
2. Basic skills
3. Motivation
4. Attitudes toward:
    a. self
    b. classmates
    c. reading
    d. school
    e. math
    f. citizenship
5. Occupational Aspirations

Fourth grade students took tests to assess basic skills and attitude (except attitude toward citizenship). Sixth graders completed only an instrument which measured career maturity. All of the first four variables were measured in the case of eighth and eleventh graders. In addition, information concerning absenteeism was gathered for eleventh graders. It was considered most appropriate to measure absenteeism for only the older group of students since they typically are in an age group which makes absenteeism more directly attributable to attitude and/or motivation. Younger students are typically absent from school because of illness or weather conditions. Older students are not as likely to be influenced by common childhood diseases (having passed the age where such diseases usually develop) and are less likely to miss school because of extreme weather conditions. Eleventh grade students who are absent from school, and who are not legitimately ill, may miss school as a matter of choice more easily than younger students who are under much more direct supervision by parents and others. Thus, it was decided that absenteeism information would only be meaningful for this older group of students.

To assess levels of occupational aspiration, the fifth variable, a modified version of the Occupational Aspiration Scale (OAS) was used. The OAS was developed by Haller and consisted of eight multiple choice items.[6] Respondents are permitted to respond realistically (what is the best job you are really sure you can get?) and idealistically (what job would you choose if you were free to choose any?). Each type of question is asked in terms of the short-range (by the time you are 30 years old) goals of students. Thus, there are four questions concerning short-range goals and four concerning long-range goals. There are two realistic and two idealistic questions within each goal range.

Each of the eight questions has a list of 10 jobs which span the range of occupational prestige. The particular form of the OAG used in this study was adopted by Powers for a study of occupational aspirations of Appalachian students.[7] The revisions were made to eliminate possible sex bias in the occupational listings. This was accomplished by adding the equivalent "female" job title to those typically termed "male" jobs. The job lists were not arranged in any particular order of prestige. A computer program was developed to assign prestige scores to responses. A copy of the OAS is included in Appendix D.

The students who completed this instrument did so in the spring of 1973 when they were ninth graders (pretest). They also completed the instrument in the spring of 1974 (posttest). Part of these students were involved in

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[6]Archibald O. Haller and Irwin W. Miller, The Occupational Aspiration Scale, (Cambridge, Massachusetts: Schenkman Publishing Company, 1971.

[7]Betty C. Powers, "The Relationship of Occupational Aspirations and Expectations to Selected Personal, Family, Community, and School Related Factors," Unpublished doctoral dissertation, University of Kentucky, 1974.

Career Education programs as tenth graders and the remainder were control group students.

The Career Maturity Inventory (CMI) was utilized to collect data relative to the career maturity of students. The CMI, published by CTB/McGraw-Hill, measures variables common to two of Crite's dimensions of career maturity -- Career Choice Competencies and Career Choice Attitudes. Formerly called the Vocational Development Inventory (VDI), the CMI consists of an Attitude Scale and a Competence Test which assess the two choice process dimensions mentioned to measure the following:

1. Orientation to the World-of-Work
2. Conceptions of Career Decision-Making
3. Involvement in Choice and Work
4. Independence in Career Choice
5. Preference for Factors in Career Choice[8]

The Competence Test is composed of five subtests which assess the four stages of career choice. The four steps and the respective subtests are:

1. Information-gathering--Knowing Yourself--Knowing About Jobs
2. Goal-Selection--Choosing a Job
3. Planning--Looking Ahead
4. Problem-Solving--What Should They Do?[9]

Crites states that the CMI is appropriate as an assessment technique in several settings. He further asserts when Career Education program has been initiated, the CMI has special value in evaluating the effectiveness of the program.[10]

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[8]Crites, "Career Maturity and Career Education," p. 2.

[9]Ibid.

[10]Ibid.

Numerous reliability and validity studies have been conducted with the CMI, especially the older Attitude Scale. Content validity for the Attitude Scale was established in a study of the agreement between the empirical scoring key and one derived "rationally."[11] A panel of judges was asked to choose the more mature response to each attitude item. The judges agreed with the national standardization sample on 37 items (74%). Criterion related validity has been demonstrated in several studies which found significant correlations between the Attitude Scale and other scales which were designed to measure criterion variables directly.[12] To establish construct validity, studies were conducted to assess response bias (response set bias and response style bias were found to be negligible) and correlation with other variables (most background variables were not related to the scale; the scale correlated significantly with several intelligence, aptitude, and personality scales).[13]

Reliability studies showed an overall internal consistency coefficient of .74 for grades 6 through 12.[14] The test-retest reliability (stability) coefficient was .71, a correlation which was termed "low enough to allow for maturational variance but high enough to establish systematic measurement of the variable being quantified."[15]

The Competence Test has not been used as long as the Attitude Scale, thus the number of studies using this section of the CMI is smaller. Internal consistency measures are available, however most of the correlations within

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[11] John O. Crites, Career Maturity Inventory: Theory and Research Handbook, (Monterey, California: CTB/McGraw-Hill, 1973), p. 15.

[12] Ibid., pp. 15-16.

[13] Ibid., pp. 16-21.

[14] Ibid., p. 14.

[15] Ibid., p. 14.

subtests range from .72 to .90, establishing that the five parts of the test consist of relatively homogeneous sets of items.[16]

Some validity studies have also been conducted. Content and criterion-related validity were demonstrated in studies which showed the test to be systematically related to time (expressed as grade levels).[17] The product-moment correlation among the five subtests was found to be .54, within the range of the approximate correlation hypothized from the construct.[18]

An integrated series of tests was used to assess the basic academic skills of the students. The California Comprehensive Tests of Basic Skills (CTBS) is a testing series designed to test student skills in reading, language, arithmetic, and study skills. There are four levels in the testing program: Level 1 accommodates the second half of Grade 2 and Grades 3 and 4; Level 2 covers Grades 4, 5, and 6 overlapping Level 1 at Grade 4; Level 3 includes Grades 6, 7, and 8 overlapping Level 2 at Grade 6; and Level 4 is addressed to Grades 8, 9, 10, 11 and 12 overlapping Level 3 at Grade 8.

Levels 2, 3, and 4 of the CTBS Battery include the following tests:

Reading Vocabulary

Reading Comprehension

Language Mechanics

Language Spelling

Arithmetic Computation

Arithmetic Concepts

Arithmetic Applications

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[16] Ibid., p. 33.

[17] Ibid., p. 34.

[18] Ibid., p. 35.

Study Skills Using Reference Materials

Study Skills Using Graphic Materials[19]

The total battery consists of 318 multiple-choice items; 85 items relate to Reading, 85 to Language, 98 to Arithmetic, and 50 to Study Skills. The tests were administered in accordance with the instructions outlined in the Examiner's Manual. Two to three days were required in most instances to administer the tests.

Eleven scores result from the scoring -- ten scores representing each of the specific subtests and a total score on the battery. For each student on each subtest, an obtained grade equivalent score, percentile rank, and stamine were reported.

The Junior Index of Motivation (JIM Scale) was used to assess students' motivation toward school. The instrument, developed by Jack R. Frymier at the Ohio State University, consists of 80 items and requires approximately 30 minutes for administration. However, only 50 items are scored.

Frymier has conducted extensive studies of the reliability and validity of the JIM Scale for use with public school and college students. Nine separate studies were reported, eight of which were concerned with developing the scale and testing its reliability and validity and one to determine the specific content of the Scale. Each succeeding study was undertaken to answer questions or solve problems encountered in earlier studies.

Frymier reports a test-retest reliability of .70 from a sample of 718 junior high school students (369 boys, r = .74; 349 girls, r = .63).[20]

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[19] State-wide Testing Program, (Frankfort, Kentucky: Department of Education, Bureau of Pupil Personnel Service, Division of Guidance Services, 1973), p. 4.

[20] Jack R. Frymier, "Development and Validation of a Motivation Index," Theory Into Practice, IX (February 1970), p. 78.

Split-half reliability coefficients of correlation were .63 for 139 boys and .72 for 104 girls and a total group (N=243) coefficients of .67.[21] Similar results were obtained with samples of high school students and college students. The JIM Scale was also found to correlate significantly with another motivation scale (Farquhar's M-Scale) and with achievement tests (Iowa Tests of Educational Development).

A factor analysis study was designed to identify the content of the JIM Scale. The six largest rotated factors accounted for 51 percent of the variance and these factors were assigned the following names:

I. Belongingness - Alienation

II. Positive School Attitude - Negative School Attitude

III. Personal Control - Fatalism

IV. Optimism - Pessimism

V. Flexibility - Dogmatism

VI. Idealism - Pragmation[22]

The Kentucky Student Attitude Inventory (KSAI) was adapted for use in this study. The instrument was designed to assess student concepts about or attitudes toward (1) self, (2) classmates, (3) reading, (4) school, (5) math, and (6) citizenship. All six attitude areas were tested for grades 8 and 11. Only the first five were tested for grade four.

Management Component

Interview guides covering the objectives of the evaluation were prepared for use in the study (Appendix E.). In-depth interviews were conducted with the six management personnel (cooperative director, project director, four

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[21] Ibid., p. 78.

[22] Ibid., p. 85.

component directors). In-depth interviews were also conducted with the thirteen school system coordinators. These coordinators, due to their strategic location between the project staff and the school district personnel, were judged to be the most knowledgeable persons available concerning the performance of project management. Additionally, a small sample of superintendents of the participating districts, teacher members of the Career Education teams, and teachers of the participating districts were interviewed. The purpose of the latter interviews was to validate information secured in the in-depth interviews.

The data gathered in these interviews were organized consistently with the objectives of the evaluation.

Data Analysis

Community Component

As suggested by Career Education project officials the "Key Educators" in the Hazard Region were assured that no statistical comparisons would be made among the schools and/or school systems. Descriptive data from the questionnaire were tabulated so that some judgments could be made concerning the effectiveness of the project in the area of community involvement.

The PACE questionnaire was scored by assigning point values to the responses -- Strongly Agree = 5, Strongly Disagree = 1. The demographic variables were used as main factors in the analysis.

Professional Staff Development Component

Pretest-posttest comparisons were made on the teachers' scores on the CEII. The major statistical treatments were the multiple discrimination analysis and Hotelling's T^2 procedure. Age, vocational versus non-vocational, and level taught were used as classification variables in the analysis.

The data from the Teacher Questionnaire were analyzed chiefly through the method of computing means and rank order for most items, especially in Sections II and III of the instrument. Demographic variables were used to classify respondents into age, sex, and grade level taught for the analysis. Some items from Sections III and IV were tabulated and analyzed in order to relate them to evaluation objectives concerning (1) the extent to which the community and its resources were utilized, and (2) problems encountered and solutions used to overcome them. Section IV also contained a list of 26 potential problems. Point values ranging from 1 to 4 were assigned to the four responses.

Student Component

Simple statistics were generated for all student groups--means and standard deviations. Further, the analysis of covariance technique was utilized to test hypotheses concerning the effect of Career Education on student variables. Pretest scores were used as the covariate in the analysis in order to eliminate possible initial group differences. The analysis of covariance is suggested by Campbell and Stanley as the appropriate statistical technique for this research design.[23] A test was first made to determine if an interaction between sex and group membership was operating. The absence of significant interactions was a signal to investigate main effects (sex, group).

[23] D. T. Campbell and J. C. Stanley, Experimental and Quasi-Experimental Designs for Research, (Chicago: Rand-McNally, 1963).

CHAPTER 3

FINDINGS
COMMUNITY COMPONENT

The primary objective of the community segment of the Hazard Research Project was to evaluate the extent and effectiveness of community participation in the Hazard Career Education project. Special objectives were the determination of: public understanding and commitment, minority group understanding and commitment, utilization and procedures for utilizing resource people, and the extent of use and effectiveness of advisory committees. Data were collected near the end of the project year from a random sample of citizens of the region as found in telephone directories, and from principals in affected schools in the region. Two instruments were developed and utilized with these group; The Career Education Questionnaire for Key Educators in the Hazard Region (Appendix A) and the PACE (Public Awareness of Career Education) questionnaire (Appendix B). It should be noted that several problems beset this segment of the project. First, the Career Education Staff emphasized at an early meeting that little emphasis had been placed in securing community involvement. This precluded use of a pretest/treatment/posttest design. It was then decided to conduct an ex post facto, point-in-time assessment by surveying the respective communities and administrators near the end of the school year. This created the problem of securing responses during the busy spring/early summer period when people are gardening, vacationing, farming, etc. A mailed follow-up was sent to the key educators approximately three weeks after the initial mailing. Because of the nearness to the project completion deadline, a telephone follow-up of non-respondent citizens was made through random sampling technique.

Findings relating to the five objectives of the community segment were reported by data source (instrument used).

Questionnaire for Key Educators

This instrument was used to elicit such information as: existence of school board policy concerning Career Education; newspaper, radio, and television coverage; resource personnel availability; use, value, means in securing, and follow-up procedures; parental interest and involvement; and advisory committees use and value. Out of 57 schools identified by project staff as engaged in Career Education, 40 returns, or 70 percent, were received. Geographical location of the school (principals) responding can seen in Figure 1.

