

AN ABSTRACT OF THE THESIS OF

RICHARD EUGENE HOLLOWAY for the DOCTOR OF EDUCATION
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Title: A STUDY OF THE CAREER EDUCATION COMPETENCIES

CONSIDERED NEEDED BY ELEMENTARY AND JUNIOR HIGH

SCHOOL TEACHERS IN SELECTED SCHOOLS OF OREGON

Abstract approved: *Redacted for Privacy*

Dr. Earl E. Smith

There were six major objectives of this study. The first was to identify the common career education competencies that elementary and/or junior high school teachers should have as they adopt and utilize the concepts of career education. The second purpose was to identify where, in the professional preparation of the teacher, it is best to include instruction centered around the development of career education competencies. The third purpose was to investigate the proficiency level that respondents now have for each competency identified. The fourth purpose was to determine if significant differences existed in the responses between schools. The fifth purpose was to determine if selected independent variables were influencing the responses to the questionnaire. The sixth purpose was to determine the extent to which the competencies clustered or grouped together based upon the respondents in the study.

Procedures

A 50-item career education competency questionnaire was developed for gathering the data for this study. The instrument was administered to 30 elementary and 45 junior high school teachers within the state of Oregon. Two five-point scales were used which enabled respondents to judgmentally score 1) the level of proficiency now possessed by the respondent, and 2) the level of proficiency a teacher should have. There was also a column for respondents to check as to where each competency should be initiated and completed in the teacher training program.

Analysis of variance, analysis of covariance, and factor analysis were utilized in analyzing the data. The differences and similarities in mean score rating of competencies between elementary and junior high respondents were noted and discussed.

Selected Findings

Selected findings were: 1) Both elementary and junior high school respondents felt that teachers should have at least moderate proficiency in 49 out of the 50 competencies investigated in the study. 2) There were 16 competencies that showed a large difference in mean scores between elementary and junior high school respondents as to the proficiency a teacher should have; eight of which were found to be significantly different. Except for two of these competencies, the higher

mean score was given by the junior high respondents. 3) The competencies centering around evaluation, manpower trends and theories of career development were ranked low by both elementary and junior high teachers. 4) The competencies centering around resources, dignity of work, life role concept, requirements of occupations, understanding total career education program, and reason for education were ranked high by both elementary and junior high teachers. 5) Except for a few competencies, no significant difference existed in the responses between elementary schools, junior high schools, and between elementary and junior high schools. 6) The R-mode factor analysis extracted 42 competencies with factor loadings of .50 or higher. These competencies were named career education competencies and divided into the sub-factors Resources, Evaluation, Instructional Planning, Teaching Strategies - requirements of career, and Teaching Strategies - career relationships. 7) The majority of respondents felt that all 50 competencies should be initiated at the undergraduate level and (with one exception) completed at the graduate/in-service level.

Selected Conclusions

All 50 competencies investigated in the study can be identified as common career education competencies that elementary and/or junior high school teachers should have. There are 14 competencies unique to the needs of junior high teachers and two competencies unique to the

needs of elementary teachers. There are 34 competencies common to the needs of both elementary and junior high teachers.

The preferred place to initiate the development of each competency is at the undergraduate level. The preferred place to complete the development of each competency (with one exception) is at the graduate-in-service level.

Selected Recommendations

In view of the findings and conclusion of the study, it is recommended that 1) instruction centered around the development of career education competencies be initiated in the undergraduate teacher training program; 2) all 50 competencies investigated in the study be given consideration in the development of a performance-based curriculum--the developing of behavior objectives and curriculum material centering around career education concepts; 3) a study of this nature be conducted in the near future which focuses upon a) competencies of elementary teachers by grade level, and b) competencies of junior high teachers by subject matter taught.

A Study of the Career Education Competencies Considered
Needed by Elementary and Junior High School
Teachers in Selected Schools in Oregon

by

Richard Eugene Holloway

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Professor of Education
in charge of major

Redacted for Privacy

Dean of the School of Education

Redacted for Privacy

Dean of the Graduate School

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Typed by Mary Jo Stratton for Richard Eugene Holloway

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TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	1
Background of the Problem	1
Statement of the Problem	2
Objectives	3
Hypotheses	4
Limitations of the Study	4
Importance of the Study	5
REVIEW OF LITERATURE	12
Literature Related to the Scope of Career Education	12
Literature Related to Performance-based Programs and Teacher Competencies in Career Education	20
Performance-based Programs	20
Teacher Competencies in Career Education	25
Literature Used in Generating Career Education Competencies	28
Literature within Oregon	35
Summary	39
DESIGN OF THE STUDY	41
Preparation of the Questionnaire	41
Jury Panel of Experts	42
Pilot Test	43
The Dependent Variables	44
The Sample	44
The Collection of Data	47
The Statistical Design	48
Significance Testing of Hypotheses	48
Factor Analysis	50
PRESENTATION OF FINDINGS	51
Ranking of Career Education Competencies	52
Competencies Teachers Should Have	52
Competencies Teachers Now Have	71

	<u>Page</u>
Analysis of Variance and Covariance Findings	94
Differences Among Elementary Schools as to the Proficiency Teachers Should Have	94
Differences Among Junior High Schools as to the Proficiency Teachers Should Have	94
Differences Among Elementary Schools as to the Proficiency Teachers Now Have	97
Differences Among Junior High Schools as to the Proficiency Teachers Now Have	100
Differences Between Elementary and Junior High Schools as to the Proficiency Teachers Should Have	100
Analysis of Covariance Test	101
Results of Factor Analysis	103
Q-Mode	103
R-Mode	104
Analysis of Where the Competencies Should be Initiated and Completed	107
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS	117
The Problem Restated	117
Procedures	118
Summary of Findings	118
Conclusions	122
Recommendations	125
Recommendations for Further Study	126
BIBLIOGRAPHY	127
APPENDICES	133

LIST OF TABLES

<u>Table</u>		<u>Page</u>
1	Composition of elementary sample by grade level.	46
2	Composition of junior high sample by subject matter.	46
3	Fifty competencies in rank order of importance as to the proficiency elementary teachers should have.	53
4	Fifty competencies in rank order of importance as to the proficiency junior high teachers should have.	59
5	Competencies with mean scores of 4.00 or above in both groups as to the proficiency teachers should have.	66
6	Seven competencies found in the 15 lowest ranked competencies from each group as to the proficiency teachers should have.	70
7	Largest difference in mean score between elementary and junior high school teachers as to the proficiency teachers should have.	72
8	Smallest difference in mean scores between elementary and junior high school teachers as to the proficiency teachers should have.	74
9	Fifty competencies in rank order according to the proficiency elementary teachers now have.	75
10	Fifty competencies in rank order according to the proficiency junior high teachers now have.	81
11	Competencies with mean scores greater for elementary teachers as to the proficiency teachers now have.	88

<u>Table</u>		<u>Page</u>
12	Competencies with mean scores greater for junior high teachers as to the proficiency teachers now have.	90
13	Significant differences among elementary schools as to the proficiency teachers should have.	95
14	Significant differences among junior high schools as to the proficiency teachers should have.	98
15	Significant differences among elementary schools as to the proficiency teachers now have.	99
16	Significant differences between elementary and junior high schools as to the proficiency teachers should have.	102
17	Percentage of common variance for the R-mode factor analysis technique.	106.
18	Results of the R-mode two-factor solution. Factor one - career education competencies.	108
19	Response results as to where career education competencies should be initiated and completed.	113
20	Thirteen competencies varying from the general pattern of responses as to where each should be initiated and completed.	114.

LIST OF FIGURES

<u>Figure</u>		<u>Page</u>
1	Comparison of real data versus random data - R-mode factor analysis.	105

A STUDY OF THE CAREER EDUCATION COMPETENCIES CONSIDERED NEEDED BY ELEMENTARY AND JUNIOR HIGH SCHOOL TEACHERS IN SELECTED SCHOOLS OF OREGON

INTRODUCTION

Background of the Problem

Career education, at this point in time, is a major focus of attention at all levels of education. All across the United States the thrust toward career education is visible and the momentum is increasing with noticeable vigor. United States Commissioner of Education, Sidney P. Marland, Jr. (1972) has stated, "Career education seems already to have beginnings of a National movement" (p. 62). Evidence of the career education movement is manifest through a wide range of activities, particularly in the development of new and innovative career education pilot projects in career awareness and career exploration.

To insure the success of these and other projects, considerable money and effort has been expended in providing in-service workshops in career education for those teachers now affected. The teachers involved in the workshops have come from a variety of disciplines other than vocational education. In addition to the emphasis upon in-service activity, there has also been a concern expressed regarding the need to expand career education concepts into the pre-service

undergraduate teacher training program. This thrust is evident in the state of Oregon through the funding of a teacher education in career education project specifically aimed at achieving this objective. Inevitably, curriculum building relative to career education has become a major concern for those responsible for personnel development.

Teacher training institutions, state departments of education, and local school districts, desirous to build a sound curriculum while at the same time faced with a move to a performance-based curriculum, have expressed concern for identifying the competencies needed by teachers relative to incorporating career education concepts into their teaching.

Statement of the Problem

The problem faced by this study evolved from the events mentioned above and centered around what teachers need to know or be able to do as they adopt and apply the concept of career education. Specifically, this study was concerned with the career education competencies that are common to elementary and/or junior high school teachers; competencies that do not represent an occupational specialty. The central problem of the study focused upon three major questions:

1. What are the common career education competencies of elementary and junior high school teachers which are needed

as they adopt and utilize concepts of career education?

- 2) To what extent do the respondents selected for the survey population resemble each other as to their response to identified career education competencies?
- 3) Where, in the professional preparation of a teacher, be it undergraduate, graduate, or in-service, is it best to develop career education competencies?

Objectives

Based on the problem noted above, the major objectives of the study were:

1. From a validated list of competencies, identify, by consensus, though the use of a questionnaire, the common career education competencies that elementary and/or junior high school teachers should have as they adopt and utilize concepts of career education.
2. To identify where, in the professional preparation of the teacher, be it undergraduate, graduate, or in-service, it is best to include instruction centered around the development of these career education competencies.
3. To investigate the proficiency elementary and junior high school teachers now have for each career education competency identified.
4. To determine the significant difference in group responses

between elementary schools, junior high schools, and between elementary and junior high schools.

5. To determine if selected independent variables, like years of teaching experience, were influencing the responses to the questionnaire.
6. To determine the extent to which the competencies tended to cluster or group together based upon the respondents in the study.

Hypotheses

To establish if there were any significant differences in group responses between schools the following three hypotheses were tested.

1. There is no significant difference among the elementary school responses.
2. There is no significant difference among the junior high school responses.
3. There is no significant difference among the elementary and junior high school responses.

Limitations of the Study

Research in this study was limited as follows:

1. Respondents and Schools - Participants in the study who responded to the questionnaire were limited to elementary and junior high school teachers within the state of Oregon.

Respondents were further limited to those elementary and junior

high school teachers who had gone through an in-service workshop in career education and who were: a) teaching in a model, pilot, or exemplary school, or b) identified by Key Leaders of career education, (Oregon State Department of Education staff, career education program directors and building school principals) as being appropriate to include in the survey.

2. Competencies - Competencies relevant to this study were limited to those needed by teachers in the awareness and exploration stages of career education.

Importance of the Study

Schooling must help each student develop. . . competencies and the confidence that he or she can cope successfully with real-life situations (Oregon State Department of Education, 1972b, p. 1).

The above statement, made by Oregon's Superintendent of Public Instruction, Dale Parnell, was in reference to the proposed new high school graduation requirements scheduled for final adoption starting September 1972. Part of section four of the proposal is devoted specifically to the area of career development indicating that a student's transcript should show minimum competence in this area. Emphasis throughout the entire proposal was placed on students being able to demonstrate minimum competencies in future life roles (i. e., producers, consumers, citizens, family members, and individuals).