School Policy on Career Education

When asked if their school had a written policy on Career Education, 17, or 46 percent indicated affirmatively, while 20, or 54 percent said no. Copies of the policy statements for Knott County (Hindman Elementary) and Jenkins Independent School System were sent in and may be seen in Appendix F. Both included plans for community involvement. Other responses may be seen in Table 1.

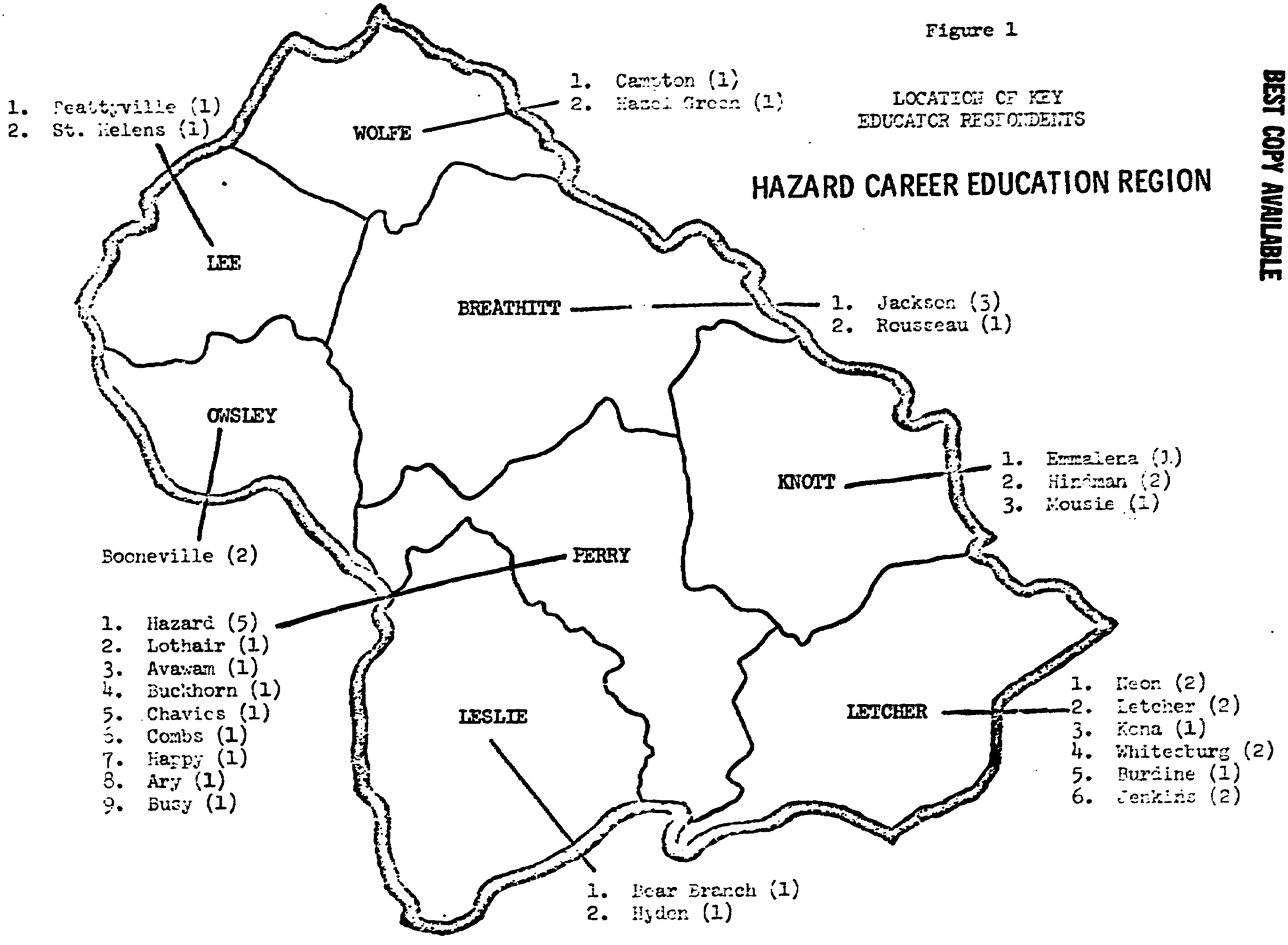
News Media Coverage of Career Education

Principals revealed that there had been considerable coverage of Career Education. Twenty-nine respondents reported 234 articles, an average of eight per school. Three-hundred-forty-seven column inches of news space were used by 14 respondents, for an average of 24.8 column inches. Newspaper coverage had increased since September in 18 cases, or 72 percent of those responding; it stayed about the same in 6 cases (24 percent), and it had decreased in only one case. Two articles were sent in, both of which included several pictures

Figure 1

LOCATION OF KEY
EDUCATOR RESPONDENTS

HAZARD CAREER EDUCATION REGION



of Career Education group activities. Five respondents indicated that articles had been placed in the school scrapbook or were otherwise not available.

Ninety percent of the respondents indicated that local radio and television coverage of Career Education was needed, while just four (10 percent) felt it was at about the correct level. None thought less was needed.

Table 1. Comments by Key Educators Regarding School Policy on Career Education

Comment	Number of Responses
At least two units are taught by each teacher	4
Career Education is fused with other subject matter	3
Policy is permissive; teachers may practice Career Education if they choose to	2
Policy is part of school system philosophy	2
Policy is being developed	2
No written policy exists	2
Career Education is considered in the schedule	1
A policy exists but is not available	1

Public Interest in Career Education

When queried about public interest in Career Education in the local school, principals were nearly unanimous in their feeling that more was needed, as indicated by 36 (90 percent) checking that item. Four felt that public interest was about right. No principals thought that less interest was called for.

Comments were made by four respondents; three said they had received very good to excellent public acceptance of Career Education, while one said that some people were concerned that the quality of the academic program would suffer. One respondent suggested that there was a need to formulate new ways to reach the general public.

Regarding parents' roles in the Career Education program, most respondents reported that parents were in favor of and involved in Career Education, but didn't know much about the program. These findings were reported in Table 2. In the "comments" section, one respondent said parents were most cooperative; another stated that a good start was made in reaching parents during the first year, awareness stage; while a third said parents were indifferent because they were uninformed.

Resource Personnel Involvement in the Career Education Program

Most respondents agreed that resource personnel were available in the community, that they were used in Career Education and were helpful. These data are found in Table 3.

Principals were also asked what means were used to secure resource persons. A wide range of methods was used, with personal invitation by teachers and telephone contacts, predominating. These data are presented in Table 4.

Various means of follow-up of resource persons were reported by respondents, but a letter to the speaker and/or his employer were the major methods utilized. Specific data on this aspect of the study are outlined in Table 5.

Use and Effectiveness of Advisory Committees

The last item asked of principals dealt with the use and value of advisory committees in their local Career Education programs. More than one-third reported a special advisory committee for Career Education while 42.5 percent used an advisory committee which covered the total school programs (Table 6).

Table 2. Key Educators' Responses Regarding Parents' Roles in Career Education[a]

Statement	N	Responses					Mean of Responses
		Strongly Agree (1 on Scale)	Agree (2 on Scale)	Undecided (3 on scale)	Disagree (4 on Scale)	Strongly Disagree (5 on Scale)	
Parents are involved in Career Education	35	5	17	5	6	2	2.5
Parents are in favor of Career Education	30	6	20	3	0	1	2.0
Parents don't know much about Career Education	30	6	15	1	8	0	2.4

[a]A five-point scale was used with Strongly Agree = 1 and Strongly Disagree = 5.

Table 3. Key Educators' Responses Regarding Resource Personnel in the Community[a]

Statement	N	Responses					Mean of Response
		Strongly Agree (1 on Scale)	Agree (2 on Scale)	Undecided (3 on Scale)	Disagree (4 on Scale)	Strongly Disagree (5 on Scale)	
Resource people in the community are generally available when needed	38	10	23	0	3	2	2.00
Resource people are used in Career Education classes	30	11	15	2	1	1	1.87
Resource are helpful in implementing the Career Education concept	30	19	10	1	1	1	1.59

[a]A five point scale was used with Strongly Agree = 1 and Strongly Disagree = 5.

Table 4. Means Used to Secure Resource Personnel for Career Education in the Hazard Region

Method	N	Percentage
Teachers invite personally	39	97.5
Telephone contacts	38	95.0
Requests from the principal	28	70.0
Students write request letters	23	57.5
Community survey	17	42.5
Teachers write request letters	17	42.5
Requests from the superintendent	9	22.5
Guidance counselors	2	5.0
Volunteers from the community	1	2.5
Career Education coordinator secures	1	2.5
Use of card file on resource person	1	2.5
Children invite parents	1	2.5

Table 5. Follow-up Techniques Used in Conjunction with Resource Personnel for Career Education Programs in the Hazard Region

Method	N	Percentage of Respondents
A letter to the speaker	38	95.0%
A letter to the employer of the resource person	22	55.0
Recognition dinner for resource persons	1	2.5
Recognition through news articles	1	2.5
Telephone call	1	2.5
Invitation to a program wherein a "Certificate of Honor" was given	1	2.5

Table 6. Use of Advisory Committees in Schools with Career Education in the Hazard Region

Type of Committee	N	Percentage of Respondents
Advisory committee for the total program	17	42.5
Special advisory committee for Career Education	15	37.5
Advisory committees for programs other than Career Education	8	20.0
Informal advisory help from selected members of the community	5	12.5
Craft advisory committee	1	2.5

Twenty-seven principals rated their advisory committees for effectiveness in dealing with the Career Education program. Most of the groups were called "moderately effective" (19 or 70.4 percent of the respondents). Seven respondents (25.9 percent) felt their advisory committees were "very effective" and only one principal said his advisory committee was "ineffective"; the latter was partially explained by the comment that the group had been appointed, but no further action was taken to follow-up. One respondent said that no use of advisory help was planned during the initial, "awareness" phase of the Career Education project.

Public Awareness of Career Education - (PACE) Questionnaire

This instrument was developed to determine public awareness of, and commitment to, Career Education in the Hazard Region. A yellow or blue version of the PACE instrument was sent to 500 residents who were randomly selected from the telephone directory. One hundred fifty five returns were received of which 77 were useable. A randomized follow-up of non-respondents was visually scanned and found to be similar to the mailed returns. Therefore, these ten additional respondents were added to the sample, making a total of 87. As would be expected, relatively more responses were received from the more-populous counties, Knott, Perry and Letcher. The geographical distribution of respondents may be viewed on Figure 2.

Demographic racteristics of Respondents to the PACE Questionnaire

Respond s to the survey were predominately male (61%), married (78%), an average of 47 years of age with a high school education and more than three children, of which one was still in school. All respondents were Caucasian. Income levels were predominately in the $3,000 to $10,000-plus range (89.5%). These data appear on Table 7.

Figure 2

DISTRIBUTION OF RESPONDENTS
TO THE PACE SURVEY

Table 7. Characteristics of Respondents to the PACE Questionnaire

Characteristic	Percentage	Mean	S.D.	Range	Median	Mode
Age		47.0	15.21	15-87	47	44
Educational Level		11.8	4.04	1-21	12	12
Number Children		3.3	2.59	0-12	3	2
Children in School		1.1	1.36	0-6	1	0
Sex						
Male	61%					
Female	39%					
Marital Status						
Married	78%					
Single, divorced or widowed	22%					
Family Annual Income						
Less than $3,000	10.5%					
$3,000 to $10,000	29.0%					
Over $10,000	60.5%					

Responses by Hazard Region Citizens to the PACE Survey

Respondents reacted to 56 statements regarding Career Education in their community. The items which evoked the greatest agreement were, in declining order:

-The school my children attend should have a Career Education program.

-School programs should help get people ready to work.

-The school counselor is important in setting up a Career Education program.

-The major purpose of Career Education is to help young people look into the many ways to earn a living that would be interesting and fulfilling.

-Work experience is an important part of Career Education.

-Workers from business and industry can be valuable sources of information about jobs for the Career Education program.

Items with which respondents most strongly disagreed, are, in declining order:

-Career Education is for those students who are not able to do the work in regular courses.

-Students know enough about future jobs to make sound career decisions.

-People know about the Career Education program in our county.

-Career Education for girls should be to prepare for a job as a secretary, nurse or teacher.

-Our teachers are prepared to teach in Career Education programs.

All responses are listed in Table 8.

NOTE: Statements appear as they were presented on the PACE instruments. This is designed to help the reader locate specific items on subsequent tables where they appear only as numbered items.

Responses to the PACE Survey Items According to Age

In designing the study, it was hypothesized that no significant difference existed between older and younger citizens regarding items on the PACE questionnaire. Fourteen items proved to be significant at the .01 or .05 levels of confidence; therefore, the null hypothesis was not accepted. Those statements which were significant at the .01 level of confidence are as follows:

-Career Education is more important for boys than girls.

-The major purpose of Career Education is to help young people look into the many ways to earn a living that would be interesting and fulfilling.

-The classes in our school help the children to make wise decisions about their careers.

-Career Education takes place from grade ten through college.