Oregon's new proposed high school graduation requirements is a typical example of the widespread move to performance-oriented schooling. It also has implications for teacher preparation in the area of career education, for if students are to be expected to demonstrate competencies in the areas of career development, then teachers will likewise need the necessary competencies to provide appropriate instructions and guidance.

The move to a performance-based curriculum is advocated by many and is beginning to spread rapidly to teacher education. Arizona, for example, is advocating recertification based upon performance (Stofstaff, 1971). Davies (1969) also advocates an educational system based upon performance.

Oregon State University (1970), through the Division of Vocational, Adult and Community College Education, submitted a Proposal for Change specifically directed at developing a relevant, performance-based teacher education curriculum. The proposal was funded and the performance-based curriculum is being developed.

Effective October 15, 1972, emphasis will be added to the development of the performance-based curriculum in Oregon as the state will have adopted some significant changes in teacher preparation and licensing (Oregon State Department of Education, 1971b).

Relevant to this study are the following changes:

1. Teacher education institutions will be able to waive part or all of

the current course requirements in accordance with individual candidates' previous experience and demonstrated competency.

2. Teachers and administrators will be exposed to the concept of career education and the relationship of careers to the schooling process.
3. The elementary training program will include grades kindergarten through nine, and the secondary training program will include grades five through twelve. Both programs will give more overall emphasis to the development of individual diagnosis and performance objectives.

At the very heart of the performance-based teacher education curriculum is the need for research relative to the competencies needed by teachers. Cyphert (1969) notes a redirection of research in teacher education that is moving toward identifying what a teacher actually does as he performs assignments. Scholoch and Hale (1968) have stated ". . . the objectives of a teacher education program should be specified in terms of the competencies needed by teachers to bring about the outcomes desired in pupils" (p. 6).

Martin (1972) further suggests that the validation of a list of competencies is a logical way for gaining the necessary information for the design and development of a competency-based curriculum.

Taking all of the above into consideration and recognizing the lack of empirical research in the area of career education, particularly

in reference to teacher competencies, this study was important for six major reasons:

1. It will strengthen and lend support to the performance-based movement for both teacher preparation (pre- and in-service) and high school curricula.
2. Inasmuch as teachers were directly involved by providing input regarding the importance of certain competencies, this study will provide valuable information regarding the feeling of teachers concerning the thrust to implement career education concepts into the public schools.
3. Inasmuch as attempts are being exerted to expose teachers and administrators to the concept of career education, this study will provide valuable information concerning which career education competencies should receive emphasis.
4. This study was important also because it sought to identify the career education competencies needed by teachers outside the field of vocational education. The concept of career education calls for the involvement of all teachers, not just vocational or guidance personnel. Career education instruction for teacher preparation in the past has been limited primarily to those majoring in vocational education. However, those involved in career education on an in-service level have not been limited to just vocational personnel, but involve counselors, elementary

- teachers, math teachers, English teachers, social studies teachers, and others from various subject matter disciplines.
5. Relative to the concept of career education, the widely practiced procedure has been to develop first and then research. This study is important for it provides supportive research for teacher education relative to the career education emphasis.
 6. Finally, this study will provide a foundation upon which to build curriculum material wherein all prospective teachers can be acquainted with career education concepts as well as learn how to incorporate these concepts into their classroom teaching. Information gained through this research will be a viable step in the design and development of curriculum content, performance objectives, and teaching strategies.

Definition of Terms

The following definition of terms or phrases has been included to facilitate communication.

Career Education - A method or process of teaching, designed to facilitate learning. It calls for a reordering and restructuring of the curriculum to provide a continuum of experiences designed to assist students in leading a useful and productive life. It is that aspect of individual development which focuses upon the occupational role while at the same time seeks to enhance and show relationships of

other life roles. It includes career awareness in the elementary grades, career exploration in the intermediate grades, pre-specialization in the upper high school grades, and specialization above high school; all of which encompass the concepts associated with career development, career planning, and career information.

Career Education Competencies - Competencies needed by teachers as they adopt and apply the concept of career education. They are competencies which assist students in their career planning and development and which are useful for imparting career information. The competencies identified and listed in this study do not necessarily encompass or represent all the concepts, parameters, and competencies associated with career education.

Common Career Education Competencies - Those competencies that are common to all teachers regardless of subject matter and grade level. This study only concerned itself with the career education competencies common to elementary teachers, junior high school teachers, and to elementary and junior high teachers.

Competency - The knowledge, specific skill, or ability to perform a given task, duty, or responsibility directly related to one's role.

Elementary School Teacher - A professionally trained and certified person who teaches in kindergarten or grades one through six.

Junior High School Teacher - A professionally trained and certified person who teaches a specific subject or subjects in the seventh, eighth, or ninth grades.

Proficiency - The level or degree of expertise required in the performance of a given task.

REVIEW OF LITERATURE

This study focused upon career education competencies for elementary and junior high school teachers. The literature reviewed revealed a lack of research directed at this particular level and subject matter. There were, however, several studies germane to this research and which assisted in its overall design and development. Specifically, the review of literature focused upon the following:

1. Literature related to the scope of career education;
2. Research related to performance-based programs and competencies in career education;
3. Literature used in generating the competencies investigated in the study.

Literature Related to the Scope of Career Education

One of the purposes for reviewing related literature was to provide evidence of the scope and magnitude of career education. As mentioned earlier, career education was the focus of attention at all levels of education. At the national level, for example, President Richard Nixon recommended that major emphasis be placed on career education (Burkett, 1972). Among other things, President Nixon said:

Schools should be doing more to build self-reliance and self-sufficiency to prepare students for a productive and fulfilling life (p. 9).

He further emphasized:

. . . too many students are 'turning off' and 'turning out' on their educational experiences. . . . Career education is a concept leading to the achievement of a major goal for education (p. 9).

Another key figure at the national level who has been instrumental in promoting the concept of career education is Sidney P. Marland, Jr., United States Commissioner of Education. Marland has spoken on the subject of career education on several different occasions. During a question and answer session, Marland (1971c) stated:

I think most people feel it is high time to make the schools truly relevant and meaningful for every youngster, and that's what career education is all about (p. 28).

Marland (1972) made public the commitment of the United States Office of Education to career education when he said:

I have proposed, and the U. S. Office of Education has undertaken as a high priority activity, a direct and total confrontation with this concern for a purposeful education. We call the new concept 'career education' (p. 35).

As evidence of this commitment, the U. S. O. E. has made available more than 86 million dollars for research, development, and initiation of career education. This is being accomplished through a variety of model programs all across the United States. At present, there exist four models or alternate ways of implementing the career education goals (Taylor, 1972). The four models are: 1) the school-based model or Comprehensive Career Education Model, 2) the

employer-based model, 3) the home-based model, and 4) the residential-based model. This study concerned itself only with the school-based model.

The United States Office of Education, working through The Center for Vocational and Technical Education at The Ohio State University, is developing the school-based model in six school districts: Mesa, Arizona; Los Angeles, California; Jefferson County, Colorado; Atlanta, Georgia; Pontiac, Michigan; and Hackensack, New Jersey. Dr. Robert E. Taylor (1972), Director of The Center for Vocational and Technical Education, described the districts:

There are variations in the size of school districts, geographic settings, and the cultural and ethnic mix. The network involves the staff and students from 112 school buildings as more than 3,900 teachers and administrators work with 83,300 students in this development effort (p. 18).

A contract between The Center for Occupational Education at North Carolina State University (1971) and the National Center for Educational Communications at the United States Office of Education provides additional evidence of the magnitude and scope of career education activity. The contract called for identifying, assessing, and describing career education programs all over the United States and surrounding territories. A total of 41 projects were chosen for on-site visitation with ten regions and 32 states represented. The programs chosen for visitation were selected from a list of 111 possibilities.

Taylor (1972) also notes that the United States Department of

Education, besides providing funds for exemplary career education programs, has funded a total of 16 regional meetings on career education. These meetings are bringing together leaders from education, business, industry, and the community to discuss and analyze career education and its implications.

Activity in the state of Arizona provides further evidence of the scope and magnitude of career education. The state introduced a bold new approach to education that will become effective September 1971. This new approach sees "career education" as the essence of the entire process of public education. To facilitate implementation, monies were allocated by the state through the passage of Senate Bill 5, which has a certain portion devoted strictly to career education. Among other purposes, the funds were used for retraining school teachers and counselors toward a career education orientation. Arizona is the only state in the nation to have a piece of legislation with monies specifically appropriated for career education (Career Education, 1972).

Among the many states that could be noted for their innovative career education endeavors, Oregon deserves recognition for a number of accomplishments. Starting in the early 1960's, major emphasis was directed toward the development of the cluster concept and community college programs. The initial effort of the cluster concept has greatly magnified where today it is widely used and accepted as a vital part of the total career education concept.

Career clusters form a practical and effective base for a total career education program. The clusters present a logical organization of occupational characteristics for helping students in the primary and middle elementary grades to become aware of careers and the world of work and for exploring careers and developing career goals at the junior high levels (Oregon State Department of Education, 1972c, p. 2).

Originally there were 11 pilot cluster programs, and the unofficial number operating as of May 1972 throughout the state was around 250, involving over 1,000 teachers.

In the middle 1960's, efforts were exerted in the development of a program called S. U. T. O. E. (Self Understanding Through Occupational Exploration). This program, like the cluster program, is an essential part of career education and is operational in about 250 schools around the state with about 250 teachers involved.

In the later part of the 1960's, Project C. O. R. E. (Careers-Oriented Relevant Education) emerged and blossomed in Springfield. Project C. O. R. E. was one of the programs chosen for on-site visitation by The Center for Occupational Education at North Carolina State University (1971).

Other innovative career education programs which developed around the same time as Project C. O. R. E. included Project VIGOR (Vocational cluster education, Integrated and articulated grade one through fourteen with Guidance service, Occupational exploration and

work experience Relevant to general education) at David Douglas in Portland; Judson World of Work in Salem; and IACP (Industrial Arts Curriculum Project) in various parts of the state.

Most recently (fiscal year 1971-72), pilot career awareness projects were funded and developed in four different school districts: Springfield, Pleasant Hill, Tigard, and Portland.

A publication from Oregon's State Department of Education (1972a) identified Project C. O. R. E. as a National Model Project; Project VIGOR as a State Exemplary Project; Whitaker Mid-school in Portland, Twality Junior High School in Turner, and Portland Public Schools as pilot career exploration programs; and the four school districts mentioned above as pilot elementary career awareness programs.

In nearly all of the above mentioned projects, extensive in-service activities have been a key factor to the success of the project. Teachers had to be oriented to the concept of career education and actively involved in restructuring their present curriculum around a career education theme.

Taylor (1972) notes that this is not peculiar to the state of Oregon as in-service training workshops have been conducted all across the United States, including workshops at the national pilot schools identified earlier. He further notes that in addition to the in-service

workshops for teachers, The Ohio State University is conducting a National Conference on Career Education for deans of colleges of education. This conference was to be held in April, 1972, followed by one in May, 1972, for professors of educational administration.

However, where much effort has gone into in-service activities, little effort has been devoted to pre-service teacher preparation at the undergraduate level (not only for Oregon, but all over the United States). This is evidenced by the responses to a letter written by members of the Teacher Education in Career Education Project at Oregon State University. The letter was written to state education agencies, universities, research coordinating units, and the United States Office of Education requesting information relative to career education; specifically asking what they were doing to identify career education concepts, and if they were offering career education courses to prospective teachers at the pre-service undergraduate level. Among the 35 replies, only one state was making any changes in the pre-service teacher education programs. The majority responding indicated the need for such action and research, but at present were relying only on in-service workshops to train qualified personnel to operate in their career education programs. Many were quick to note the value of such action and the need for a new breed of qualified career education teachers.

By funding the Teacher Education in Career Education Project,

the state of Oregon has been a leader in expanding career education instruction into the pre-service undergraduate teacher training program. The original proposal for the project was submitted to the Oregon State Department of Education by the Division of Vocational, Adult and Community College Education at Oregon State University (1971). The purpose of the project was

. . . to outline a developmental strategy which would result in all prospective teachers having opportunities to become acquainted with career education concepts and see how these concepts can be incorporated into their classroom teaching (p. 1).

The ultimate goal being to initiate career education instruction in all teacher preparation institutions within the Oregon State System of Higher Education.

Obstacles facing members of the Teacher Education in Career Education Project in the achievement of the above goal were minimized through the formation of the Interinstitutional Committee on Career Education and Vocational Teacher Education (hereafter referred to as Interinstitutional Committee).

The Interinstitutional Committee is composed of two representatives from each institution within the Oregon State System of Higher Education. Working in conjunction with members of the Teacher Education in Career Education Project, the Interinstitutional Committee had as its goal to make:

1. An analysis of what, if anything additional, needs doing to assure that teacher candidates being turned out by

teacher preparation institutions are equipped to function effectively in providing their students in the public schools with an awareness of life careers with an opportunity to explore life careers and the ability to function effectively in the career cluster program in the public schools.

2. A long-range plan for the use of the State System's resources in the production of an adequate number of well-prepared teachers in the various occupational specialties (Oregon State System of Higher Education, 1971, p. 1).

The Interinstitutional Committee has provided the vehicle and the incentive for spreading the concept of career education into all of the teacher training institutions within the Oregon State System of Higher Education.

Literature Related to Performance-Based Programs and Teacher Competencies in Career Education

Literature pertaining to the performance-based curriculum and also to the research related to the identification of teacher competencies relative to certain aspects of career education is reviewed in this section.

Performance-based Programs

The concerns expressed in behalf of the performance-based curriculum have come from a variety of sources. Davies (1969), for example, advocated a performance-based curriculum, arguing that the final test is really how one behaves, thinks, feels, and performs,

and not the mere passing of courses, meeting requirements, and accumulating credentials.

The above argument is typical of the feeling behind the move to a performance-based curriculum particularly in reference to teacher training. It is a move that promotes the concept of placing responsibility on the perspective teacher or whomever the learner might be. It was with this underlying rationale that the state of Arizona moved to adopt a recertification plan based upon performance.

In a statement made by Shofstaff (1971), three propositions were given as the reasoning behind Arizona's recertification plan:

1. Fundamental education reform will come only through those charged with the basic educational responsibility, to wit, the teachers;
2. teachers are unlikely to change their ways of doing things just because imperious, theoretical reformers. . . tell them to shape up;
3. teachers will take reform seriously only when they are responsible for defining their own educational problems, delineating their own needs, and receiving help on their own terms and turf (p. 2).

Shofstaff (1971) believes that the initiative for change should, by and large, come from the teachers themselves. He further states:

In spite of the fact that they are the ones who are working day in and day out on the firing line, the definition of their problems, of their roles, of their goals, always seems to be someone else's responsibility: Supervisors, parents, college professors, text book publishers, self-styled reformers, boards of education, state and national education officials (p. 2).

In describing Oregon's new high school graduation requirements, Superintendent Dale Parnell (Oregon State Department of Education, 1972b) stated: "Emphasis is on measurable outcomes based on the needs and 'real life goals' of students" (p. 1). The proposal "distinguishes between the traditional 'exposure' method of teaching, measured mainly in terms of time (quantitatively), and 'performance-oriented' schooling, which is measured in qualitative terms" (p. 1). What essentially is intended to happen is the gradual elimination of the present units of credit based on time and replaced with a system that is "performance-oriented."

Further insight into the performance-based concept is provided by the American Association of Colleges for Teacher Education (AACTE), which has formed a committee called the AACTE Committee on Performance Based Teacher Education. In a paper prepared by Elam (1971), editor of Phi Delta Kappa Publications for the AACTE Committee on Performance Based Teacher Education, the performance-based program was described as follows:

In performance-based programs, performance goals are specified and agreed to in rigorous detail in advance of instruction. The student preparing to become a teacher must either be able to demonstrate his ability to promote desirable learning or exhibit behaviors known to promote it. He is held accountable, not for passing grades but for attaining a given level of competence in performing the essential tasks of teaching; the training institution is itself held accountable for producing able teachers. The emphasis is on demonstrated product or output (p. 3).

There now appears to be general agreement that a teacher education program is performance-based if:

1. Competencies (knowledge, skills, behaviors) to be demonstrated by the person completing the preparation are:
 - a. derived from explicit conceptions of teacher roles;
 - b. stated so as to make possible assessment of a student's behavior in relation to specific competencies;
 - c. made public in advance.
2. Assessment of the student's competence:
 - a. uses his performance as the primary source of evidence;
 - b. takes into account evidence of the student's knowledge relevant to planning for, analyzing, interpreting, or evaluating situations or behavior;
 - c. strives for objectivity.
3. The student's rate of progress through the program is determined by demonstrated competence rather than by time or course completion.
4. The instructional program is intended to facilitate the development and evaluation of the student's achievement of competencies specified (Elam, 1971, p. 3-4).

Performance-based teacher education in the United States is by no means universally accepted. Elam (1971) suggests, however, that: "There are antecedents, current developments, and growing pressures which suggest. . . that a reform movement of great potential is in the making. . . ." (p. 3).

In a publication titled Performance-Based Certification of School Personnel (1971), the states of California, Florida, Maryland, Massachusetts, Michigan, Minnesota, New Jersey, New York, Texas, Utah, and Washington were identified and noted for their move toward a

performance-based curriculum. Each state, of course, is at varying stages of development. The state of Florida was noted as officially committing itself to a statewide implementation of performance-based teacher education and has formed a special teacher education advisory council task force specifically for encouraging universities to develop such programs. Also noted was Florida's concern for developing instruments and procedures for measuring competencies of middle school teachers. At the time of the above writing, a number of colleges in the state of Minnesota had implemented performance-based programs and three of Utah's six teacher education institutions had pilot projects aimed at performance-based programs.

As the move toward a performance-based curriculum intensifies, and as the career education emphasis continues to mount, there is going to be an ever-increasing need for empirical research to support desired changes. Very few research studies in this area have been conducted, and those that have come primarily from the field of vocational education.

This, however, is not unusual. Tennyson (1971) suggests that in most states at the moment, there is a void in leadership with respect to career development in the schools and that very often leadership is provided by the vocational educator. The studies from the field of vocational education were relevant to this research and are discussed below because vocational education not only is an essential

part of career education, but is its main source of leadership.

Teacher Competencies in Career Education

Courtney and Halfin (1969) selected 40 vocational teachers and utilized a factor analysis technique to extract a common core of training curricula. The objective of the study was to determine the common training requirements of secondary-level vocational teachers. A Likert-type scale, similar to the one adapted for this study, was used to survey teachers from five disciplines: vocational agriculture, home economics, trade and industrial education, distributive education, and business education. By using the Varimax rotation method of factor analysis, 14 vectors were extracted in which one or more of the 40 variables showed a factor loading of $\pm .50$ or greater.

The following year, Halfin and Courtney (1970) conducted another study utilizing a five-point Likert-type scale. The factor analysis technique was used in combination with analysis of variance as a means of identifying a common core of curricular experiences for the training of vocational teachers. Responses to the questionnaire came from 150 teachers representing five vocational disciplines and ten states. As a result of the analysis, six interpretable factors were generated for curriculum development.

Walsh (1963) utilized a Likert-type instrument similar to the one used by Halfin and Courtney. He analyzed 107 teacher competencies

for trade and industrial education instruction. The approach allowed a rating of teacher competencies in terms of importance and compared the ratings of teachers to teacher educators. Competencies that were expressed as the ability to do something were rated as most important by teachers, whereas teacher educators rated competencies expressed in terms of knowledge or understanding as most important.

Gunderson (1971), Lindahl (1971), and Miller (1971) patterned their studies after Courtney and Halfin by utilizing a five point Likert-type scale aimed at identifying the common professional education competencies of community college vocational instructors. The instrument contained 99 professional education competencies with a scale for respondents to indicate the level of proficiency for each competency. Factor analysis (both Q-mode and R-mode) and analysis of variance were employed in analyzing the data. Analysis of variance showed that instructors were alike in their response to the competencies and the factor analysis technique was found to contribute to the identification of common factors for competencies and instructors. Factor analysis was also shown to be an effective method of obtaining essential information for developing curricula.

Ward (1971) investigated the competencies essential for adequate performance of vocational education leadership roles. Considered in his study were methods of preparing leaders for those roles (i. e., formal course work, on-the-job experience, or a combination of the

two). Through a review of literature, competency items were written, examined by vocational personnel in a leadership development seminar, rewritten, and incorporated into a Likert-type questionnaire. Utilizing 50 items, the questionnaire was administered to 134 leaders in Oregon and ten national leaders. The Spearman Rank Coefficient statistic was used in analyzing the data along with applying the chi-square test. Mean ratings for each competency item were computed for the purpose of ranking the items according to their mean rating. The Spearman Rank Coefficient statistic showed a positive correlation between the two populations. The findings of his study produced a list of 40 competencies which were, in all probability, essential for vocational educational leaders.

Baltimore (1972) and Martin (1972), adapting the questionnaire used by Gunderson (1971), Lindahl (1971), and Miller (1971), applied factor analytic and analysis of variance techniques in identifying competencies of vocational leaders. Martin (1972) sought to identify the common professional education competencies of vocational administrators at the community college level. Martin, in using the R-technique, generated five factors and found that the competencies which clustered in these factors represented meaningful groups which could be used for curriculum development. The factor loading of $\pm .50$ or higher was used in clustering the competencies. Except for

five competencies, the analysis of variance showed no difference between vocational administrators from the four states.

The studies mentioned above have all contributed in part to the design and development of a competency-based teacher education curriculum for vocational teachers and leaders. These studies were also helpful in generating and formulating competencies used in this study.

With respect to factor analysis, it should be noted that its use is not seclusive to vocational education. Guilford (1965) applied factor analysis to five kinds of intellectual abilities; learning, memory, problem solving, investigation, and decision making. He suggested that educational programs should undergo a transformation with respect to the concept of learning based upon a verified structure of tasks.

By developing a check list of job activities, Palmer and McCormick (1961) used factor analysis to conclude that work activities can be identified, measured, and organized.

Factor analysis was also used by Sjorgen, Schroder and Sahl (1967) to determine the common behaviors across metal-fabricating and agriculture occupations.

Literature Used in Generating Career Education Competencies

The studies of Gunderson (1971), Lindahl (1971), Miller (1971),

and Ward (1971) were helpful in formulating the competencies used in this study. However, they were only adaptable to a limited extent for they dealt directly with competencies of vocation teachers or administrators at the high school or college level. Therefore, other literature had to be used to generate more relevant competencies for elementary and junior high school teachers. The literature used for this purpose is not empirical research in nature but constitutes a variety of material such as curriculum guides, articles by leaders in the field, stated goals and objectives of career education programs and teacher in-service activities. A few sources cite the competencies of teachers but the majority state only the objectives for the student. Utilizing student objectives in arriving at teacher competencies is not necessarily an unusual procedure. According to Schaloch (1968), four interrelated steps are involved in determining objectives of a teacher education program. These steps are as follows:

1. Specification of the pupil outcomes desired;
2. specification of the conditions by which each outcome can be realized;
3. specification of the competencies needed by teachers to provide the conditions that are needed for the realization of each outcome, and
4. specification of the condition by which the needed teacher competencies can be realized (p. 7).