Table 8. Responses to the PACE Survey by Selected Citizens of the Hazard Region[a]

Item (Variable)	Mean	Standard Deviation
1. Career ("World of Work") Education is the same as Vocational Education.	3.18	1.19
2. Career Education begins when children are ready to choose an occupation.	3.21	1.36
3. The school counselor is important in setting up a Career Education program.	1.73	.73
4. A high school student should be prepared to enter a job after graduation	2.28	1.22
5. If given a choice of teachers, I want my children to have a teacher who practices Career Education.	1.88	.83
6. I would like to see more about Career Education in the newspaper.	1.82	.69
7. At the elementary level, Career Education should help children know more about different kinds of jobs.	1.98	1.01
8. Career Education is a part of every school in our county.	3.05	1.11
9. New rooms and equipment are needed in most schools to start a Career Education program.	2.34	1.22
10. The superintendent and principal(s) in our school(s) believe that having a successful Career Education program is very important.	2.41	.95
11. The classes in our school help the children to make wise decisions about their careers.	2.77	1.27
12. Students now know enough about future jobs to make sound career decisions.	3.68	1.12
13. Practical experiences are necessary for a good Career Education program.	1.93	.73
14. People know about the Career Education program in our county.	3.59	1.04
15. Our students know about the different amounts of money that can be earned in different kinds of jobs	3.19	1.10

Table 8. Continued

Item (Variables)		Mean	Standard Deviation
16.	Employers know about the Career Education Program in our school(s).	3.07	1.16
17.	The teacher should be able to give students information about jobs.	1.80	.73
18.	Work experience is an important part of Career Education.	1.77	.77
19.	Career Education is concerned with helping each student have a better feeling about himself and his own importance.	1.93	.81
20.	Career Education is for those students who are not able to do the work in regular courses.	3.71	1.27
21.	Special emphasis in Career Education is aimed at helping the student do well in his career.	1.88	.77
22.	Helping children know about jobs should be an important part of classes from kindergarten through grade six.	2.70	1.30
23.	Looking into different kinds of jobs should be made part of grades seven through nine.	2.19	.86
24.	Career Education takes place from grade ten through college.	2.83	1.15
25.	Groups of citizens should be involved in planning Career Education programs.	1.93	.86
26.	The major purpose of Career Education is to help young people learn how to make good (wise) choices that are made freely and on their own.	1.83	.70
27.	Studying about jobs helps a student prepare for a good job.	1.88	.59
28.	A Career Education program helps our students get along with others.	2.10	.88
29.	Career ("World of Work") Education should be a separate course.	2.62	1.15

Table 8. Continued

Item (Variable)	Mean	Standard Deviation
30. Schools prepare students for work.	2.29	1.19
31. Career Education should be part of all courses in the school.	2.21	1.12
32. Courses in high school should be grouped around similar kinds of jobs.	2.12	.97
33. The school my children attend should have a Career Education program.	1.54	.51
34. More TV and radio time should be given to the Career Education program in our county.	2.32	1.01
35. It is the school's job to teach students how to make wise job choices.	2.34	1.13
36. In teaching Career Education every class emphasizes what people do in their jobs.	2.36	.96
37. Local citizens help plan and measure success of our Career Education programs.	2.45	.99
38. Students help plan and measure success of our Career Education programs.	2.36	1.03
39. Parents' desires for their children are considered in preparing the local school program of courses.	2.66	1.15
40. Career Education is more important for boys than girls.	3.39	1.24
41. Our teachers are prepared to teach in Career Education programs.	3.22	1.08
42. Our students have the chance to compare their abilities, interests, and needs with the requirements of various types of jobs.	2.71	1.26
43. Parents know about Career Education activities which happen in the school.	3.07	1.20
44. Career Education helps students learn about and choose a job.	1.81	.59
45. The major purpose of Career Education is to help young people discover their own interests and abilities	1.81	.55

Table 8. Continued

Item (Variable)	Mean	Standard Deviation
46. Career Education for girls should be to prepare for a job as a secretary, nurse or teacher.	3.29	1.26
47. Career Education helps students know about their own interests and abilities.	1.93	.64
48. Career Education is meant for all students in a school.	2.43	1.19
49. Workers from business and industry can be valuable sources of information about jobs for the Career Education program.	1.78	.53
50. The major purpose of Career Education is to help young people look into the many ways to earn a living that would be interesting and fulfilling.	1.74	.45
51. Career Education helps students develop good attitudes toward work.	1.95	.62
52. Future teachers who are finishing college should be ready to teach Career Education.	2.05	.91
53. It is important that parents help plan Career Education programs.	2.00	.66
54. Helping students get a job is an important part of any Career Education program.	2.07	.89
55. Finding out what former students are doing is an important part of any Career Education program.	1.98	.68
56. [illegible] programs should help get people ready for work.	1.64	.49

[a]Responses were made on a five-point scale with 1 = Strongly Agree, 5 = Strongly Disagree.

Those items which were significant at the .05 level of confidence are as follows:

-The school my children attend should have a Career Education program.

-Parents know about Career Education activities which happen in the school.

-Schools prepare students for work.

-Helping children know about jobs should be an important part of classes from kindergarten through grade six.

-Career Education for girls should be to prepare for a job as a secretary, nurse, or teacher.

-Career Education is concerned with helping each student have a better feeling about himself and his own importance.

-Career Education helps students know about their own interests and abilities.

-Students now know enough about future jobs to make sound career decisions.

-In teaching Career Education every class emphasizes what people do in their jobs.

-Our teachers are prepared to teach in Career Education programs.

A complete analysis of the PACE survey, based on age categories may be seen in Table 9.

Responses to the PACE Survey According to Educational Level

It was further hypothesized that no significant difference existed between citizens with grade school education, high school education and education beyond high school, as regarded their response to the PACE survey. Fifteen items were found to be significant at the .05 level of confidence, thereby not accepting the null hypothesis.

Those items wherein citizens having grade school education differed from those having high school education are as follows:

-New rooms and equipment are needed in most schools to start a Career Education program.

Table 9. Responses to the PACE Survey by Hazard Region Residents, According to Age[a]

Item (Variable)	AGE LEVEL: Age 35 or above		Less than 35		F		T
	$\bar{X}$	SD	$\bar{X}$	SD	Value	DF	Value
1	3.24	1.28	3.22	.83	2.36	41	.04
2	3.24	1.39	3.50	1.07	1.70	39	.57
3	1.76	.79	1.67	.50	2.51	40	.42
4	2.00	1.47	3.00	1.50	2.05	39	1.88
5	1.81	.82	2.00	.93	1.27	38	.52
6	1.85	..12	1.78	.22	1.14	40	.28
7	1.81	.15	2.56	.50	3.38	39	1.42
8	2.97	1.20	3.22	.83	2.09	39	.72
9	2.24	1.17	2.89	1.36	1.35	40	1.30
10	2.30	.95	2.89	.31	1.05	40	1.67
11	2.59	1.27	3.67	.87	2.14	39	2.94**
12	3.58	1.09	4.22	.67	2.68	40	2.21*
13	1.94	.79	1.89	.20	1.72	40	.21
14	3.58	1.06	3.67	1.12	1.11	40	..22
15	3.09	1.12	3.33	1.12	1.00	39	.57
16	3.06	1.19	3.75	1.17	1.04	38	.41

Table 9. Continued

Item (Variable)	AGE LEVEL: Age 35 or Above $\bar{X}$	Age 35 or Above SD	Less than 35 $\bar{X}$	Less than 35 SD	F Value	df	T Value
17	1.76.	.83	2.00	0.00	0.00	40	1.68
18	1.73	.63	2.00	1.23	3.83*	40	0.65
19	1.72	.63	2.63	1.06	2.80	38	2.32*
20	3.68	1.40	3.89	.93	2.28	38	.53
21	1.81	.73	2.13	.84	1.14	38	.96
22	2.44	1.13	3.67	1.41	1.55	39	2.40*
23	2.00	.52	2.78	1.30	6.35	38	1.75
24	3.00	1.17	2.00	.76	2.41	36	2.92**
25	2.00	.88	1.67	.87	1.03	39	1.02
26	1.88	.75	1.75	.46	2.63	38	.59
27	1.88	.61	1.89	.60	1.03	39	.06
28	1.97	.65	2.75	1.39	4.61**	38	1.55
29	2.57	1.14	2.44	1.01	1.25	37	.31
	2.13	1.11	3.25	1.17	1.11	36	2.43*
31	2.30	1.21	2.11	.93	1.69	37	.50
32	2.03	.89	2.11	.93	1.09	37	.22

Table 9 . . Continued

Item (Variable)	AGE LEVEL: Age 35 or Above $\bar{X}$	Age 35 or Above SD	Less than 35 $\bar{X}$	Less than 35 SD	F Value	df	T Value
33	1.46	.51	1.88	.35	2.06	34	2.61*
34	2.14	.95	2.56	.88	1.17	36	1.22
35	2.10	1.08	2.56	.88	1.50	36	1.27
36	2.27	.91	3.00	.87	1.10	37	2.20
37	2.29	.94	2.67	.87	1.17	35	1.12
38	2.30	1.06	2.33	.71	2.23	37	.11
39	2.60	1.13	3.11	1.17	1.06	37	1.16
40	3.07	1.16	4.44	.53	4.87*	36	4.94**
41	3.03	1.09	3.78	.83	1.70	36	2.17*
42	2.67	1.30	2.89	.93	1.95	37	.57
43	2.97	1.27	3.67	.50	6.48*	37	2.45*
44	1.73	.52	2.22	.67	1.64	37	2.02
45	1.77	.57	1.89	.33	2.91	37	.80
46	3.13	1.20	4.11	1.05	1.29	37	2.36*
47	1.80	.48	2.00	0.00	0.00	37	2.26*
48	2.37	1.22	2.67	1.32	1.18	37	.61
49	1.79	.49	1.89	.60	1.50	36	.44

Table 9. Continued

Item (Variable)	AGE LEVEL: Age 35 or Above $\bar{X}$	Age 35 or Above SD	Less than 35 $\bar{X}$	Less than 35 SD	F Value	df	T Value
50	1.67	.48	2.00	0.00	0.00	37	3.81**
51	1.97	.72	2.00	0.00	0.00	37	.25
52	2.03	.96	2.33	.71	1.86	37	1.02
53	1.97	.62	2.11	.78	1.62	37	.51
54	2.03	.96	2.33	.71	1.86	37	1.02
55	2.00	.79	2.00	0.00	0.00	37	0.00
56	1.60	.50	1.89	.33	2.23	37	2.01

*Significant at .05 level of confidence.
**Significant at .01 level of confidence.

[a]Responses were on a five point scale with 1 = Strongly Agree, 5 = Strongly Disagree

-People know about the Career Education program in our county.

-Career Education should be part of all courses in the school.

Those statements which were significant between grade school level respondents and those respondents having education beyond high school, are as follows:

-New rooms and equipment are needed in most schools to start a Career Education program.

-Career Education is for those students who are not able to do the work in regular courses.

-A high school student should be prepared to enter a job after graduation.

-Schools prepare students for work.

-People know about the Career Education program in our county.

-Helping students get a job is an important part of any Career Education program.

-Career Education should be part of all courses in the school.

Statements of significant difference between citizens with high school versus those with education beyond high school are as follows:

-A high school student should be prepared to enter a job after graduation.

-Career Education is for those students who are not able to do the work in regular courses.

-Career ("World of Work") Education should be a separate course.

-The major purpose of Career Education is to help young people discover their own interests and abilities.

-Career Education helps students learn about and choose a job.

-Helping students get a job is an important part of any Career Education program.

-Career Education begins when children are ready to choose an occupation.

-The teacher should be able to give students information about jobs.

-The major purpose of Career Education is to help young people learn how to make good (wise) choices that are made freely and on their own.

-Career Education helps students develop good attitudes toward work.

-School programs should help get people ready for work.

Specific data regarding responses according to education level of citizens are found in Table 10.

Responses to the PACE Instrument According to Sex

Most statements on the PACE scale were not significantly affected by the sex of the respondent. Only two items caused the researchers to not accept the null hypothesis. These statements are as follows:

-Career ("World of Work") Education should be a separate course.

-Looking into different kinds of jobs should be made part of grades seven through nine.

The total list of statements including means and test scores are seen in Table 11.

Response to the PACE Instrument According to Marital Status

It was hypothesized that no significant difference existed between married citizens and those who were single, divorced, or widowed, in regard to their response to the PACE instrument. This null hypothesis was not accepted in the following three items:

-Career ("World of Work") Education should be a separate course.

-The classes in our school help the children to make wise decisions about their careers.

-Career Education is meant for all students in a school.

The complete listing of statistics relating to this marital status is portrayed in Table 12.