Bottoms (1972) feels that states must give attention to and provide for both pre- and in-service teacher education relative to career

education. He feels that competencies needed for career education can be taught and become a part of the certification requirements. Some of these competencies are:

1. Knowledge of career development tasks and how students can be helped to master them.
2. Ability to relate subject areas to the careers that students are exploring or pursuing.
3. Ability to work as a member of an interdisciplinary team.
4. Ability to develop individualized instructional packages related to a student's career objectives.
5. Ability to use feedback to aid students to discover careers and to clarify a career self-concept.
6. Ability to direct students in 'applied learning' (applying knowledge gained from subject matter to the solving of job-related problems) (p. 72).

As project director of Cobb County Occupational and Career Development Program, Smith (1972) describes what elementary teachers are required to incorporate into their units:

1. A hands-on activity to give concrete experience from which abstract ideas can be drawn;
2. an all-subject matter tie-in to show the relationship of math, science, language arts, etc. to the hands-on activity and comparable occupations in the community;
3. visits by resource persons to the classroom to lend credibility and support from the real world;
4. field trips into the business and industrial community to give youngsters a firsthand look at work places and an opportunity to interview workers concerning not only their job duties but also their feelings about their jobs;

5. role-playing to capitalize upon the students' natural desire for such activity while demonstrating occupational characteristics and the need for cooperative effort to reach a common goal;
6. introduction to occupations to aid the students in becoming aware of the vast occupational opportunities available (p. 51).

Drier (1972) notes the activities taking place in Wisconsin relative to career development which involves some 300 classroom teachers, building principals, and school counselors. A career development theme has been fused into classroom activities that centers around 16 career development concepts. These 16 concepts are as follows:

1. An understanding and acceptance of self is important throughout life.
2. Persons need to be recognized as having dignity and worth.
3. Occupations exist for a purpose.
4. There is a wide variety of careers which may be classified in several ways.
5. Work means different things to different people.
6. Education and work are interrelated.
7. Individuals differ in their interests, abilities, attitudes, and values.
8. Occupational supply and demand has an impact on career planning.
9. Job specialization creates interdependency.
10. Environment and individual potential interact to influence career development.

11. Occupations and life styles are interrelated.
12. Individuals can learn to perform adequately in a variety of occupations.
13. Career development requires a continuous and sequential series of choices.
14. Various groups and institutions influence the nature and structure of work.
15. Individuals are responsible for their career planning.
16. Job characteristics and individuals must be flexible in a changing society (p. 40).

Concepts 1 through 7 are intended to be introduced in grades kindergarten through third and developed in grades four through six. Concepts 8 through 14 are to be introduced in grades four through six and developed in grades seven through nine.

In the state of Michigan, the Pontiac public schools were chosen as one of the six United States Office of Education models for career education. Kougnett and Justig (1972) list the goals by which the model program will be evaluated. They are as follows:

Grades 1-6

To develop attitudes about the personal and social significance of work.

To develop each pupil's self-awareness.

To develop and expand the occupational awareness and aspirations of pupils.

To improve overall pupil performance by unifying and focusing around a career development theme.

Grades 7-8

To provide experiences for students which will assist them

in evaluating their interests, abilities, values, and needs as they relate to occupational roles.

To provide students with opportunities for detailed exploration of selected occupational clusters (p. 38).

Marland (1972) provides additional insight into the competencies for elementary and junior high teachers by noting that pupils in the first six grades will be exposed to and become familiar with the career cluster concept where pupils in the seventh and eighth grades would begin to explore those clusters.

Whyte (1972) elaborates on this idea by describing various teaching phases of the cluster concept. The cluster concept, which at present represents 15 occupational areas of the world, might be the central theme around which career education is designed. In grades one through six, or phase I, the following questions will be explored: What are occupations? Who works in these Occupations? What is the life style of the people? With whom do the people work? Where are these jobs? How do the workers accomplish their jobs? Teachers of grades nine through twelve will relate their subject matter to careers.

DiMinico (1969) described the objectives of the elementary-You and Work Project that was tested in the Ellensburg (Washington) public schools. The objectives are similar to those noted above with the additional input that students at this age should develop realistic views of the world of work and their own abilities and limitations.

The United States Office of Education has published what they call

Career Education: A Model for Implementation (1971). In this publication, objectives were listed for each level of an existing school system. For grades Kindergarten through six, the objectives are:

- to develop in pupils attitudes about the personal and social significance of work;
- to develop each pupil's self-awareness;
- to develop and expand the occupational awareness and the aspirations of the pupils;
- to improve overall pupil performance by unifying and focusing basic subjects around a career development theme.

The career education objectives for the seventh and eighth grade levels are:

- to provide experiences for students to assist them in evaluating their interests, abilities, values, and needs as they relate to occupational roles;
- to provide students with opportunities for further and more detailed exploration of selected occupational clusters, leading to the tentative selection of a particular cluster for in-depth exploration at the ninth grade level;
- to improve the performance of students in basic subject areas by making the subject matter more meaningful and relevant through unifying and focusing it around a career development theme.

Literature Within Oregon

Although the articles noted above were, in part, instrumental in helping to generate the competencies used in this study, the literature originating from within the state of Oregon was the major source of information. Nearly all of the school districts participating in the study had literature published in reference to career education objectives for students. Due to the similarity of stated objectives within the literature, only a few are cited below.

The Oregon State Department of Education (1972a) provided some input through their publication Career Education - The Oregon Way. In the one page mimeograph, general objectives for each level of career education were listed. Students in career awareness, grades Kindergarten through six will:

- develop awareness of the many occupational careers available
- develop awareness of self in relation to occupation in their potential careers
- develop foundations for wholesome attitudes toward work and society
- develop attitudes of respect and appreciation toward workers in all fields
- make tentative choices of career cluster to explore in greater depth during mid-school years

Students in career exploration (grades seven to ten) will:

- explore key occupational areas and assess own interests and abilities
- become familiar with occupational classifications and clusters
- develop awareness of relevant factors to be considered in decision making
- gain experience in meaningful decision making
- develop tentative occupational plans and arrive at a tentative career choice

Cited below are a few objectives listed in Springfield's Teacher Guide for Career Awareness Process in the Elementary Schools (Springfield School District #19, 1971), which is a part of Project C. O. R. E. (Career Oriented Relevant Education). Objectives related to student knowing process are:

1. The student will locate and present descriptions of at least ten occupations in their own community.
2. The student will be able to describe the occupation of their own family members.
3. The student will be able to distinguish differences and relationships between occupation and avocation.
4. The student will be able to name at least ten occupations requiring a form of higher education and ten occupations requiring high school diplomas only.
5. The student will identify at least three occupations which are compatible with their interests, abilities, and limitations.

6. The student will be able to identify at least six occupations represented by people working in his particular school; i. e., custodian, secretary, delivery men, cook, teacher, etc.
7. The student will be able to list three tasks people do in their occupations within their school.
8. By the end of the 6th year, the student will know what is meant by the following occupation titles: Accounting, Agriculture, Forestry, Clerical, Construction, Electrical, Food Service, Home Related Industries, Marketing, Mechanics, Metals, and Secretarial, and will demonstrate by identifying three jobs within each cluster.
9. The student will be able to cite at least four reasons for work.
10. The student should know the underlying causes of the origin of different types of work.
11. The student will be able to list physical, intellectual, and economic limits of five occupations.
12. A student should be able to realize that social interactions differ in the various occupations, avocations, citizenship, and family roles.
13. The student will demonstrate that he has a knowledge of the relationship between the curriculum and career program.

The guide also listed behavioral objectives for the teacher. Some of these objectives were:

1. Each staff member will be able to identify his role in the Career Awareness Program as it relates to other people and programs.

2. Each staff member will be able to describe his role in the Career Awareness Program so that others can paraphrase that description.
3. Each staff member will be able to identify available relevant Career Awareness resources.
4. Each staff member will be able to demonstrate a positive understanding toward the Career Awareness Program by integrating career awareness activities into all subject areas.
5. Each staff member will allow each student an opportunity to express himself regardless of the student's value system.
6. Having given a commitment to the Career Awareness Program, the staff member will draw support from the community.

Literature from Portland Public Schools listed objectives for both grade levels. For grades one to six, the students will be able to:

- a. Learn attitudes of respect and appreciation for all types of work and for workers in all fields.
- b. Relate the subject matter of each discipline to occupations.
- c. Express their own interests, aptitudes, and abilities in several of the major career fields.
- d. Make tentative choices of career fields that they would like to explore.
- e. Know the wide range of occupations open to them.

For grades seven to ten, the student will be able to:

- a. Understand the physical, educational, and skill requirements of typical occupations.
- b. Relate their own interests, aptitudes, and abilities to the requirements of typical occupations in a number of career clusters.

- c. Appreciate the importance of education and career training as preparation for a satisfying life.
- d. Arrive at a tentative career choice in an appropriate field.

Summary

The literature reported and described in this chapter is viewed as the foundation and justification for this study. It has shown the magnitude and scope of the career education thrust which is evidenced by the widespread development of new and innovative career education programs all across the United States.

The review has suggested a need for the development of qualified personnel to function in a career education setting and the need for research relative to personnel development.

Studies have also indicated a thrust toward a performance-based curriculum wherein the identification of competencies is a vital step in the design and development of such a curriculum. Of the studies that have been made regarding teacher competencies in career education, the review of literature revealed vocational education as a primary source of information.

Studies by Coutrney and Halfin (1969), Gunderson (1971), Lindahl (1971), Miller (1971), Ward (1971), and Martin (1972) were among those that moved in this direction and that were helpful and relevant to the purposes of this study.

The latter portion of the review of literature provided the necessary information essential in generating the career education competencies investigated in this study.

DESIGN OF THE STUDY

This study was an empirical investigation of career education competencies needed by elementary and junior high school teachers as they adopt and apply the concepts of career education to their teaching situation. This chapter explains the procedures used in achieving six objectives for the study (see pages 3-4) and is divided into five main sections: Preparation of the Questionnaire; The Dependent Variables; The Sample; The Collection of Data; and The Statistical Design.

Preparation of the Questionnaire

The data for the study were gathered by means of a mail survey questionnaire. The survey instrument contained 50 competency items. Two five-point scales were used, which enabled respondents to judgmentally score (1) the level of proficiency now possessed by the respondent for each competency, and (2) the level of proficiency a teacher should have for each competency. There was also a column for respondents to check as to where each competency should be initiated and completed in the teacher training program.

Preliminary steps in the design and development of the questionnaire involved a review of literature related to teacher competencies.

Studies by Halfin and Courtney (1970), Gunderson (1971), Lindahl (1971), Miller (1971), Ward (1971), Baltimore (1972), and Martin (1972) utilized a Likert scale competency questionnaire in identifying vocational teacher or administrator competencies, and as such were helpful in setting up the basic format of the instrument and in generating appropriate competencies. From these studies, a few competencies were used as written, others revised so as to be appropriate for elementary and/or junior high school teachers.

Other literature, such as career awareness and exploratory teacher guides, brochures, and pamphlets with stated objectives for career education, and magazine articles, was also used in generating appropriate competencies.

The initial list of competencies was subjected to a review and critique by selected Oregon State University staff. The competencies were subsequently revised and again distributed for reaction. Based upon these reactions and the suggestions of committee members, 67 competency items were incorporated into a survey questionnaire.