Responses to the PACE Survey, According to Family Size of Respondents

The hypothesis that no significant difference existed between respondents having no children, those with one to two children, and those having three

Table 10. Responses to the PACE Survey by Selected Residents of the Hazard Region, According to Level of Educational Attainment[a]

Item (Variable)	LEVEL OF EDUCATION ATTAINED						T VALUES		
	"A." Up to 8th Grade		"B." Grades 9-12		"C." Beyond Grade 12		A vs B	A vs C	B vs C
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD			
1	2.33	1.16	3.04	1.21	3.73	1.03	1.00	1.95	1.93
2	3.00	1.00	2.96	1.37	3.93	1.14	.06	1.42	2.35*
3	1.67	.58	1.71	.75	1.80	.78	.11	.34	.36
4	1.33	.58	1.74	.92	3.13	1.19	1.06	3.97**	3.86**
5	1.33	.58	1.87	.97	1.93	.62	1.38	1.60	.23
6	1.67	1.16	1.83	.82	1.87	.35	.24	.30	.18
7	1.67	.58	2.13	1.18	1.80	.81	1.12	.33	1.00
8	2.33	1.53	2.87	1.14	3.40	.99	.59	1.16	1.52
9	1.00	0.00	2.25	1.19	2.87	1.19	5.15**	6.09**	1.58
10	3.33	2.08	2.38	.88	2.33	.82	.79	.82	.15
11	2.00	1.00	2.70	1.40	3.20	1.01	1.08	1.89	1.29
12	3.67	1.53	3.63	1.14	3.87	.83	.05	.22	.76
13	1.33	.58	1.92	.65	2.07	.88	1.62	1.82	.57
14	4.67	.58	3.54	1.10	3.47	.99	2.80*	2.86*	.22
15	[illegible]	1.16	3.21	1.22	3.14	.95	.76	.67	.18
16	3.33	1.16	3.09	1.31	3.07	1.00	.34	.36	.04

Table 10. Continued

Item (Variable)	LEVEL OF EDUCATION ATTAINED						T VALUE		
	"A." Up to 8th Grade		"B." Grades 9-12		"C." Beyond Grade 12		A vs B	A vs C	B vs C
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD			
17	1.67	.58	1.63	.77	2.13	.64	.11	1.25	2.23*
18	1.33	.58	1.75	.85	1.93	.70	1.11	1.58	.73
19	1.67	.58	1.83	.94	2.07	.62	.41	1.09	.96
20	2.00	1.00	3.45	1.37	4.47	.64	2.25	4.11**	3.01**
21	1.67	.58	1.70	.77	2.21	.80	.08	1.38	1.94
22	3.33	1.53	2.70	1.36	2.60	1.18	.69	.79	.23
23	2.00	0.00	2.14	.77	2.27	.96	.83	1.07	.44
24	2.00	1.00	2.86	1.25	2.85	1.07	1.36	1.30	.04
25	1.33	.58	1.87	.87	2.13	.92	1.41	1.96	.89
26	1.33	.58	1.70	.56	2.21	.80	1.03	2.22	2.13*
27	1.33	.58	1.83	.72	2.07	.26	1.35	2.16	1.47
28	1.67	.58	2.09	1.00	2.29	.73	1.07	1.60	.70
29	2.57	.79	2.00	.94	3.21	1.12	1.53	1.52	3.23**
30	1.71	.49	2.24	1.25	2.92	1.26	1.47	3.07**	1.49
31	1.57	.54	2.41	1.37	2.29	.91	2.16*	2.25*	.31
32	2.43	.98	1.82	.95	2.14	.77	1.39	.68	1.03

. . . . Continued

Item (Variable)	LEVEL OF EDUCATION ATTAINED						T VALUE		
	"A." Up to 8th Grade		"B." Grades 9-12		"C." Beyond Grade 12		A vs B	A vs C	B vs C
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD			
33	1.43	.54	1.44	.51	1.75	.45	.04	1.34	1.71
34	2.43	.98	1.94	.93	2.43	.94	1.13	0.00	1.44
35	2.50	1.38	2.18	1.07	2.74	.95	.52	.58	.09
36	2.29	.76	2.59	1.18	2.36	.25	.75	.21	0.66
37	2.29	.49	2.40	1.06	2.43	1.02	.35	.44	.07
38	2.71	1.25	2.00	.87	2.50	.94	1.38	.40	1.53
39	2.43	.98	2.82	1.33	2.78	1.05	.80	.77	.09
40	2.86	1.07	3.38	1.15	3.79	1.25	1.05	1.77	.93
41	2.86	.69	3.13	1.09	3.57	1.16	.71	1.76	1.08
42	2.43	1.27	2.59	1.28	3.07	1.14	.28	1.13	1.11
43	2.71	.76	3.00	1.32	3.57	1.09	.67	2.10	1.32
44	1.86	.38	1.59	.51	2.14	.66	1.43	1.26	2.57*
45	2.14	.69	1.53	.51	1.93	.21	2.12	.79	2.78**
46	3.14	.90	3.29	1.31	3.50	1.35	.32	.72	.43
47	1.71	.49	1.82	.53	1.93	.27	.49	1.08	.72

Table 10. Continued

Item (Variable)	LEVEL OF EDUCATION ATTAINED						T VALUE		
	"A." Up to 8th Grade		"B." Grades 9-12		"C." Beyond Grade 12		A vs B	A vs C	B vs C
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD			
48	2.00	.58	2.41	1.42	2.57	1.77	1.01	1.45	.34
49	1.86	.38	1.75	.58	1.86	.54	.53	0.00	.53
50	1.57	.54	1.71	.47	1.86	.36	.58	1.27	1.01
51	1.86	.38	1.75	.58	1.86	.54	.53	0.00	.53
52	2.14	.69	1.82	.81	2.43	1.09	.98	.73	1.72
53	2.29	.76	1.94	.75	1.93	.48	1.02	1.14	.06
54	1.71	.49	1.82	.64	2.64	1.15	.45	2.59*	2.38*
55	2.43	1.13	1.82	.39	2.07	.62	1.38	.78	1.30
56	1.71	.49	1.53	.51	1.86	.36	.83	.69	2.07*

[a]Responses were on a five point scale, 1 = Strongly Agree, 5 = Strongly Disagree
*Significant at .05 level of confidence.
**Significant at .01 level of confidence.

Table 11. Responses to the PACE Survey by Selected Residents of the Hazard Region, According to Sex[a]

Item (Variable)	SEX: Male $\bar{X}$	Male SD	Female $\bar{X}$	Female SD	F Value	df	T Value[b]
1	3.24	1.36	3.22	.94	2.09	41	.05
2	3.04	1.46	3.61	1.09	1.79	39	1.42
3	1.58	.50	1.94	0.94	3.47**	40	1.48
4	2.29	1.23	2.11	1.22	1.02	39	0.45
5	1.68	0.78	2.06	0.87	1.25	38	1.41
6	1.75	0.74	1.94	0.64	1.33	40	0.91
7	1.96	1.04	2.00	1.06	1.04	39	0.12
8	3.17	1.20	2.82	1.02	1.41	39	0.99
9	2.42	1.35	2.33	1.09	1.55	40	0.22
10	2.46	0.98	2.39	0.98	1.00	40	0.23
11	2.92	1.32	2.71	1.21	1.18	39	0.53
12	3.83	1.17	3.56	0.86	1.86	40	0.89
13	1.88	0.80	2.00	0.69	1.35	40	0.54
14	3.58	1.02	3.61	1.15	1.26	40	0.08
15	3.42	1.02	2.76	1.15	1.27	39	1.88
16	2.95	1.17	3.28	1.18	1.01	38	0.86

Table 11. Continued

Item (Variable)	SEX: Male $\bar{X}$	Male SD	Female $\bar{X}$	Female SD	F Value	df	T Value[b]
17	1.83	0.87	1.78	0.5[illegible]	2.51	40	0.25
18	1.75	0.68	1.83	0.92	1.87	40	0.32
19	1.86	0.64	1.94	1.00	2.44	38	0.30
20	3.83	1.34	3.59	1.28	1.09	38	0.57
21	1.86	0.83	1.89	0.76	1.21	38	0.10
22	2.74	1.32	2.67	1.28	1.06	39	0.18
23	2.39	1.00	1.88	0.33	8.85**	38	2.30*
24	2.59	1.22	3.06	1.06	1.32	36	1.27
25	1.83	0.78	2.06	1.00	1.65	39	0.80
26	1.81	0.66	1.89	0.76	1.30	38	0.31
27	1.83	0.65	1.94	0.54	1.45	39	0.64
28	2.18	0.91	2.06	0.87	1.08	38	0.45
29	2.88	1.17	1.93	0.62	3.59*	37	3.33**
30	2.50	1.18	2.14	1.23	1.09	36	1.88
31	2.36	1.19	2.07	1.07	1.22	37	0.78
32	2.24	0.97	1.71	0.61	2.52	37	2.07*

Table 11. Continued

Item (Variable)	SEX						
	Male		Female		F Value	df	T Value[b]
	$\bar{X}$	SD	$\bar{X}$	SD			
33	1.60	0.50	1.45	0.52	1.09	34	0.78
34	2.40	1.08	1.92	0.49	4.79**	36	1.86
35	2.29	1.08	2.07	1.00	1.18	36	0.64
36	2.60	0.96	2.14	0.86	1.23	37	1.52
37	2.48	1.05	2.17	0.58	3.28*	35	1.17
38	2.48	1.09	2.00	0.68	2.55	37	1.70
39	2.64	1.11	2.86	1.23	1.22	37	0.55
40	3.44	1.16	3.31	1.31	1.29	36	0.31
41	3.12	1.20	3.38	0.77	2.45	36	0.82
42	2.72	1.21	2.71	1.27	1.10	37	0.01
43	3.16	1.18	3.07	1.21	1.05	37	0.22
44	1.92	0.64	1.71	0.47	1.87	37	1.15
45	1.84	0.47	1.71	0.61	1.67	37	0.67
46	3.36	1.19	3.36	1.34	1.27	37	0.01
47	1.84	0.37	1.86	0.54	2.04	37	0.11

Table 11. Continued

Item (Variable)	SEX: Male $\bar{X}$	Male SD	Female $\bar{X}$	Female SD	F Value	df	T Value[b]
48	2.60	1.30	2.14	1.10	1.38	37	1.17
49	1.88	0.44	1.69	0.63	2.06	36	0.96
50	1.80	0.41	1.64	0.50	1.48	37	1.01
51	2.04	0.68	1.86	0.54	1.60	37	0.93
52	2.28	1.02	1.79	0.58	3.11*	37	1.93
53	2.04	0.68	1.93	0.62	1.20	37	0.52
54	2.20	1.00	1.93	0.73	1.88	37	0.97
55	2.08	0.81	1.86	0.36	5.00**	37	1.18
56	1.68	0.48	1.64	0.50	1.09	37	0.23

[a]Responses were on a five point scale, 1 = Strongly Agree, 5 = Strongly Disagree.

[b]Significance at the .05 level indicated by an asterisk(*);
Significance at the .01 level is shown by two asterisks(**).

Table 12. Responses to the PACE Questionnaire by Selected Residents of the Hazard Region, According to Marital Status[a]

Item (Variable)	MARITAL STATUS: Not Married (Single Divorced or Widowed) $\bar{X}$	SD	Married $\bar{X}$	SD	F Value	df	T Value
1	3.20	1.10	3.24	1.22	1.24	41	0.07
2	2.75	1.50	3.35	1.32	1.30	39	0.77
3	1.80	0.45	1.73	0.77	2.96	40	0.30
4	2.60	1.34	2.17	1.21	1.24	39	0.68
5	1.75	0.50	1.86	0.87	3.01	38	0.38
6	2.20	1.10	1.78	0.63	3.03	40	0.83
7	2.20	1.10	1.94	1.04	1.11	39	0.49
8	3.60	0.89	2.94	1.15	1.64	39	1.48
9	2.00	0.00	2.43	1.30	0.00	40	2.02
10	2.40	0.90	2.43	0.99	1.22	40	0.08
11	3.60	0.55	2.72	1.30	5.64	39	2.68*
12	4.00	0.71	3.68	1.08	2.34	40	0.89
13	2.00	1.23	1.92	0.68	3.22*	40	0.15
14	3.60	0.89	3.59	1.09	1.49	40	0.01
15	3.40	0.89	3.11	1.14	1.63	39	0.65
16	3.50	1.00	3.06	1.19	1.43	38	0.83

Table 12. Continued

Item (Variable)	MARITAL STATUS: Not Married (Single, Divorced or Widowed) $\bar{X}$	SD	Married $\bar{X}$	SD	F Value	df	T Value
17	1.60	0.55	1.84	0.76	1.95	40	0.86
18	1.80	0.45	1.78	0.82	3.37	40	0.07
19	1.75	0.50	1.92	0.84	2.83	38	0.58
20	3.60	1.14	3.74	1.34	1.37	38	0.26
21	1.75	0.50	1.89	0.82	2.69	38	0.49
22	3.00	1.41	2.67	1.29	1.21	39	0.50
23	2.60	1.34	2.11	0.72	3.49*	38	0.79
24	2.80	1.10	2.79	1.19	1.19	36	0.02
25	2.80	1.30	1.81	0.75	3.03	39	1.67
26	1.75	0.50	1.86	0.72	2.09	38	0.40
27	2.00	0.00	1.86	0.64	0.00	39	1.30
28	2.00	0.00	2.14	0.93	0.00	38	0.90
29	2.00	0.58	2.81	1.20	4.32*	37	2.84**
30	2.25	1.29	2.42	1.17	1.21	36	0.40
31	1.85	1.00	2.46	1.17	1.41	37	1.72
32	1.69	0.63	2.23	1.00	2.28	37	2.11

Table 12. Continued

Item (Variable)	MARITAL STATUS: Not Married (Single, Divorced or Widowed) $\bar{X}$	SD	Married $\bar{X}$	SD	F Value	df	T Value
33	1.40	0.52	1.62	0.50	1.08	34	1.13
34	2.00	0.71	2.36	1.04	2.15	36	1.26
35	2.08	0.86	2.28	1.14	1.74	36	0.62
36	2.31	0.86	2.50	0.99	1.34	37	0.63
37	2.67	0.78	2.24	0.97	1.55	35	1.44
38	2.08	0.64	2.42	1.10	2.96	37	1.24
39	2.92	1.19	2.62	1.13	1.10	37	0.77
40	3.25	1.36	3.46	1.14	1.42	36	0.47
41	3.33	0.78	3.15	1.19	2.34	36	0.55
42	2.23	1.17	2.96	1.18	1.03	37	1.84
43	2.92	1.12	3.23	1.21	1.18	37	0.79
44	1.69	0.48	1.92	0.63	1.71	37	1.27
45	1.62	0.51	1.88	0.52	1.04	37	1.56
46	3.38	1.26	3.35	1.23	1.05	37	0.09
47	1.77	0.60	1.88	0.33	3.38**	37	0.65

Table 12. Continued

Item (Variable)	MARITAL STATUS: Not Married (Single, Divorced or Widowed) $\bar{X}$	SD	Married $\bar{X}$	SD	F Value	df	T Value
48	1.85	0.80	2.73	1.31	2.69	37	2.60*
49	1.67	0.65	1.88	0.43	2.28	36	1.06
50	1.69	0.48	1.77	0.43	1.25	37	0.49
51	1.85	0.56	2.04	0.66	1.42	37	0.96
52	1.85	0.56	2.23	1.03	3.46*	37	1.51
53	1.92	0.64	2.04	0.66	1.07	37	0.52
54	1.85	0.69	2.23	0.99	2.08	37	1.41
55	1.85	0.38	2.08	0.80	4.49**	37	1.23
56	1.62	0.51	1.69	0.47	1.16	37	0.46

[a]Responses were on a five point scale, 1 = Strongly Agree, 5 = Strongly Disagree
*Significant at .05 level of confidence.
**Significant at .01 level of confidence.

or more children, was not accepted for 19 statements on the PACE survey.

These items and the categories in which they fall are as follows:

(No children versus one to two children)

-Career Education takes place from grade ten through college.

-Career Education is more important for boys than girls.

-Career Education is meant for all students in a school.

-The school counselor is important in setting up a Career Education program.

-New rooms and equipment are needed in most schools to start a Career Education program.

(No children versus three or more children)

-Career Education is more important for boys than girls.

-The major purpose of Career Education is to help young people look into the many ways to earn a living that would be interesting and fulfilling.

-Career ("World of Work") Education should be a separate course.

-Career Education is for those students who are not able to do the work in regular courses.

-Career Education is concerned with helping each student have a better feeling about himself and his own importance.

-Work experience is an important part of Career Education.

-Career Education helps students know about their own interests and abilities.

-Students now know enough about future jobs to make sound career decisions.

-Studying about jobs helps a student prepare for a good job.

-Special emphasis in Career Education is aimed at helping the student do well in his career.

-Career Education helps students learn about and choose a job.

-The major purpose of Career Education is to help young people learn how to make good (wise) choices that are made freely and on their own.

(One to two children versus three or more children)

-The classes in our school help the children to make wise decisions about their careers.

-Students now know enough about future jobs to make sound career decisions.

-Practical experiences are necessary for a good Career Education program.

-Employers know about the Career Education program in our school(s).

Complete data on responses according to family size can be seen on Table 13.

Responses to the PACE Survey According to Children in School

The hypothesis that no significant difference existed between citizens responding to the PACE questionnaire, according to their having children in school or not,was accepted for all statements except the following two items:

-Career ("World of Work") Education should be a separate course.

-Career Education is a part of every school in our county.

A complete listing of statements can be viewed in Table 14.

Responses to the PACE Survey According to Levels of Income

It was hypothesized that no significant difference existed between responses to the PACE survey based on levels of annual income. Fourteen statements were found to be significant at the .05 level of confidence in one or more of the following categories:

(Less than $3,000 vs. $3,000-$10,000)

-Studying about jobs helps a student prepare for a good job.

-The major purpose of Career Education is to help young people learn how to make good (wise) choices that are made freely and on their own.

-I would like to see more about Career Education in the newspapers.

-Career Education takes place from grade ten through college.

-If given a choice of teachers, I want my children to have a teacher who practices Career Education.

-The school counselor is important in setting up a Career Education program.

-At the elementary level, Career Education should help children know more about different kinds of jobs.

Table 13. Responses to the PACE Survey by Selected Residents of the Hazard Region, According to Size of Family[a]

Item (Variable)	SIZE OF FAMILY						T VALUES		
	No Children		One to Two Children		Three or More Children		None vs One to Two	None vs Three or More	One to Two vs Three or More
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD			
1	3.33	1.16	3.41	1.14	3.00	1.28	.11	.46	1.05
2	2.00	0.00	3.64	1.29	3.00	1.32	5.94	3.12	1.50
3	2.00	0.00	1.64	0.79	1.82	0.73	2.16*	1.00	0.77
4	3.67	1.53	2.18	1.22	2.00	1.03	1.61	1.81	0.5
5	2.00	0.00	1.77	0.81	1.94	0.93	1.31	0.27	0.57
6	2.00	0.00	1.81	0.73	1.82	0.73	1.16	1.00	0.02
7	1.67	0.58	2.10	1.22	1.88	0.86	1.00	0.55	0.63
8	3.67	0.58	3.09	1.02	2.81	1.33	1.45	1.82	0.70
9	2.00	0.00	2.59	1.33	2.18	1.19	2.08*	0.61	1.03
10	2.00	1.00	2.64	1.00	2.24	0.97	1.04	0.38	1.29
11	3.33	0.58	3.18	1.26	2.25	1.18	0.35	2.43	2.33*
12	4.33	0.58	4.05	0.79	3.18	1.19	0.77	2.63*	2.61*
13	2.33	1.53	2.09	0.75	1.65	0.49	0.27	0.77	2.22*
14	3.67	0.58	3.77	1.07	3.35	1.12	0.26	0.73	1.19
15	3.00	1.00	3.43	1.03	2.82	1.19	0.69	0.27	1.66
16	3.50	0.71	3.48	1.08	2.59	1.18	0.04	1.58	2.40*

Table 13. Continued

Item (Variable)	SIZE OF FAMILY						T VALUES		
	No Children		One to Two Children		Three or More Children		None vs One to Two	None vs Three or More	One to Two vs Three or More
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD			
17	2.00	0.00	1.82	0.73	1.76	0.83	1.16	1.17	0.21
18	2.00	0.00	1.86	0.99	1.65	0.49	0.65	2.95**	0.89
19	2.00	0.00	2.09	0.97	1.63	0.50	0.44	3.00**	1.93
20	4.67	0.58	4.00	1.20	3.13	1.36	1.59	3.17*	2.00
21	2.00	0.00	2.00	0.98	1.69	0.48	0.00	2.61*	1.30
22	3.00	1.73	3.00	1.38	2.25	1.00	0.00	0.73	1.94
23	3.00	1.73	2.14	0.77	2.07	0.59	0.85	0.92	0.31
24	2.00	0.01	3.10	1.21	2.53	1.13	4.07**	1.84	1.43
25	2.33	1.53	2.09	0.92	1.63	0.62	0.27	0.79	1.86
26	2.00	0.00	1.90	0.87	1.75	0.45	0.49	2.24*	0.74
27	2.00	0.00	2.00	0.69	1.69	0.48	0.00	2.61*	1.65
28	3.00	1.41	2.14	0.89	2.00	0.82	0.85	0.98	0.49
29	1.83	0.41	2.44	1.13	2.75	1.15	1.48	3.18**	0.69
30	2.60	0.89	2.67	1.32	2.21	1.22	0.11	0.83	0.91
31	2.17	1.17	2.56	1.24	2.17	1.13	0.62	0.00	0.82
32	1.67	0.21	2.22	0.32	2.08	0.93	1.44	1.47	0.37

Table 13. Continued

Item (Variable)	SIZE OF FAMILY						T VALUE		
	No Children		One to Two Children		Three or More Children		None vs One to Two	None vs Three or More	One to Two vs Three or More
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD			
33	1.80	0.45	1.78	0.44	1.41	0.50	0.09	1.72	2.03
34	2.40	0.89	2.33	0.87	2.17	1.01	0.14	0.52	0.47
35	2.67	1.03	2.56	1.01	1.96	1.02	0.21	1.50	1.50
36	2.67	0.82	2.44	1.01	2.38	0.97	0.47	0.75	0.18
37	2.60	0.89	2.78	0.83	2.17	0.94	0.37	0.96	1.78
38	2.17	0.41	2.22	0.83	2.38	1.14	0.17	0.73	0.42
39	3.00	1.27	3.00	1.00	2.54	1.18	0.00	0.80	1.11
40	4.50	0.55	3.22	1.20	3.17	1.19	2.79*	3.96**	0.10
41	3.50	0.84	3.22	1.09	3.13	1.14	0.56	0.89	0.21
42	2.83	0.98	2.78	1.09	2.67	1.34	0.10	0.34	0.24
43	3.17	0.75	3.00	1.00	3.17	1.34	0.37	0.00	0.39
44	2.00	0.00	2.11	0.78	1.71	0.55	0.43	2.60*	1.42
45	1.83	0.41	1.89	0.33	1.75	0.61	0.28	0.40	0.83
46	4.00	1.10	3.67	1.23	3.08	1.21	0.55	1.79	1.22
47	2.00	0.00	2.00	0.50	1.75	0.44	0.00	2.77*	1.32

Table 13. Con

Item (Variable)	SIZE OF FAMILY						F VALUE		
	No Children		One to Two Children		Three or More Children		None vs One to Two	None vs Three or More	Three or More
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD			
48	1.83	0.41	3.11	1.36	2.33	1.24	2.64*	1.65	1.49
49	1.67	0.52	1.89	0.60	1.83	0.49	0.76	0.68	0.28
50	2.00	0.00	1.78	0.44	1.67	0.48	1.51	3.39**	0.63
51	2.00	0.00	1.78	0.44	1.04	0.75	1.51	0.27	1.24
52	2.00	0.63	2.11	0.78	2.13	1.04	0.30	0.37	0.04
53	1.83	0.41	2.44	0.73	1.88	0.61	2.08	0.20	2.09
54	2.33	0.52	2.00	0.87	2.08	1.02	0.93	0.84	0.23
55	2.00	0.00	1.78	0.44	2.08	0.83	1.51	0.49	1.36
56	1.83	0.41	1.67	0.50	1.63	0.50	0.71	1.07	0.21

[a]Responses were on a five point scale, 1 = Strongly Agree, 5 = Strongly Disagree
*Significant at .05 level of confidence.
**Significant at .01 level of confidence.

Table 14. Responses to the PACE Survey by Selected Residents of the Hazard Region, According to Children in School

Item (Variable)	RESPONDENTS HAVING One or More Children in School		RESPONDENTS HAVING No Children in School		F Value	df	T Value
	$\bar{X}$	SD	$\bar{X}$	SD			
1	3.46	1.25	2.95	1.08	1.34	41	1.44
2	3.58	1.44	2.88	1.05	1.87	39	1.80
3	1.83	.87	1.61	.50	2.99	40	1.04
4	2.13	1.12	2.35	1.37	1.50	37	.57
5	1.74	.69	2.00	1.00	2.11	38	.93
6	1.88	.74	1.78	.65	1.31	40	.45
7	2.04	1.16	1.88	.86	1.83	39	.51
8	3.33	1.17	2.54	.94	1.54	39	2.26*
9	2.50	1.38	2.22	1.00	1.90	40	.75
10	2.50	.89	2.33	1.09	1.50	40	.53
11	2.83	1.37	2.82	1.13	1.47	39	.03
12	3.79	1.02	3.61	1.09	1.15	40	.55
13	1.83	.70	2.06	.80	1.31	40	.94
14	3.68	1.01	3.56	1.15	1.29	40	.20
15	3.30	1.06	2.94	1.16	1.19	39	1.02
16	3.04	1.26	3.18	1.07	1.38	38	.36

Table 14. Continued

Item (Variable)	RESPONDENTS HAVING One or More Children in School		RESPONDENTS HAVING No Children in School		F Value	df	T Value
	$\bar{X}$	SD	$\bar{X}$	SD			
17	1.79	.78	1.83	.71	1.21	40	.18
18	1.83	.96	1.72	.46	4.37**	40	.49
19	2.04	.96	1.69	.48	3.98**	38	1.55
20	3.96	1.20	3.38	1.41	1.38	38	1.36
21	1.92	.83	1.81	.75	1.22	38	.41
22	2.50	1.22	3.00	1.37	1.27	39	1.21
23	2.00	.72	2.44	.89	1.53	38	1.64
24	3.04	1.22	2.40	.99	1.54	36	1.79
25	1.92	.88	1.94	.90	1.04	39	.09
26	[illegible]	.85	1.81	.40	4.45**	38	.31
27	1.96	.69	1.76	.44	2.49	39	1.10
28	2.21	.98	2.00	.73	1.79	38	.77
29	2.95	1.05	1.88	.81	1.68	36	3.59**
30	2.32	1.17	2.27	1.10	1.13	35	.14
31	2.36	1.26	2.13	1.03	1.50	36	.64
32	2.27	.99	1.75	.68	2.08	36	1.93