Jury Panel of Experts

The second step involved an evaluation of format, content, and clarity by presenting the questionnaire to a jury panel of experts. The ten-member jury panel of experts consisted of elementary teachers, a junior high school teacher, project directors of career awareness and

career exploration, a career education specialist, staff members of Oregon State University directly involved in career education, an Oregon State Department of Education staff member, and an intermediate education district coordinator of career education. The names and positions of the members of the jury panel of experts are presented in Appendix C. Each panel member was personally contacted by the writer and asked to look for clarity, appropriateness of content and format, and to make any recommendations for addition, deletion, or revision of any part of the questionnaire. As a result of their input, changes were made in the content and format of the questionnaire and a number of competencies were either eliminated, combined, or rewritten so that the revised instrument consisted of 50 career education competencies considered appropriate by the jury panel of experts to be incorporated into the questionnaire.

Pilot Test

A third step resulting in further refinement of the questionnaire centered around a field test of the instrument. The field test involved five elementary and five junior high school teachers selected from the same areas as the final target survey population. Each respondent in the pilot group was contacted by phone and invited to participate. They were all given instructions to complete the questionnaire and to identify any competencies or other parts of the questionnaire which were not

clear. Following the field testing phase, a few minor changes were found necessary prior to the preparation of the final draft. The final draft of the questionnaire used in this study may be found in Appendix A.

The Dependent Variables

Respondents were asked to indicate the proficiency level which they now possessed and also the proficiency level a teacher should have for each career education competency. The proficiency level was based upon a five-point scale. In addition, respondents were also asked to check where the competency should be initiated and completed. The dependent variables in this study were

1. the scores judgmentally assigned by respondents to denote, for each competency, the proficiency they now possessed;
2. the scores judgmentally assigned by respondents to denote the proficiency a teacher should have for each competency;
3. the response given by the respondents to denote where in the professional preparation of the teacher each competency should be initiated and completed.

The Sample

The sample population consisted of 30 elementary teachers and 45 junior high school teachers within the state of Oregon. Selection of

participants was based upon four criteria. First, each participant had to have taken an in-service workshop in career education. Secondly, there had to be at least five teachers from each school, project, or area. Thirdly, teachers had to come from (1) those schools or projects that were identified as either a pilot, model, or exemplary career awareness or exploratory program, or (2) those schools or areas where a group of teachers had been working together in career awareness and/or career exploratory activities and who were recommended by leaders and administrators of career education programs as being appropriate to include in the survey. Lastly, final teacher selection within each school, project, or area was based upon the recommendation of the building school principal or someone directly involved in the project who could identify those teachers best able and willing to respond to the instrument.

By subject matter and grade level, the composition of the sample is illustrated in Tables 1 and 2. (See Appendix J, K, L, and M for additional detail regarding the composition of the sample.)

The pilot, model, or exemplary projects were those identified by the Oregon State Department of Education. The other schools, areas, or projects included in this study population were recommended by staff members of the Oregon State Department of Education or personnel directly responsible for career education leadership within

the state and local school districts. The schools, projects, and/or areas involved in this study are listed in Appendix B.

The Collection of Data

Data for the study were collected through the use of a survey questionnaire. The instrument was designed for mailing to respondents with all the necessary instructions and purposes of the study included on the questionnaire. However, the procedure used by this writer involved group meetings with respondents where the questionnaire could be personally administered. The meetings were arranged for an hour in length so that ample time could be allowed for explaining the purposes of the study, giving instructions, answering of questions, and completion of questionnaire.

In two of the schools, the writer could not arrange to be there to administer the questionnaire. As a result, five junior high school teachers from one school (School "I") were mailed a copy of the questionnaire with instructions to complete and return by mail; five junior high school teachers from another school (School "F") were asked to complete the questionnaire in a group meeting with the person administering the instrument being briefed as to the purpose of the study and the instructions to give for completing the questionnaire.

The Statistical Design

The facilities and resources of the Oregon State University Computer Center were utilized in compiling the numerical data collected through the questionnaire. The questionnaire was designed to solicit three responses for each competency. The first response called for respondents to judgmentally score the proficiency they now possessed. The second response called for respondents to score the proficiency the teacher should have. The third response called for respondents to check where the competency should be initiated and completed. Based upon the computed mean scores of the respondents to the should have scale, all 50 competencies were rank ordered for elementary teachers and for junior high school teachers. Consideration was also given to the mean spacing between the ranked items. Competencies were also rank ordered for both groups based upon the mean rating of respondents to the now have portion of the questionnaire.

Opinions as to where the career education competency should be initiated and completed were compiled as to the number of responses for each.

Significance Testing of Hypotheses

This study also sought to determine if differences existed among

the proficiency level mean scores of respondents according to (1) elementary schools, (2) junior high schools, and (3) elementary and junior high schools combined.

The three hypotheses tested in this study were:

1. There is no significant difference among the elementary school responses.
2. There is no significant difference among the junior high school responses.
3. There is no significant difference among the elementary school and junior high school responses.

A one-way classification analysis of variance was used in testing for significant differences for hypotheses one and two. The third hypothesis was tested using analysis of covariance. The test statistic used to analyze contrasts between mean scores was the F statistic.

There was also an interest in learning if certain independent variables had a significant effect upon the responses to the dependent variables. The independent variables under consideration were (1) years of teaching experience, (2) years taught in Oregon, (3) years of work experience other than teaching, (4) extent of formal schooling, (5) bachelor's degree received in Oregon, (6) marriage, and (7) children in school or beyond school age. These variables were treated

as covariates in a general linear hypothesis analysis of covariance with the F test used in determining significance.

Factor Analysis

The study also incorporated the use of two factor analytic techniques--the Q-mode and the R-mode. The Q-mode ordered respondents according to how they responded to the competencies in the study. It provided a measure of commonality among the respondents by indicating the extent to which elementary and junior high school teachers were alike relative to their response to the proficiency teachers should have. Based upon the data furnished by the 50 competencies, a 75-respondent intercorrelation matrix was generated which provided the measure of commonality.

The R-mode, on the other hand, ordered competencies according to the respondents included in the study. In this case, the data furnished by the 75 respondents generated a 50-competency item intercorrelation matrix which provided for a clustering of common career education competencies. This technique examined the relationship of every competency with every other competency where factor loadings of $\pm .50$ or higher were recorded as being clustered within each factor.

PRESENTATION OF FINDINGS

This chapter is divided into five main sections. The first section presents the findings centering around mean score ranking of competencies by elementary teachers and junior high school teachers and reports a comparison between the two. The proficiency the teachers now have and the proficiency a teacher should have are identified and discussed.

The second section presents the results of the analysis of variance statistical technique used in testing for differences among mean scores between elementary schools and between junior high schools. Section two also discusses the analysis of covariance statistical technique used in testing the differences between elementary and junior high schools.

The third section presents the results of the analysis of covariance statistical technique used in testing the significant effect of certain independent variables upon the responses to the dependent variables.

Section four presents the results of Q-mode and R-mode factor analysis.

The fifth section reports the tabulation of responses as to where each competency should be initiated and completed.

Ranking of Career Education Competencies

With the aid of the Computer Center located at Oregon State University, mean scores were obtained for each career education competency according to (1) the responses of 30 elementary teachers to the should have and now have portion of the survey instrument, and (2) the responses of 45 junior high school teachers to the should have and now have portion of the survey instrument. Based upon the mean score, each competency was rank ordered for elementary teachers and for junior high school teachers; both the competencies that teachers should have and those respondents now have were rank ordered for each group.

Competencies Teachers Should Have

The 50 competencies in rank order of importance for elementary teachers according to the proficiency elementary teachers should have are shown in Table 3. The 50 competencies in rank order of importance for junior high teachers according to the proficiency junior high teachers should have are shown in Table 4.

For the junior high group, all 50 items were ranked with a mean score of 3.15 or higher. This indicated that the junior high teachers responding to the questionnaire felt that junior high teachers should have at least moderate proficiency in all 50 competencies. Thirty-three of the 50 competencies received a mean score of 4.0 or higher,

Table 3. Fifty competencies in rank order of importance as to the proficiency elementary teachers should have.

Questionnaire item number	Title of competency	Rank	Mean score		
			Elem.	Jr. High	Elem. now have
26	Identify the careers represented among the parents of your students.	1	4.56	3.77	4.00
23	Utilize learning activities that foster wholesome attitudes regarding the worth and function of work in all fields at all levels.	2	4.53	4.37	3.90
48	Understand the total career education program within your school district and identify your role in the total program.	3	4.50	4.22	3.66
47	Help students realize that responsibility and decision making are part of career development.	4	4.43	4.43	3.76
25	Identify people in the local community who are willing to talk to students about their occupations and keep a directory of contacts made.	5	4.43	4.24	3.80
9	Direct students in analyzing the direct relationship between competencies developed while in school and those needed in occupations as well as in citizen, avocational and family life roles.	6	4.40	4.26	3.83
33	Discuss with students the interdependence of occupations and how all work contributes to the effective functioning and well-being of society.	7	4.40	4.31	3.96
17	Utilize selected resource people in class to present career information closely allied to their occupational specialties.	8	4.36	4.28	3.86

Table 3. (Continued)

Questionnaire item number	Title of competency	Rank	Mean score		
			Elem.	Jr. High	Elem. now have
14	Identify career awareness and/or exploratory resource material such as A.V. material, games, literature, etc.	9	4.33	4.11	3.60
32	Discuss and illustrate for students how people in various occupations also function in other life roles as well. (i.e., a citizen, family member and user of leisure time).	10	4.30	4.08	3.83
46	Conduct field trips for career awareness and/or exploration.	11	4.26	4.20	3.56
50	Direct students in identifying the tasks performed by people in various occupations.	12	4.26	4.13	3.66
49	Evaluate for classroom application, various sources of career information.	13	4.20	4.13	3.43
43	Involve the parents of class members in presenting information on their career.	14	4.20	3.86	3.33
28	Utilize career awareness and/or exploratory resource materials such as A.V. material, games, literature, etc.	15	4.20	4.15	3.56
15	Identify resources and/or services available from the community for enriching the career awareness and/or exploration programs.	16	4.20	4.40	3.43
21	Direct students in identifying careers that require some some form of higher education.	17	4.16	4.20	4.00

Table 3. (Continued)

Questionnaire item number	Title of competency	Rank	Mean score		
			Elem.	Jr. High	Elem. now have
22	Utilize career awareness and/or exploration teaching guides that have been developed.	18	4.16	4.11	3.63
2	Direct students in studying the occupations involved in the day-to-day operations of your local school system.	19	4.16	4.04	3.90
12	Direct students in identifying the physical and intellectual requirements of occupations related to subject matter units covered in class.	20	4.10	4.26	3.46
13	Direct students in identifying occupations that are compatible with their interests and abilities.	21	4.06	4.22	3.36
40	Distinguish for students relationships between occupations and avocations.	22	4.06	3.95	3.56
36	Identify for students the career opportunities related to subject matter units covered in class.	23	4.03	4.33	3.43
19	Direct students in developing a questionnaire appropriate for interviewing parents and others about what they do in their jobs.	24	4.00	3.93	3.40
4	Direct students in doing research on occupations that are of interest to them.	25	3.96	4.31	3.40
55	Direct students in analyzing the career <u>cluster</u> job family concept.	26	3.96	4.13	3.23

Table 3. (Continued)