Table 14. Continued

Item (Variable	PARENTS HAVING One or More Children in School		PARENTS HAVING No Children in School		F Value	df	T Value
	$\bar{X}$	SD	$\bar{X}$	SD			
33	1.50	.51	1.62	.51	1.02	33	.65
34	2.41	1.05	2.00	.76	1.94	35	1.37
35	2.27	1.16	2.13	.92	1.61	35	.41
36	2.45	1.01	2.31	.79	1.62	36	.49
37	2.32	0.95	2.36	0.84	1.26	34	0.13
38	2.45	1.14	2.00	0.52	4.90**	36	1.65
39	2.64	1.05	2.75	1.29	1.52	36	0.29
40	3.23	1.19	3.60	1.24	1.08	35	0.91
41	3.09	1.27	3.33	0.72	3.07*	35	0.74
42	2.55	1.26	2.88	1.15	1.21	36	0.84
43	3.14	1.28	3.06	1.06	1.46	36	0.19
44	1.77	0.53	1.81	0.40	1.72	36	0.26
45	1.73	0.46	1.88	0.62	1.84	36	0.81
46	3.32	1.09	3.31	1.40	1.66	36	0.01
47	1.77	0.43	0.94	0.44	1.06	36	1.15
48	2.55	1.34	2.31	1.14	1.38	36	0.58

Table 14. Continued

Item (Variable)	RESPONDENTS HAVING One or More Children in School		RESPONDENTS HAVING No Children in School		F Value	df	T Value
	$\bar{X}$	SD	$\bar{X}$	SD			
49	1.91	0.53	1.67	0.49	1.16	35	1.44
50	1.73	0.46	1.75	0.45	1.04	36	0.15
51	2.05	0.72	1.88	0.50	2.09	36	0.86
52	2.27	1.08	1.88	0.62	3.03*	36	1.44
53	2.05	0.72	1.94	0.57	1.58	36	0.51
54	2.09	1.02	2.00	0.63	2.60	36	0.34
55	2.14	0.83	1.81	0.40	4.28**	36	1.59
56	1.59	0.50	1.75	0.45	1.27	36	1.03

*Significant at the .05 level of confidence.
**Significant at the .01 level of confidence.
[a]Responses were on a five point scale, 1 = Strongly Agree, 5 = Strongly Disagree.

-Groups of citizens should be involved in planning Career Education programs.

-Career Education is meant for all students in a school.

(Less than $3,000 vs over $10,000)

-Studying about jobs helps a student prepare for a good job.

-I would like to see more about Career Education in the newspapers.

-Groups of citizens should be involved in planning Career Education programs.

-The major purpose of Career Education is to help young people learn how to make good (wise) choices that are made freely and on their own.

-If given a choice of teachers, I want my children to have a teacher who practices Career Education.

-The school counselor is important in setting up a Career Education program.

-At the elementary level, Career Education should help children know more about different kinds of jobs.

-Career Education takes place from grade ten through college.

-Career Education is more important for boys than girls.

-Career Education is meant for all students in a school.

($3,000-$10,000 vs over $10,000)

-Helping children know about jobs should be an important part of classes from kindergarten through grade six.

-New rooms and equipment are needed in most schools to start a Career Education program.

-A Career Education program helps our students get along with others.

-Career Education is concerned with helping each student have a better feeling about himself and his own importance.

A listing of all statistics related to responses by income levels can be viewed in Table 15.

Table 15. Responses to the PACE Survey by Selected Residents of the Hazard Region, According to Income Levels[a]

Item (Variable)	YEARLY INCOME LEVEL						T VALUES		
	"A" Less Than $3,000		"B" $3,000 to $10,000		"C" Over $10,000		"A" vs "B" Income Level	"A" vs "C" Income Level	"B" vs "C" Income Level
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD			
1	2.67	1.53	3.20	1.03	3.44	1.19	0.57	0.85	0.61
2	2.67	1.53	2.80	1.40	3.58	1.27	0.14	0.99	1.53
3	1.00	0.00	2.00	0.82	1.70	0.72	3.87**	3.05**	1.01
4	1.33	0.58	2.00	0.94	2.41	1.34	1.49	2.55	1.03
5	1.00	0.00	1.80	0.63	1.88	0.82	4.00**	5.53**	0.33
6	1.00	0.00	2.20	0.92	1.78	0.51	4.13**	7.98**	1.38
7	1.00	0.00	2.00	0.94	2.04	1.11	3.35**	4.76**	0.10
8	3.00	1.73	2.80	1.14	3.15	1.10	0.19	0.14	0.84
9	2.00	1.73	1.80	0.42	2.67	1.33	0.20	0.65	3.00**
10	3.00	2.00	2.20	0.92	2.48	0.85	0.67	0.44	0.84
11	2.33	1.16	2.30	1.16	3.11	1.28	0.04	1.09	1.84
12	4.33	0.58	3.30	1.06	3.89	1.01	2.19	1.15	1.52
13	1.67	0.58	1.90	0.88	2.00	0.73	0.54	0.92	0.32
14	4.33	0.58	3.40	0.97	3.56	1.12	2.06	1.96	0.42
15	3.33	1.16	2.60	1.08	3.42	1.07	0.93	0.13	2.06
16	3.00	1.73	2.70	1.16	3.28	1.14	0.28	0.27	1.34

Table 15. Continued

Item (Variable)	YEARLY INCOME LEVEL						T VALUES		
	"A" Less Than $3,000		"B" $3,000 to $10,000		"C" Over $10,000		"A" vs "B" Income Level	"A" vs "C" Income Level	"B" vs "C" Income Level
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD			
17	1.33	0.58	1.60	0.52	1.96	0.81	0.72	1.71	1.61
18	1.33	0.58	1.70	0.48	1.89	0.89	1.00	1.48	0.82
19	1.33	0.58	1.60	0.52	2.12	0.88	0.72	2.09	2.16*
20	2.33	1.16	3.50	1.18	4.08	1.16	1.53	2.47	1.32
21	1.33	0.58	1.70	0.48	2.04	0.89	1.00	1.87	1.45
22	3.33	2.08	2.00	0.47	3.00	1.33	1.10	0.27	3.33**
23	1.67	0.58	2.00	0.00	2.31	0.97	1.00	1.67	1.62
24	1.33	0.58	3.10	1.10	2.96	1.11	3.67**	4.00*	0.34
25	1.00	0.00	2.20	1.14	2.00	0.75	3.34**	6.81**	0.52
26	1.00	0.00	1.70	0.48	2.00	0.76	4.58**	6.55**	1.10
27	1.00	0.00	1.80	0.42	2.00	0.63	6.00**	8.06**	1.10
28	1.33	0.58	1.80	0.42	2.36	1.00	1.30	2.64	2.34*
29	2.20	0.45	2.25	1.06	2.79	1.23	0.14	1.71	1.30
30	1.80	0.45	2.25	1.06	2.33	1.19	1.23	1.55	0.20
31	1.60	0.55	2.42	1.44	2.21	1.03	1.69	1.79	0.43
32	2.60	0.90	1.92	0.90	2.00	0.94	1.43	1.32	0.25

Table 15. Continued

Item (Variable)	YEARLY INCOME LEVEL						T VALUES		
	"A" Less Than $3,000		"B" $3,000 to $10,000		"C" Over $10,000		"A" vs "B" Income Level	"A" vs "C" Income Level	"B" vs "C" Income Level
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD			
33	1.40	0.55	1.50	0.53	1.61	0.50	0.34	0.78	0.54
34	2.80	1.30	2.08	0.79	2.22	1.00	1.14	0.92	0.42
35	2.60	1.52	1.91	0.94	2.37	1.01	0.94	0.32	1.25
36	2.40	1.14	2.50	1.17	2.37	0.76	0.16	0.06	0.35
37	2.00	0.71	2.27	0.91	2.44	0.98	0.65	1.13	0.48
38	2.80	1.48	2.17	1.19	2.21	0.63	0.85	0.87	0.12
39	2.80	0.84	2.92	1.38	2.47	1.07	0.21	0.73	0.95
40	2.40	0.89	3.36	1.12	2.68	1.25	1.84	2.61*	0.72
41	3.00	0.71	3.36	1.12	3.11	1.20	0.79	0.25	0.59
42	2.40	1.52	2.83	1.34	2.63	1.12	0.56	0.32	0.44
43	3.20	0.84	3.0	1.50	3.11	1.15	0.35	0.21	0.21
44	1.60	0.55	1.83	0.58	1.79	0.42	0.79	0.72	0.23
45	2.00	0.71	1.75	0.62	1.74	0.45	0.69	0.79	0.06
46	2.40	1.14	3.75	1.14	3.32	1.20	2.23	1.58	1.01
47	1.60	0.55	1.83	0.39	1.84	0.38	0.87	0.93	0.06

Table 15. Continued

Item (Variable)	YEARLY INCOME LEVEL						T VALUES		
	"A" Less Than $3,000		"B" $3,000 to $10,000		"C" Over $10,000		"A" vs "B" Income Level	"A" vs "C" Income Level	"B" vs "C" Income Level
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD			
48	1.60	0.55	2.67	1.30	2.47	1.31	2.38*	2.26*	0.40
49	1.80	0.45	1.91	0.54	1.79	0.54	0.42	0.04	0.59
50	1.40	0.55	1.67	0.49	1.84	0.38	0.94	1.70	1.06
51	1.80	0.45	2.00	0.85	2.00	0.58	0.63	0.83	0.00
52	1.80	0.84	2.08	0.79	2.21	1.08	0.65	0.91	0.38
53	2.40	0.89	1.75	0.45	2.05	0.71	1.54	0.81	1.46
54	1.60	0.55	1.83	0.84	2.26	0.93	0.68	2.04	1.33
55	2.60	1.34	1.83	0.39	1.95	0.62	1.26	1.06	0.63
56	1.40	0.55	1.58	0.52	1.74	0.45	0.64	1.27	0.85

[a]Responses were on a five point scale with 1 = Strongly Agree, 5 = Strongly Disagree.
*Significant at .05 level of confidence.
**Significant at .01 level of confidence.

Chapter 4

FINDINGS
PROFESSIONAL STAFF COMPONENT

The Professional Staff Component was designed to (1) assess the effectiveness of various programs and activities in increasing the knowledge level or attitude of staff member concerning Career Education, (2) to identify factors (of staff and support groups) which contribute to the successful development of Career Education, (3) to identify personnel development techniques considered most effective, and (4) to identify problems encountered in implementing Career Education.

To attain the aforementioned purposes a design was utilized which included pre-post attitude and knowledge measures about Career Education, a questionnaire to ascertain characteristics and problems, and personal interview to further support the research findings.

The findings presented in this chapter were divided into two sections. The first section dealt with the findings obtained from a teacher questionnaire and personal interviews. The second section focused on an analysis of the Career Education Information Inventory. This instrument was administered through a pre-post design and was utilized to ascertain the teacher's level of knowledge and attitude toward Career Education (1) before the first summer workshops in 1973, (2) after the initial two week workshops, and (3) at the conclusion of one year of program operation.

Teacher Questionnaire

The teachers who were active in the Hazard Career Education program were asked to respond to a questionnaire designed to identify characteristics which contribute to the implementation of Career Education, as well as problems encountered in implementation, and techniques/strategies utilized to overcome such barriers. See Appendix C .

Lists of teacher names from the various local educational agencies were secured from the Regional Career Education Staff. A sample of names was selected to receive a mailed questionnaire. A second group was identified for personal interview. The interview was utilized to validate the mailed instrument as well as to gain some further information through a more extensive question/discussion period.

The responses of one hundred forty one personnel were tabulated through one or the other techniques. No attempt was made to force a teacher to complete the instrument, for data illicited from a teacher who had not actively worked in the Career Education program would detract from the value of other teacher data.

Therefore, the population of teachers was all professional education personnel in the Hazard Region. This was reduced to those in attendance at the summer workshops in Hazard or Jackson in 1973, approximately 225 in number. This list was further reduced by eliminating any teacher who did not participate in the Career Education program. However, it should be clarified that most did participate, as well as a great number of teachers who did not attend either workshop.

Results from the survey of professional personnel were cross tabulated by sex, age of respondent, level taught, and by subject area taught (academic/vocational). Because of small cell size, these cross tabulations could not be done simultaneously. However, the basic cross tabulations were done to provide more specific information about the professional staff.

The professional personnel were asked to respond to a series of questions in which they rank ordered a number of items for each question. The mean ranking for each item was calculated and, for purposes of presentation, the items were rank ordered from highest to lowest according to how the total group of respondents reacted to the item.