Questionnaire item number	Title of competence	Rank	Mean score		
			Elem.	Jr. High	Elem. now have
8	Direct students in making a task analysis of their parent's occupation or of others that are of special interest.	27	3.96	3.91	3.36
7	Direct students in analyzing how social interactions differ among various careers.	28	3.93	3.68	3.30
27	Provide for student discussion of their career aspirations.	29	3.93	4.20	3.66
35	Utilizer "hands-on" or applied classroom projects in which the tasks of real workers are simulated.	30	3.90	4.06	2.93
20	Identifying those vocations that can become avocations and avocations that can and have become vocations.	31	3.90	3.95	3.30
1	Direct students in identifying the type of tools, clothes, material and equipment used by people in various occupations.	32	3.90	3.60	3.33
44	Work with guidance and counseling staff to implement and improve the career awareness and/or exploration program.	33	3.83	4.02	3.13
42.	Help students recognize advantages of career planning.	34	3.80	4.40	3.26
3	Identifying careers that require a high school diploma or a GED.	35	3.76	4.17	3.43
29	Utilize vocational literature and data for class assignments.	36	3.76	4.02	3.03

Table 3. (Continued)

Questionnaire item number	Title of competence	Rank	Mean score		
			Elem.	Jr. High	Elem. now have
30	Establish and maintain working relationships with local business, industrial and labor personnel in developing and improving career awareness and/or exploratory programs.	37	3.76	4.06	2.90
38	Utilize individualized instruction material developed for use in career awareness and/or exploration.	38	3.70	4.04	2.80
16.	Utilize developed tests that measure the achievement of career awareness and/or exploratory objectives.	39	3.66	3.91	2.36
45	Direct students in assessing the life styles associated with various occupations.	40	3.60	3.80	3.13
6	Direct students in using classified ads to identify and describe occupations.	41	3.56	3.97	3.53
31	Utilize appropriate measuring devices to guide students in a self-understanding of their interests, attitudes and aptitudes as they relate to future career decisions.	42	3.56	4.04	2.46
34	Identify available tests that measure the achievement of career awareness and/or exploratory objectives.	43	3.50	3.84	2.30
18	Direct students in identifying the salary levels and working conditions of various occupations studied in subject matter units covered in class.	44	3.43	3.88	2.90
24	Develop tests that measure the achievement of career awareness and/or exploratory objectives.	45	3.43	3.80	2.56

Table 3. (Continued)

Questionnaire item number	Title of competence	Rank	Mean score		
			Elem.	Jr. High	Elem. now have
11	Using the Dictionary of Occupational Titles (D. O. T.) to identify and describe occupations.	46	3.36	3.97	2.83
41	Identify appropriate measuring devices for students to use in assessing their interests, attitudes and aptitudes as they relate to future career decisions.	47	3.36	4.06	2.43
10	Direct students in obtaining information on manpower trends and needs from the local state employment services.	48	3.33	4.02	2.66
39	Identify for classroom application the national, regional, and local manpower trends and needs.	49	3.03	3.82	2.50
37	Understand and apply various theories of career development (e.g., theories of Super. Holland, etc.)	50	2.80	3.15	1.76

Table 4. Fifty competencies in rank order of importance as to the proficiency junior high teaching should have.

Questionnaire item number	Title of competency	Rank	Mean score		
			Jr. high	Elem.	Jr. high now have
47	Help students realize that responsibility and decision making are part of career development.	1	4.43	4.43	3.57
42	Help students recognize advantages of career planning.	2	4.40	3.80	3.66
15	Identify resources and/or services available from the community for enriching the career awareness and/or exploration programs.	3	4.40	4.20	3.48
23	Utilize learning activities that foster wholesome attitudes regarding the worth and function of work in all fields at all levels.	4	4.37	4.53	3.55
36	Identify for students the career opportunities related to subject matter units covered in class.	5	4.33	4.03	3.60
33	Discuss with students the interdependence of occupations and how all work contributes to the effective functioning and well-being of society.	6	4.31	4.40	3.66
4	Direct students in doing research on occupations that are of interest to them.	7	4.31	3.96	3.64
17	Utilize selected resource people in class to present career information closely allied to their occupational specialties.	8	4.28	4.36	3.51
9	Direct students in analyzing the direct relationship between competencies developed while in school and those needed in occupations as well as in citizen, avocational and family life roles.	9	4.26	4.40	3.46

Table 4. (Continued)

Questionnaire item number	Title of competency	Rank	Mean score		
			Jr. high	Elem.	Jr. high now have
12	Direct students in identifying the physical and intellectual requirements of occupations related to subject matter units covered in class.	10	4.26	4.10	3.51
25	Identify people in the local community who are willing to talk to students about their occupations and keep a directory of contacts made.	11	4.24	4.43	3.48
48	Understand the total career education program within your school district and identify your role in the total program.	12	4.22	4.50	3.35
13	Direct students in identifying occupations that are compatible with their interests and abilities.	13	4.22	4.06	3.40
21	Direct students in identifying careers that require some form of higher education.	14	4.20	4.16	3.97
27	Provide for student discussion of their career aspirations.	15	4.20	3.93	3.60
46	Conduct field trips for career awareness and/or exploration.	16	4.20	4.26	3.28
3	Direct students in identifying careers that require a high school diploma or a GED.	17	4.17	3.76	3.44
28	Utilize career awareness and/or exploratory resource material such as A. V. material, games, literature, etc.	18	4.15	4.20	3.26
5	Direct students in analyzing the career <u>cluster</u> job family concept.	19	4.13	3.96	3.11

Table 4. (Continued)

Questionnaire item number	Title of competency	Rank	Mean score		
			Jr. high	Elem.	Jr. high now have
49	Evaluate for classroom application, various sources of career information.	20	4.13	4.20	3.13
50	Direct students in identifying the tasks performed by people in various occupations.	21	4.13	4.26	3.26
22	Utilize career awareness and/or exploration teaching guides that have been developed.	22	4.11	4.16	3.17
14	Identify career awareness and/or exploratory resource material such as A.V. material, games, literature, etc.	23	4.11	4.33	3.31
32	Discuss and illustrate for students how people in various occupations also function in other life roles as well. (i. e., as citizen, family member and user of leisure time).	24	4.08	4.30	3.44
30	Establish and maintain working relationships with local business, industrial and labor personnel in developing and improving career awareness and/or exploratory programs.	25	4.06	3.76	2.86
41	Identify appropriate measuring devices for students to use in assessing their interests, attitudes and aptitudes as they relate to future career decisions.	26	4.06	3.36	3.57
35	Utilize "hands-on" or applied classroom projects in which the tasks of real workers are simulated.	27	4.06	3.90	2.84
2	Direct students in studying the occupations involved in the day-to-day operations of your local school system.	28	4.04	4.16	3.60

Table 4. (Continued)

Questionnaire item number	Title of competency	Rank	Mean score		
			Jr. high	Elem.	Jr. high now have
31	Utilize appropriate measuring devices to guide students in a self-understanding of their interests, attitudes and aptitudes as they relate to future career decisions.	29	4.04	3.56	2.95
38	Utilize individualized instruction material developed for use in career awareness and/or exploration.	30	4.04	3.70	3.02
29	Utilize vocational literature and data for class assignments.	31	4.02	3.76	3.28
10	Direct students in obtaining information on manpower from the local state employment services.	32	4.02	3.33	3.06
44	Work with guidance and counseling staff to implement and improve the career awareness and/or exploration program.	33	4.02	3.83	2.88
6	Direct students in using classified ads to identify and describe occupations.	34	3.97	3.56	3.82
11	Direct students in using the Dictionary of Occupational Titles (D. O. T.) to identify and describe occupations.	35	3.97	3.36	3.24
20	Direct students in identifying those vocations that can become avocations and avocations that can and have become vocations.	36	3.95	3.90	3.31
40	Distinguish for students relationships between occupations and avocations.	37	3.95	4.06	3.53

Table 4. (Continued)

Questionnaire item number	Title of competency	Rank	Mean score		
			Jr. high	Elem.	Jr. high now have
19	Direct students in developing a questionnaire appropriate for interviewing parents and others about what they do in their jobs.	38	3.93	4.00	2.97
8	Direct students in making a task analysis of their parent's occupation or of others that are of special interest.	39	3.91	3.96	3.08
16	Utilize developed tests that measure the achievement of career awareness and/or exploratory objectives.	40	3.91	3.66	2.64
18	Direct students in identifying the salary levels and working conditions of various occupations studied in subject matter units covered in class.	41	3.88	3.43	3.40
43	Involve the parents of class members in presenting information on their career.	42	3.86	4.20	2.48
34	Identify available tests that measure the achievement of career awareness and/or exploratory objectives.	43	3.84	3.50	2.53
39	Identify for classroom application the national, regional, and local manpower trends and needs.	44	3.82	3.03	2.60
45	Direct students in assessing the life styles associated with various occupations.	45	3.80	3.60	3.02
24	Develop tests that measure the achievement of career awareness and/or exploratory objectives.	46	3.80	3.43	2.51
26	Identify the careers represented among the parents of your students.	47	3.77	4.56	3.42

Table 4. (Continued)

Questionnaire item number	Title of competency	Rank	Mean score		
			Jr. high	Elem.	Jr. high now have
7	Direct students in analyzing how social interactions differ among various careers.	48	3.68	3.93	3.24
1	Direct students in identifying the type of tools, clothes, material and equipment used by people in various occupations.	49	3.60	3.90	3.26
37	Understand and apply various theories of career development (e.g. theories of Super, Holland, etc.	50	3.15	2.80	1.88

which indicated that for 33 competencies considerable proficiency was needed. The content of these 33 competencies centered around teachers assisting students in career decision making, discovering interests and abilities, doing research on occupations, studying requirements of careers, identifying and utilizing resources, and promoting the dignity of work.

For the elementary group, 49 items had a mean score of 3.0 or greater and one item (Understand and apply various theories of career development) was below 3.0. Twenty-four items had a mean score of 4.00 or greater. The content of these 24 competencies dealt with resources, promoting the dignity of work, the life role concept, studying the tasks of workers, responsibility in career development, and the purpose of education.

There were twenty competencies that had mean scores of 4.0 or higher in both groups. These competencies are listed in Table 5 along with the mean scores of both groups. These 20 competencies can be considered very important and unique to both elementary and junior high school teachers; the differences in mean score between groups was small and not one was listed among those found in Table 7, which identifies those competencies with the largest differences in mean scores between groups (.34 or greater). With one exception (students' parents as resources), the content of these 20 competencies was exactly the same as the content of the 24 high ranked (4.0 and above)

Table 5. Competencies with mean scores of 4.00 or above in both groups as to the proficiency teachers should have.

Questionnaire item number	Title of competency	Elementary			Junior high		
		should have mean score	standard deviation	now have mean score	should have mean score	standard deviation	now have mean score
2	Direct students in studying the occupations involved in the day-to-day operations of your local school system.	4.16	.69	3.90	4.04	.85	3.60
9	Direct students in analyzing the direct relationship between competencies developed while in school and those needed in occupations as well as in citizen, avocational and family life roles.	4.40	.81	3.83	4.26	.78	3.46
12	Direct students in identifying the physical and intellectual requirements of occupations related to subject matter units covered in class.	4.10	.92	3.46	4.26	.61	3.51
13	Direct students in identifying occupations that are compatible with their interests and abilities.	4.06	.94	3.36	4.22	.59	3.40
14	Identify career awareness and/or exploratory resource material such as A. V. material, games, literature, etc.	4.33	.60	3.60	4.11	.57	3.31
15	Identify resources and/or services available from the community for enriching the career awareness and/or exploration programs.	4.20	.61	3.43	4.40	.53	3.48
17	Utilize selected resource people in class to present career information closely allied to their occupational specialties.	4.36	.66	3.86 ^a	4.28	.50	3.51

Table 5. (Continued)

Questionnaire item number	Title of competency	Elementary			Junior high		
		should have mean score	standard deviation	now have mean score	should have mean score	standard deviation	now have mean score
21	Direct students in identifying careers that require some form of higher education.	4.16	.91	4.00 ^a	4.20	.69	3.97
22	Utilize career awareness and/or exploration teaching guides that have been developed.	4.16	.69	3.63 ^a	4.11	.57	3.17
23	Utilize learning activities that foster wholesome attitudes regarding the worth and function of work in all fields at all levels.	4.53	.57	3.90	4.37	.61	3.55
25	Identify people in the local community who are willing to talk to students about their occupations and keep a directory of contacts made.	4.43	.56	3.80	4.24	.57	3.48
28	Utilize career awareness and/or exploratory resource material such as A.V. material, games, literature, etc.	4.20	.71	3.56	4.15	.52	3.26
32	Discuss and illustrate for students how people in various occupations also function in other life roles as well (i.e., a citizen, family members and user of leisure time).	4.30	.70	3.83	4.08	.76	3.44
33	Discuss with students the interdependence of occupations and how all work contributes to the effective functioning and well-being of society.	4.40	.62	3.96 ^a	4.31	.63	3.65

Table 5. (Continued)

Questionnaire item number	Title of competency	Elementary			Junior high		
		should have mean score	standard deviation	now have mean score	should have mean score	standard deviation	now have mean score
36	Identify for students the career opportunities related to subject matter units covered in class.	4.03	1.06	3.43	4.33	.60	3.60
46	Conduct field trips for career awareness and/or exploration.	4.26	.73	3.56 ^a	4.20	.72	3.28
47	Help students realize that responsibility and decision-making are part of career development.	4.43	.93	3.76 ^a	4.44	.58	3.57
48	Understand the total career education program within your school district and identify your role in the total program.	4.50	.62	3.66	4.22	.70	3.35
49	Evaluate for classroom application various sources of career information.	4.20	.55	3.43 ^a	4.13	.58	3.13
50	Direct students in identifying the tasks performed by people in various occupations.	4.26	.63	3.66	4.13	.66	3.26

^a All of these competencies are listed in Table 7 with the small difference in mean scores between each group.

competencies noted above for the elementary group. It is interesting to note also that both elementary and junior high teachers felt they possessed at least moderate to considerable proficiency in all 20 of these competencies (3.10 to 4.00 mean score level of proficiency).

Of the 15 lowest ranked competencies in each group as to the proficiency teachers should have, there were seven competencies found in both groups with a mean score of 3.91 or less. Table 6 lists these seven competencies and shows the mean score, standard deviation, and ranking number as determined by both elementary and junior high teachers. Four of these competencies dealt with evaluation or assessment, one with manpower trends, one with the requirements of occupation and one with theories of career development. With the exception of two of these competencies (18 and 45), both elementary and junior high teachers felt they possessed only slight to moderate proficiency (mean score ratings of 1.88 to 2.90). Both groups felt they were less proficient in these areas and also felt teachers needed less proficiency in them.

The results of the mean score rank ordering according to the proficiency teachers should have showed a number of similarities and differences in the responses of elementary and junior high teachers. In all, there were 16 competencies that showed a difference between the two groups of .34 or greater in the mean score rating. Likewise, there were 11 competencies that showed a difference of .09 or less,

Table 6. Seven competencies found in the 15 lowest ranked competencies from each group, as to the proficiency teachers should have.

Questionnaire item number	Title of competency	Elementary			Junior high		
		should have mean score	standard deviation	now have mean score	should have mean score	standard deviation	now have mean score
16	Utilize developed tests that measure the achievement of career awareness and/or exploratory objectives.	3.66	1.24	2.36	3.91	.82	2.64
18	Direct students in identifying the salary levels and working conditions of various occupations studied in subject matter units covered in class.	3.43	1.16	2.90	3.88	.57	3.40
24	Develop tests that measure the achievement of career awareness and/or exploratory objectives.	3.43	1.10	2.56	3.80	.78	2.51
34	Identify available tests that measure the achievement of career awareness and/or exploratory objectives.	3.50	1.07	2.30	3.84	.79	2.53
37	Understand and apply various theories of career development (e.g., theories of Super, Holland, etc.)	2.80	1.18	1.76	3.15	.99	1.88
39	Identify for classroom application the national, regional, and local manpower trends and needs.	3.03	1.18	2.50	3.82	.71	2.60
45	Direct students in assessing the life style associated with various occupations.	3.60	1.13	3.13	3.80	.78	3.02

leaving the remaining 33 competencies showing differences of .11 to .30. Table 7 lists the competencies with group differences in mean score of .34 or greater. They are presented in order from the greatest difference .79) to the least (.34). Table 8 lists those competencies with small differences (from .00 to .10) and presents them in order starting with the least difference. With the exception of two items listed in Table 7 (26 and 43), the higher mean score was with the junior high group which indicates that this particular group of 14 competencies was more unique to junior high teachers than elementary teachers; competencies number 26 and 43 (Table 7) being more unique to elementary teachers than junior high teachers.

Competencies Teachers Now Have

Competencies were rank ordered for both elementary and junior high school teachers according to the proficiency the teachers now have.

The 50 competencies in rank order according to the proficiency elementary teachers now have are listed in Table 9. The 50 competencies in rank order according to the proficiency junior high teachers now have are listed in Table 10.

Elementary teachers responding to the questionnaire felt they possessed between moderate to considerable (3.60 to 4.00 mean score) proficiency in 15 competencies (see the first 15 competencies listed in

Table 7. Largest difference in mean score between elementary and junior high school teachers as to the proficiency teachers should have.

Questionnaire item number	Title of competency	Elementary		Junior high		Difference between mean scores
		mean score	standard deviation	mean score	standard deviation	
26 ^a	Identify the careers represented among the parents of your students.	4.56 ^a	.56	3.77	.95	.79
39	Identify for classroom application the national, regional, and local manpower trends and needs.	3.03	1.18	3.82	.71	.79
41	Identify appropriate measuring devices for students to use in assessing their interests, attitudes and aptitudes as they relate to future career decisions.	3.36	1.24	4.06	.71	.70
10	Direct students in obtaining information on manpower trends and needs from the local state employment services.	3.33	1.02	4.02	.81	.69
11	Direct students in using the Dictionary of Occupational Titles (D.O. T.) to identify and describe occupations.	3.36	1.37	3.97	.94	.61
42	Help students recognize advantages of career planning.	3.80	1.09	4.40	.58	.60
31	Utilize appropriate measuring devices to guide students in a self-understanding of their interests, attitudes and aptitudes as they relate to future career decisions.	3.56	1.25	4.04	.67	.48
18	Direct students in identifying the salary levels and working conditions of various occupations studied in subject matter units covered in class.	3.43	1.16	3.88	.57	.45
6	Direct students in using classified ads to identify and describe occupations.	3.56	1.00	3.97	.86	.41

Table 7. (Continued)

Questionnaire item number	Title of competency	Elementary		Junior high		Difference between mean scores
		mean score	standard deviation	mean score	standard deviation	
3	Direct students in identifying careers that require a high school diploma or a GED.	3.76	.93	4.17	.57	.41
24	Develop tests that measure the achievement of career awareness and/or exploratory objectives.	3.43	1.10	3.80	.78	.37
37	Understand and apply various theories of career development (e.g., theories of Super, Holland, etc.).	2.80	1.18	3.15	.99	.35
4	Direct students in doing research on occupations that are of interest to them.	3.96	.76	4.31	.59	.35
43	Involve the parents of class members in presenting information on their career.	4.20 ^a	.71	3.86	.81	.34
38	Utilize individualized instruction material developed for use in career awareness and/or exploration.	3.70	1.02	4.04	.60	.34
34	Identify available tests that measure the achievement of career awareness and/or exploratory objectives.	3.50	1.07	3.84	.79	.34

^aHigh mean score with elementary group.

Table 8. Smallest difference in mean scores between elementary and junior high school teachers as to the proficiency teachers should have.

Questionnaire item number	Title of competency	Elementary		Junior high		Difference between mean scores
		mean score	standard deviation	mean score	standard deviation	
47	Help students realize that responsibility and decision-making are part of career development.	4.43	.93	4.43	.58	.00
21	Direct students in identifying careers that require some form of higher education.	4.16	.91	4.20	.69	.04
20	Direct students in identifying those vocations that can become avocations and avocations that can and have become vocations.	3.90	.80	3.95	.83	.05
8	Direct students in making a task analysis of their parent's occupation or of others that are of special interest.	3.96	.85	3.91	.73	.05
22	Utilize career awareness and/or exploration teaching guides that have been developed.	4.16	.69	4.11	.57	.05
28	Utilize career awareness and/or exploratory resource material such as A.V. material, games, literature, etc.	4.20	.71	4.15	.52	.05
46	Conduct field trips for career awareness and/or exploration.	4.26	.73	4.20	.72	.06
19	Direct students in developing a questionnaire appropriate for interviewing parents and others about what they do in their jobs.	4.00	.83	3.93	.68	.07
49	Evaluate for classroom application, various sources of career information.	4.20	.55	4.13	.58	.07
17	Utilize selected resource people in class to present career information closely allied to their occupational specialties.	4.36	.66	4.28	.50	.08

Table 9. Fifty competencies in rank order according to the proficiency elementary teachers now have.

Questionnaire item number	Title of competency	Elementary		Junior high	
		rank	mean score	rank	mean score
21	Direct students in identifying careers that require some form of higher education.	1	4.00	1	3.97
26	Identify the careers represented among the parents of your students.	2	4.00	19	3.42
33	Discuss with students the interdependence of occupations and how all work contributes to the effective functioning and well-being of society.	3	3.96	3	3.66
2	Direct students in studying the occupations involved in the day-to-day operations of your local school system.	4	3.90	6	3.60
23	Utilize learning activities that foster wholesome attitudes regarding the worth and function of work in all fields at all levels.	5	3.90	10	3.55
17	Utilize selected resource people in class to present career information closely allied to their occupational specialties.	6	3.86	13	3.51
9	Direct students in analyzing the direct relationship between competencies developed while in school and those needed in occupations as well as in citizen, avocational and family life roles.	7	3.83	16	3.46
32	Discuss and illustrate for students how people in various occupations also function in other life roles as well (i. e., a citizen, family member and user of leisure time).	8	3.83	18	3.44
25	Identify people in the local community who are willing to talk to students about their occupations and keep a directory of contacts made.	9	3.80	15	3.48

Table 9. (Continued)

Questionnaire item number	Title of competency	Elementary		Junior high	
		rank	mean score	rank	mean score
47	Help students realize that responsibility and decision-making are part of career development.	10	3.76	9	3.57
27	Provide for student discussion of their career aspirations.	11	3.66	7	3.60
48	Understand the total career education program within your school district and identify your role in the total program.	12	3.66	22	3.35
50	Direct students in identifying the tasks performed by people in various occupations.	13	3.66	29	3.26
22	Utilize career awareness and/or exploration teaching guides that have been developed.	14	3.63	32	3.17
14	Identify career awareness and/or exploratory resource material such as A.V. material, games, literature, etc.	15	3.60	23	3.31
28	Utilize career awareness and/or exploratory resource material such as A.V. material, games, literature, etc.	16	3.56	28	3.26
40	Distinguish for students relationships between occupations and avocations.	17	3.56	11	3.53
46	Conduct field trips for career awareness and/or exploration.	18	3.56	26	3.28
6	Direct students in using classified ads to identify and describe occupations.	19	3.53	2	3.82

Table 9. (Continued)