Presented in Table 16 were the mean rankings and rank orders by sex and total group for whom the personnel considered to be most effective in increasing their knowledge and understanding of Career Education.

Table 16. Teacher Ranking of who was the most Effective in Increasing their Knowledge and Understanding of Career Education by Sex (Individuals Ordered for Total)

Individual(s)	Mean Ranking & Rank Order					
	Males		Females		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Hazard Region Career Education Staff	1.72	1	[illegible]	1	1.63	1
System Career Education Coordinator	3.50	2	2.93	2	3.15	2
Teachers from other schools	3.55	3	3.72	3	3.64	3
Teachers in own system	3.82	4	3.96	4	3.90	4
University faculty	4.69	6	4.45	5	4.54	5
Out-of-state consultants	4.68	5	5.04	7	4.85	6
State Department of Education Personnel	4.97	7	4.85	6	4.89	7

As a total group and when considering the sexes independently, the teachers felt that the Regional Career Education Staff was the most effective in helping them gain knowledge about Career Education. Both groups were also consistent in their second, third, and fourth choices. At the lower end of the ranking, there was some disagreement. The females ranked university faculty and state department personnel higher than did the males. The males ranked consultants higher than did the females.

Table 17. Teacher Ranking of who was the most Effective in Increasing their Knowledge and Understanding of Career Education by Teacher Age

Individual(s)	Mean Ranking and Rank Order by Age									
	Under 30		30-39		40-49		Over 50		Total	
	X	Rank	X	Rank	X	Rank	X	Rank	X	Rank
Hazard Region Career Education Staff	1.77	1	1.58	1	1.70	1	1.40	1	1.63	1
System Career Education Coordinator	3.09		2.97	2	3.44	2	3.31	2	3.15	2
Teachers from other schools	3.34	3	3.67	3	3.64	3	4.19	5	3.64	3
Teachers in own system	3.66	4	4.11	4	4.05	5	3.86	3	3.90	4
University faculty	4.66	5	5.00	6	3.75	4	4.36	6	4.54	5
Out-of-state consultants	5.21	7	4.50	5	5.06	7	4.63	7	4.85	6
State Department of Education Personnel	5.10	6	5.08	7	4.82	6	4.15	4	4.89	7

The factor of age was also isolated concerning teacher perceptions of who was effective in increasing their knowledge of Career Education. These data were presented in Table 17.

As was the case for sex, the regional staff was rated a high first. The list of individuals was again listed from high to low according to the rank given by the total group, so it that it would be convenient to visualize where the groups differed among themselves and with the total group.

The second choice, System Career Education Coordinator, was constant across groups, but then a few changes in ranking occurred. With the exception of the oldest group of teachers, the group ranked teachers from other schools higher. The older group of teachers considered teachers from their own school to be more effective. They also ranked state department personnel much higher than the other age groups.

Table 18. Teacher Ranking of who was most Effective in Increasing their Knowledge and Understanding of Career Education, by Level Primarily Taught

Individual(s)	Mean Ranking and Rank Order by Level Taught							
	K - 6		7 - 9		10 - 12		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Hazard Region Career Education Staff	1.59	1	1.64	1	1.67	1	1.63	1
System Career Education Coordinator	3.13	2	2.89	2	3.43	2	3.15	2
Teachers from other schools	3.92	4	3.13	3	3.79	3	3.64	3
Teachers in own system	3.72	3	4.04	4	4.00	4	3.90	4
University faculty	4.09	5	4.64	5	5.00	7	4.54	5
Out-of-state consultants	5.00	7	4.77	6	4.76	6	4.85	6
State Department of Education Personnel	4.97	6	5.19	7	4.52	5	4.89	7

Also considered, when ranking who was most effective in increasing the teachers' knowledge and understanding of Career Education, was the level the teacher primarily taught. The levels were divided into elementary (K-6), junior high (7-9), and high school (10-12). These data were presented in Table 18.

The groups were in total agreement on the first two factors, all ranking the Regional Career Education Staff and their System Career Education Coordinator first and second respectively. There were slight differences in the remaining rankings, with the only significant variations being for the 10-12 grade group. They ranked state department of education personnel fifth, whereas the total group ranked them seventh. University faculty were ranked seventh, rather than sixth as by the total group.

Table 19. Teacher Ranking of which Activities were the most Effective in Increasing their Knowledge and Understanding of Career Education by Sex (Activities Order for Total)

Activity	Mean Ranking and Rank Order					
	Males		Females		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Summer Workshops	1.56	1	1.17	1	1.35	1
Career Education Conferences (sponsored by Hazard Staff)	2.55	2	2.86	2	2.72	2
In-service program in own school	2.93	3	3.24	3	3.13	3
Professional Meetings	4.13	4	4.23	4	4.16	4
Reading Professional Literature	4.30	5	4.35	5	4.31	5
University Courses	4.47	6	4.66	6	4.56	6

Also of interest was a determination of which activities were the most effective in increasing a teacher's knowledge and understanding of Career Education. Presented in Table 19 were mean rankings and rank orders by sex for this variable.

Males and females were in total agreement on the ranking of these activities. Summer workshops ranked first by a wide margin. Conferences and in-service programs in their own school ranked second and third respectively. Professional meetings and reading professional literature followed, and university courses were last.

A fact of importance to be considered was that university courses dealing with Career Education have not been offered, therefore realistically could not have been ranked as being effective.

Table 20. Teacher Ranking of which Activities were the most Effective in Increasing their Knowledge and Understanding of Career Education, by Teacher Age

Activity	Mean Ranking and Rank Order by Age									
	Under 30		30-39		40-49		Over 50		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Summer Workshops	1.33	1	1.31	1	1.38	1	1.40	1	1.35	1
Career Education Conferences (sponsored by Hazard Staff)	2.73	2	2.86	2	2.71	2	2.53	2	2.72	2
In-service Program in own School	3.06	3	3.03	3	3.10	3	3.40	3	3.13	3
Professional Meetings	4.07	4	4.11	5	4.48	5	4.00	4	4.16	4
Reading Professional Literature	4.52	6	4.00	4	4.17	4	4.63	6	4.31	5
University Courses	4.46	5	4.84	6	4.53	6	4.31	5	4.56	6

A slight alteration in rank occurred when considering age groupings of teachers and perceptions of which activities were most effective in increasing their knowledge of Career Education. These data were reported in Table 20 . The first three choices remained constant. However, th younger and older group ranked professional meetings and university courses higher than the middle two age groups. They also ranked reading professional literature lower. Overall, the age groups were in agreement concerning the primary activities.

Table 21. Teacher Ranking of which Activities were the most Effective in Increasing their Knowledge and Understanding of Career Education, by Level Primarily Taught

Activity	Mean Ranking and Rank Order by Level Taught							
	K - 6		7 - 9		10 - 12		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Summer Workshops	1.47	1	1.12	1	1.42	1	1.35	1
Career Education Conferences (sponsored by Hazard Staff)	2.85	2	2.65	2	2.61	2	2.72	2
In-service Program in Own School	3.17	3	2.90	3	3.29	3	3.13	3
Professional Meetings	4.18	4	4.07	4	4.23	5	4.16	4
Reading Professional Literature	4.24	5	4.53	6	4.17	4	4.31	5
University Courses	4.36	6	4.42	5	4.96	6	4.56	6

Teachers teaching in the various levels varied only slightly in their ranking of which activities were the most effective in increasing their knowledge and understanding of Career Education. These data were presented in Table 21.

Summer workshops, Career Education conferences, and in-service programs in their own schools rank one, two, and three respectively. The high school group ranked reading professional literature somewhat higher than the other two groups. They also ranked professional meetings slightly lower.

Table 22. Teacher Ranking of which Activities were the most Effective in Conveying Career Education Concepts to Students, by Sex

Activity	Mean Ranking and Rank Order by Sex					
	Males		Females		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Teaching Career Education Units	2.44	1	2.40	1	2.43	1
Field Trips	2.60	2	2.67	2	2.63	2
Using Resource People in Class	2.63	3	3.02	3	2.85	3
Class Projects	2.70	4	3.09	4	2.92	4
Utilizing Career Education Related Examples or Methods to Supplement Regular Material	4.28	5	3.57	5	3.84	5

To be effective, the concepts of Career Education must be conveyed to students. The teachers were asked to indicate which activities were most effective in reaching students. Displayed in Table 22 were the means and rankings by teacher sex for this variable.

Both groups of teachers were in total agreement. Teaching Career Education units was first, followed by field trips, resource persons, and class projects.

Ranked last was utilizing Career Education related examples and methods to supplement regular material. The findings from the personal interviews somewhat contradicted this finding. In the personal interview, the teachers indicated that once they had the concept, they couldn't help but integrate it into all their teaching, because, "it is so much better for communicating relevant material to the students."

Table 23. Teacher Ranking of which Activities were most Effective in Conveying Career Education Concepts to Students, by Teacher Age

Activity	Mean Ranking and Rank Order by Age									
	Under 30		30-39		40-49		Over 50		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Teaching Career Education Units	2.41	2	2.33	1	2.18	1	2.89	4	2.43	1
Field Trips	2.38	1	2.97	4	2.57	2	2.56	1	2.63	2
Using Resource People in Class	2.93	3	2.63	2	3.00	4	2.89	3	2.85	3
Class Projects	3.21	4	2.79	3	2.86	3	2.74	2	2.92	4
Utilizing Career Education Related Examples or Methods to Supplement Regular Materials	3.68	5	4.10	5	4.14	5	3.29	5	3.84	5

When age was isolated as a factor, a somewhat different ranking occurred concerning which methods were most effective with students. Presented in Table 23 were these rankings by age group of teachers.

Utilizing Career Education related examples or methods to supplement regular materials remained last; however, class projects, previously ranked fourth for total, moved to second for the older age group. This group also moved teaching Career Education units to fourth, behind field trips, class projects, and utilizing resource persons in class.

The only other ranking to shift two places from the total ranking was in the 30-39 age group. This group ranked the use of field trips fourth, while it was ranked first or second by the other three groups.

Table 24. Teacher Ranking of which Activities were most Effective in Conveying Career Education concepts to students, by Level Primarily Taught

Activity	Mean Ranking and Rank Order by Level Taught							
	K - 6		7 - 9		10 - 12		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Teaching Career Education Units	2.66	2	2.09	1	2.48	1	2.43	1
Field Trips	2.27	1	2.90	3	2.89	3	2.63	2
Using Resource Persons in Class	2.95	4	2.75	2	2.81	2	2.85	3
Class Projects	2.85	3	2.90	4	3.04	4	2.92	4
Utilizing Career Education Related Examples or Methods to Supplement Regular Materials	3.95	5	3.76	5	3.78	5	3.84	5

Presented in Table 24 were teacher rankings of which activities were the most effective in conveying Career Education concepts to students, classified according to the grade level taught by the responding teacher.

The teachers consistently ranked utilizing Career Education related examples and methods to supplement regular materials as the poorest method. As indicated earlier, the low ranking could be due to a misunderstanding of the question. The results of personal interviews indicated this to be so.

Field trips were ranked first by the elementary teachers, but third by the junior high and high school teachers. The higher two groups ranked teaching Career Education units as first, followed by using resource persons in class. The elementary group also liked the use of class somewhat better than did the other groups. Self-contained classrooms could account for this difference.

Table 25. Teacher Ranking of the most Effective Method of Securing Resource Persons for a Class, by Sex

Method	Mean Ranking and Rank Order by Sex					
	Males		Females		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Personal Contact by Teacher	1.86	1	1.72	1	1.77	1
Telephone Contact by Teacher	3.08	2	2.85	2	2.94	2
Personal Contact by Students	3.47	3	3.24	3	3.33	3
Letters Sent by Teacher	4.33	5	4.27	4	4.26	4
Telephone Contact by Students	4.73	6	4.63	5	4.63	5
Letters Sent by Students	4.82	7	4.82	6	4.77	6
Arranged by an Administrator	4.25	4	5.57	7	5.04	7

One of the recognized methods in Career Education has been the use of resource persons in class. Teachers wishing to secure the services of such individuals might wish to know the methods which have been effective for other teachers.

Presented in Table 25 were the teacher rankings of the most effective methods used in securing resource persons. Males and females were in agreement concerning the three most effective methods for them. Personal contact by the teacher was rated far superior to other methods, followed by telephone contact by the teacher and personal contact by the students.

The total ranking placed arrangement by an administrator as last. However, the male teachers ranked it fourth; females ranked it seventh. With this exception, there was overall agreement.

Table 26. Teacher Ranking of the most Effective Method of Securing Resource Persons for Class, by Teacher Age

Method	Mean Ranking and Rank Order by Age									
	Under 30		30-39		40-49		Over 50		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Personal Contact by Teacher	1.74	1	2.04	1	1.55	1	1.68	1	1.77	1
Telephone Contact by Teacher	2.52	2	3.36	3	2.63	2	3.21	3	2.94	2
Personal Contact by Students	3.65	3	2.80	2	3.80	3	3.07	2	3.33	3
Letters sent by Teacher	4.18	4	4.38	5	4.25	4	4.17	4	4.26	4
Telephone Contact by Students	4.82	6	4.56	6	4.63	6	4.50	6	4.63	5
LettersSent by Students	4.67	5	4.24	4	5.11	7	5.38	7	4.77	6
Arranged by Administrator	4.86	7	5.64	7	4.88	5	4.50	5	5.04	7

A slightly different pattern emerges when considering the age of the teacher. These data were presented in Table 26. The older teachers weremore willing to let an administrator arrange for resource persons. However, this ranking of five may only be considered an indication of their willingness, since the first four were more preferably their choice and were also in agreement with the other age groups. The 30-39 age group ranked letters sent by students slightly higher than did the other three groups.

Differences in ranking were observed between level taught and the teacher rankings of the most effective method of securing resource persons for a class. These data appeared in Table 27.

All groups ranked personal contact by the teacher as the superior method. However, junior high teachers thought personal contact by students to be a better method than telephone contact by teacher, which was ranked second by the two other groups.

Table 27. Teacher Ranking of the most Effective Method of Securing Resource Persons for a Class, by Level Primarily Taught

Method	Mean Ranking and Rank Order by Level Taught							
	K - 6		7 - 9		10 - 12		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Personal Contact Teacher	1.92	1	1.76	1	1.56	1	1.77	1
Telephone Contact by Teacher	2.83	2	3.10	3	2.88	2	2.94	2
Personal Contact by Students	3.75	3	2.92	2	3.20	3	3.33	3
Letters sent by Teacher	4.17	4	4.43	5	4.17	4	4.26	4
Telephone Contact by Students	4.59	7	4.24	4	5.08	5	4.63	5
Letters Sent by Students	4.59	6	4.73	6	5.08	6	4.77	6
Arranged by Administrator	4.33	5	5.16	7	5.79	7	5.04	7

Other differences in method which were significant enough to mention included telephone contact by students and arrangement by an administrator. As might be expected, the elementary group rated telephone contact by student as the poorest method. They also rated arrangement by an administrator two places higher than did the other two groups. The 7-9 and 10-12 groups both ranked arrangement by an administrator as last. Again, the responsibility of a self-contained classroom may have accounted for this difference.

Teacher rating of the most effective methods of motivating students appeared in Table 28. Male and female teachers were in close agreement by rank order; however, analysis of the size of the mean ranking for the highest ranked method indicated there was a wide range of choices for the first method.

Table 28. Teacher Ranking of the Most Effective Method of Motivating Students, by Sex

Method	Mean Ranking and Rank Order by Sex					
	Males		Females		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Hands-on Class Projects	2.97	1	3.07	1	3.03	1
Field Trips	3.38	3	3.31	2	3.34	2
Resource Persons in Class	3.15	2	4.11	3	3.71	3
Teacher Enthusiasm for Career Education	4.17	4	4.17	4	4.17	4
Role Playing	5.16	5	4.93	5	5.02	5
Group Work	5.24	6	5.50	6	5.39	6
Career Corners	6.58	8	6.11	7	6.28	7
Bulletin Boards	6.11	7	6.56	8	6.39	8
Films and Filmstrips	6.75	9	6.66	9	6.70	9
Doing Research and Written Reports on Occupations	6.85	10	7.60	10	7.30	10

Hands-on class projects received more first place ratings and was ranked as the most effective method. Field trips and use of resource persons also received a number of first place ranks, but averaged to second and third place rankings respectively.

Written reports, films and filmstrips, and bulletin boards were not rated as effective by either group.

Teacher rankings of effective methods of motivating students were also tabulated for various teacher age groups. These data appeared in Table 28a. Only a few changes from the rank order for total resulted.

Table 28a. Teacher Ranking of the most Effective Method of Motivating Students, by Teacher Age

Method	Mean Ranking and Rank Order by Age									
	Under 30		30-39		40-49		Over 50		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Hands-on Class Projects	3.25	3	3.17	1	2.68	1	2.89	1	3.03	1
Field Trips	2.93	1	3.56	2	3.45	2	3.50	2	3.34	2
Resource Persons in Class	3.11	2	3.71	3	4.19	3	4.01	4	3.71	3
Teacher Enthusiasm for Career Education	4.12	4	4.15	4	4.62	4	3.69	3	4.17	4
Role Playing	5.10	5	4.96	5	4.71	5	5.35	6	5.02	5
Group Work	5.50	6	5.07	6	5.36	6	5.80	7	5.39	6
Career Corners	6.88	8	6.77	9	5.67	7	5.33	5	6.28	7
Bulletin Boards	7.00	9	5.55	7	6.50	8	6.81	8	6.39	8
Films and Filmstrips	6.27	7	6.74	8	6.90	10	7.06	9	6.70	9
Doing Research and Written Reports on Occupations	7.20	10	7.63	10	6.89	9	7.40	10	7.30	10

The younger age group of teachers ranked hands-on class projects as third, rather than first as did the other groups. They ranked field trips first and resource persons second. They also ranked the use of films and filmstrips higher than the older groups.

The use of career corners varied between two of the groups. This method was ranked seventh by the total group; however, the 30-39 age group ranked it ninth and the older age group ranked it fifth. Other rankings conformed quite well to the ranking of the groups as a total body.

Several differences in teacher rankings were observed when considering level taught and the most effective methods of motivating students. These data appeared in Table 29.

Table 29. Teacher Ranking of the most Effective Method of Motivating Students, by Level Primarily Taught.

Method	Mean Ranking and Rank Order by Level Taught						Total	
	K - 6		7 - 9		10 - 12			
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Hands-on Class Projects	2.87	2	2.71	1	3.61	2	3.03	1
Field Trips	2.76	1	3.63	4	3.82	4	3.34	2
Resource Persons in Class	4.29	3	3.0[illegible]	2	3.69	3	3.71	3
Teacher Enthusiasm for Career Education	5.63	6	3.48	3	3.21	1	4.17	4
Role Playing	4.68	4	4.96	6	5.52	6	5.02	5
Group Work	5.9[illegible]	7	4.69	5	5.46	5	5.39	6
Career Corners	4.[illegible]3	5	7.17	9	7.65	10	6.28	7
Bulletin Boards	6.28	8	6.26	8	6.67	8	6.39	8
Films and Filmstrips	7.23	9	6.81	7	5.93	7	6.70	9
Doing Research and Written Reports on Occupations	7.41	10	7.19	10	7.27	9	7.30	10

Hands-on class projects received the highest overall ranking; however, the K-6 and 10-12 groups both ranked it second. Second overall was field trips, but again differences were observed among groups. The elementary teachers ranked this method first, but the junior high and high school groups rated field trips as fourth.

Differences were also observed for the variable teacher enthusiasm for Career Education. The K-6 group ranked it sixth, the 7-9 group ranked it third, and the 10-12 group ranked it first. Differences were also observed for the use of career corners. The K-6 teachers ranked it fifth, but the other two groups ranked it ninth and tenth respectively.

Table 30. Teacher Ranking of the most Important Determiner of Program Success in Career Education, by Sex.

Determiner	Mean Ranking & Rank Order by Sex					
	Males		Females		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Total
In-service Education Prior to Implementation	2.31	1	1.79	1	2.00	1
Administrative Support	2.86	3	2.79	2	2.82	2
Leadership from a Source Such as the Regional Career Education Staff	2.66	2	2.98	3	2.85	3
Parental and Community Support	3.86	5	3.56	4	3.68	4
Prepared Instructional Materials	3.82	4	3.80	5	3.81	5
Special Facilities	5.08	6	5.40	6	5.27	6

Any planning for a Career Education program should consider what teachers, who have participated in a program, felt were the most important determiners of program success. These findings were presented in Table 30.

The determiner which received the highest ranking by both male and female teachers was a good program of in-service education prior to program implementation. Administrative support for the program and its staff ranked second. However, the male teachers tended to place a higher rank on a Career Education support staff such as that provided through the Regional Office. The data gathered through personal interview confirmed in-service and administrative support as being the most crucial, although they also indicated that in a regional project it would be difficult to consistently have the first two without the regional support staff.

Needing special facilities ranked last for both groups. The necessity of prepared instructional materials ranked next to last.

Table 31. Teacher Ranking of the most Important Determiner of Program Success in Career Education, by Teacher Age

Determiner	Mean Ranking and Rank Order by Age									
	Under 30		30-39		40-49		Over 50		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
In-service Education Prior to Implementation	2.32	1	1.81	1	1.75	1	2.11	1	2.00	1
Administrative Support	2.43	2	3.03	3	3.26	3	2.53	2	2.82	2
Leadership from a Source Such as the Regional Career Education Staff	2.67	3	3.00	2	2.86	2	2.84	3	2.85	3
Parental and Community Support	3.65	4	3.68	5	3.96	5	3.31	4	3.68	4
Prepared Instructional Materials	3.92	5	3.48	4	3.61	4	4.50	5	3.81	5
Special Facilities	5.08	6	5.63	6	5.05	6	5.21	6	5.27	6

When considering the age of the teachers, few differences were observed in their rankings of determiners of program success. Analysis of Table 31 revealed the consistency of the rankings by age group. No item for any age group varied more than one place from its rank for total teacher group.

The need for in-service education prior to program implementation remained number one. The older and younger groups viewed administrative support and parental and community somewhat more important than the middle two age groups. The middle two groups ranked a Career Education support staff and the need for prepared instructional materials more favorably than did the older and younger groups. All age groups ranked the need for special facilities as the least important.

Table 32. Teacher Ranking of the most Important Determiner of Program Success in Career Education, by Level Primarily Taught

Determiner	Mean Ranking and Rank Order by Level Taught K - 6		7 - 9		10 - 12		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
In-service Education Prior to Implementation	1.74	1	1.97	1	2.34	1	2.00	1
Administrative Support	3.42	3	2.45	2	2.44	2	2.82	2
Leadership from a Source Such as the Regional Career Education Staff	2.36	2	2.91	3	3.38	3	2.85	3
Parental and Community Support	3.46	4	3.85	5	3.79	5	3.68	4
Prepared Instructional Materials	4.08	5	3.54	4	3.72	4	3.81	5
Special Facilities	5.36	6	5.25	6	5.17	6	5.27	6

The teachers across the various teaching levels were very consistent in their rankings of the most important determiners of program success in Career Education. These data were presented in Table 32.

All groups ranked in-service education prior to implementation as the most important factor. Administrative support was also ranked high. This was one factor which was most frequently mentioned during the personal interviews. The elementary teachers ranked leadership from a source such as the Regional Career Education Staff, and parental and community support somewhat higher than the other groups.

One feels more comfortable in seeking advice from someone perceived as having more knowledge than others on a subject. In addition, uninformed publics should be made knowledgeable.

The teachers were asked their opinion of how knowledgeable they considered

various publics to be about Career Education. These results were presented in Table 33. The list of 11 publics was ordered from the one receiving the highest average rating on a five point Likert-type scale by the total group of teachers to the one receiving the lowest rating.

Table 33. Teacher Opinion of how Knowledgeable Various Publics were about Career Education, by Sex (opinion recorded on a 1, high, to 5, low, scale)

Publics	Mean Ratings and Rank Order by Sex					
	Males		Females		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Hazard Region Career Education Staff	1.15	1	1.33	1	1.26	1
Summer Workshop Participants	1.43	2	1.60	2	1.54	2
Respondent Herself/Himself	1.56	3	1.80	3	1.71	3
Respondent's Building Principal	1.67	4	1.85	5	1.79	4
Counselors (as a total group)	1.78	6	1.84	4	1.82	5
Administrators (as a total group)	1.91	7	1.97	6	1.95	6
Counselor in Respondent's School	1.76	5	2.09	7	1.97	7
Teachers (as a total group)	2.32	8	2.29	8	2.30	8
Teachers in Respondent's School	2.39	9	2.36	10	2.38	9
Parents	3.61	10	3.34	9	3.44	10
Community	3.69	11	3.36	11	3.48	11

The ordering by sex varied little from the ordering for the total group. It was, however, important to consider the overall ordering.

The Regional Career Education Staff ranked first and the summer workshop participants ranked second. It was consistent that the respondents should rank themselves third, for they in fact were the summer workshop participants and the teachers primarily participating in the Career Education program during the school year. They ranked their building principal fourth, above counselors and administrators as total groups. Teachers as a total group were ranked very low; however not as low as were teachers from the respondent's own school. This seemed to indicate that the teachers didn't feel adequate support from their own building colleagues. The personal interviews supported this feeling. A few teachers who were judged by the regional staff to be among the most effective in working in the Career Education program confessed they felt "shut off" from a few other teachers because of success with students and other teachers not wanting the "extra work of Career Education" to become a building policy. Teachers also rated counselors as a total group higher than the counselor in their own school. It could be that "things look greener on the other side of the fence."

Parents and community received the lowest teacher ratings concerning their knowledge of Career Education. Since the other publics were all educational personnel, this was no surprise. Also, the Regional Career Education Staff indicated that community involvement was not among the top priorities during the first year of operation.

When considering the age of the teacher and who he or she thought to be most knowledgeable about Career Education, a slightly different, yet consistent, pattern was revealed. These data appeared in Table 34. Only those ratings which differed significantly from the total ratings were discussed.