Questionnaire item number	Title of competency	Elementary		Junior high	
		rank	mean score	rank	mean score
12	Direct students in identifying the physical and intellectual requirements of occupations related to subject matter units covered in class.	20	3.46	12	3.51
3	Direct students in identifying careers that require a high school diploma or a GED.	21	3.43	17	3.44
15	Identify resources and/or services available from the community for enriching the career awareness and/or exploration programs.	22	3.43	14	3.48
36	Identify for students the career opportunities related to subject matter units covered in class.	23	3.43	8	3.60
49	Evaluate for classroom application, various sources of career information.	24	3.43	33	3.13
4	Direct students in doing research on occupations that are of interest to them.	25	3.40	5	3.64
19	Direct students in developing a questionnaire appropriate for interviewing parents and others about what they do in their jobs.	26	3.40	39	2.97
8	Direct students in making a task analysis of their parent's occupation or of others that are of special interest.	27	3.36	35	3.08
13	Direct students in identifying occupations that are compatible with their interests and abilities.	28	3.36	20	3.40
1	Direct students in identifying the type of tools, clothes, material and equipment used by people in occupations.	29	3.33	27	3.26

Table 9. (Continued)

Questionnaire item number	Title of competency	Elementary		Junior high	
		rank	mean score	rank	mean score
43	Involve the parents of class members in presenting information on their career.	30	3.33	49	2.48
7	Direct students in analyzing how social interactions differ among various careers.	31	3.30	30	3.24
20	Direct students in identifying those vocations that can become avocations and avocations that can and have become vocations.	32	3.30	24	3.31
42	Help students recognize advantages of career planning.	33	3.26	4	3.66
5	Direct students in analyzing the career <u>cluster</u> job family concept.	34	3.23	34	3.11
44	Work with guidance and counseling staff to implement and improve the career awareness and/or exploration program.	35	3.13	42	2.88
45	Direct students in assessing the life styles associated with various occupations.	36	3.13	38	3.022
29	Utilize vocational literature and data for class assignments.	37	3.03	25	3.28
35	Utilize "hands-on" or applied classroom projects in which the tasks of real workers are simulated.	38	2.93	44	2.84
18	Direct students in identifying the salary levels and working conditions of various occupations studied in subject matter units covered in class.	39	2.90	21	3.40

Table 9. (Continued)

Questionnaire item number	Title of competency	Elementary		Junior high	
		rank	mean score	rank	mean score
30	Establish and maintain working relationships with local business, industrial and labor personnel in developing and improving career awareness and/or exploratory programs.	40	2.90	43	2.86
11	Direct students in using the Dictionary of Occupational Titles (D. O. T.) to identify and describe occupations.	41	2.83	31	3.24
38	Utilize individualized instruction material developed for use in career awareness and/or exploration.	42	2.80	37	3.022
10	Direct students in obtaining information on manpower trends and needs from the local state employment services.	43	2.66	36	3.06
24	Develop tests that measure the achievement of career awareness and/or exploratory objectives.	44	2.56	48	2.51
39	Identify for classroom application the national, regional, and local manpower trends and needs.	45	2.50	46	2.60
31	Utilize appropriate measuring devices to guide students in a self-understanding of their interests, attitudes and aptitudes as they relate to future career decisions.	46	2.46	40	2.95
41	Identify appropriate measuring devices for students to use in assessing their interests, attitudes and aptitudes as they relate to future career decisions.	47	2.43	9	3.57
16	Utilize developed tests that measure the achievement of career awareness and/or exploratory objectives.	48	2.36	45	2.64

Table 9. (Continued)

Questionnaire item number	Title of competency	Elementary		Junior high	
		rank	mean score	rank	mean score
34	Identify available tests that measure the achievement of career awareness and/or exploratory objectives.	49	2.30	47	2.53
37	Understand and apply various theories of career development (e.g., theories of Super, Holland, etc.	50	1.76	50	1.86

Table 10. Fifty competencies in rank according to the proficiency junior high respondents now have.

Questionnaire item number	Title of competency	Junior high		Elementary	
		rank	mean score	rank	mean score
21	Direct students in identifying careers that require some form of higher education.	1	3.97	1	4.00
6	Direct students in using classified ads to identify and describe occupations.	2	3.82	19	3.53
33	Discuss with students the interdependence of occupations and how all work contributes to the effective functioning and well-being of society.	3	3.66	3	3.96
42	Help students recognize advantages of career planning.	4	3.66	33	3.26
4	Direct students in doing research on occupations that are of interest to them.	5	3.64	25	3.40
2	Direct students in studying the occupations involved in the day-to-day operations of your local school system.	6	3.60	4	3.90
27	Provide for student discussion of their career aspirations.	7	3.60	11	3.66
36	Identify for students the career opportunities related to subject matter units covered in class.	8	3.60	23	3.43
47	Help students realize that responsibility and decision making are part of career development.	9	3.57	10	3.76
23	Utilize learning activities that foster wholesome attitudes regarding the worth and function of work in all fields at all levels.	10	3.55	5	3.90

Table 10. (Continued)

Questionnaire item number	Title of competency	Junior high		Elementary	
		rank	mean score	rank	mean score
40	Distinguish for students relationships between occupations and avocations.	11	3.53	17	3.56
12	Direct students in identifying the physical and intellectual requirements of occupations related to subject matter units covered in class.	12	3.51	20	3.46
17	Utilize selected resource people in class to present career information closely allied to their occupational specialties.	13	3.51	6	3.86
15	Identify resources and/or services available from the community for enriching the career awareness and/or exploration programs.	14	3.48	22	3.43
25	Identify people in the local community who are willing to talk to students about their occupations and keep a directory of contacts made.	15	3.48	9	3.80
9	Direct students in analyzing the direct relationship between competencies developed while in school and those needed in occupations as well as in citizen, avocational and family life roles.	16	3.46	7	3.83
3	Direct students in identifying careers that require a high school diploma or a GED.	17	3.44	21	3.43
32	Discuss and illustrate for students how people in various occupations also function in other life roles as well. (i.e., a citizen, family member and user of leisure time).	18	3.44	39	2.90

Table 10. (Continued)

Questionnaire item number	Title of competency	Junior high		Elementary	
		rank	mean score	rank	mean score
26	Identify the careers represented among the parents of your students.	19	3.42	2	4.00
13	Direct students in identifying occupations that are compatible with their interests and abilities.	20	3.40	28	3.36
18	Direct students in identifying the salary levels and working conditions of various occupations studied in subject matter units covered in class.	21	3.40	39	2.90
48	Understand the total career education program within your school district and identify your role in the total program.	22	3.35	12	3.66
14	Identify career awareness and/or exploratory resource material such as A. V. material, games, literature, etc.	23	3.31	15	3.60
20	Direct students in identifying those vocations that can become avocations and avocations that can and have become vocations.	24	3.31	32	3.30
29	Utilize vocational literature and data for class assignments.	25	3.28	37	3.03
46	Conduct field trips for career awareness and/or exploration.	26	3.28	18	3.56
1	Direct students in identifying the type of tools, clothes, material and equipment used by people in various occupations.	27	3.26	29	3.33
28	Utilize career awareness and/or exploratory resource material such as A. V. material, games, literature, etc.	28	3.26	16	3.56

Table 10. (Continued)

Questionnaire item number	Title competency	Junior high		Elementary	
		rank	mean score	rank	mean score
50	Direct students in identifying the tasks performed by people in various occupations.	29	3.26	13	3.66
7	Direct students in analyzing how social interactions differ among various careers.	30	3.24	31	3.30
11	Direct students in using the Dictionary of Occupational Titles (D. O. T.) to identify and describe occupations.	31	3.24	41	2.83
22	Utilize career awareness and/or exploration teaching guides that have been developed.	32	3.17	14	3.63
49	Evaluate for classroom application, various sources of career information.	33	3.13	24	3.43
5	Direct students in analyzing the career <u>cluster</u> job family concept.	34	3.11	34	3.23
8	Direct students in making a task analysis of their parent's occupation or of others that are of special interest.	35	3.08	27	3.36
10	Direct students in obtaining information on manpower trends and needs from the local state employment services.	36	3.06	43	2.66
38	Utilize individualized instruction material developed for use in career awareness and/or exploration.	37	3.02	42	2.80
45	Direct students in assessing the life styles associated with various occupations.	38	3.02	42	2.80

Table 10. (Continued)

Questionnaire item number	Title competency	Junior high		Elementary	
		rank	mean score	rank	mean score
19	Direct students in developing a questionnaire appropriate for interviewing parents and others about what they do in their jobs.	39	2.97	26	3.40
31	Utilize appropriate measuring devices to guide students in a self-understanding of their interests, attitudes and aptitudes as they relate to future career decisions.	40	2.95	46	2.46
41	Identify appropriate measuring devices for students to use in assessing their interests, attitudes and aptitudes as they relate to future career decisions.	41	2.95	47	2.43
44	Work with guidance and counseling staff to implement and improve the career awareness and/or exploration program.	42	2.88	35	3.13
30	Establish and maintain working relationships with local business, industrial and labor personnel in developing and improving career awareness and/or exploratory programs.	43	2.86	40	2.90
35	Utilize "hands-on" or applied classroom projects in which the tasks of real workers are simulated.	44	2.84	38	2.93
16	Utilize developed tests that measure the achievement of career awareness and/or exploratory objectives.	45	2.64	48	2.36
39	Identify for classroom application the national, regional, and local manpower trends and needs.	46	2.60	45	2.53
34	Identify available tests that measure the achievement of career awareness and/or exploratory objectives.	47	2.53	49	2.30

Table 10. (Continued)

Questionnaire item number	Title competency	Junior high		Elementary	
		rank	mean score	rank	mean score
24	Develop tests that measure the achievement of career awareness and/or exploratory objectives.	48	2.51	44	2.56
43	Involve the parents of class members in presenting information on their career.	49	2.48	30	3.33
37	Understand and apply various theories of career development. (e.g. theories of Super, Holland, etc.)	50	1.88	50	1.76

Table 9 - Proficiency elementary teachers now have). Content areas of the 15 competencies center around identifying and utilizing resources, promoting the dignity of work, the life roles concept, and student decision making; the majority of which were among the objectives of the career awareness literature found in the state of Oregon. All but two of these competencies (items number 25 and 27) were among those competencies identified in Table 5 as having mean scores of 4.0 or higher in both groups according to the proficiency teachers should have.

Junior high teachers responding to the questionnaire felt they possessed between moderate to considerable proficiency (3.60 to 3.97) in eight competencies (see the first eight competencies listed in Table 10. The content of these eight competencies centered around career planning, research on occupations, student discussions of career aspirations, using resources, and promoting the dignity of work.

In comparing the mean scores of elementary and junior high teachers, according to the proficiency the responding teachers now have, a number of differences were noted. Table 11 lists those competencies that received a higher mean score from elementary teachers than from junior high teachers. Only those items with a difference of .34 or greater are shown. All nine competencies listed in this table also received a higher mean score by the elementary

Table 11. Competencies with mean scores greater for elementary teachers as to the proficiency teachers now have.

Questionnaire item number	Title of competency	Elem. and Jr. high mean score difference
43	Involve the parents of class members in presenting information on their career.	.84
26	Identify the careers represented among the parents of your students.	.57
22	Utilize career awareness and/or exploration teaching guides that have been developed.	.45
19	Developing a questionnaire appropriate for interviewing parents and others about what they do in their jobs.	.42
50	Direct students in identifying the tasks performed by people in various occupations.	.40
32	Discuss and illustrate for students how people in various occupations also function in other life roles as well. (i.e., a citizen, family member and user of leisure time).	.38
9	Analyzing the direct relationship between competencies developed while in school and those needed in occupations as well as in citizen, avocational and family life roles.	.36
17	Utilize selected resource people in class to present career information closely allied to their occupational specialties.	.35
23	Utilize learning activities that foster wholesome attitudes regarding the worth and function of work in all fields and all levels.	.34

teachers than junior high teachers as to the proficiency a teacher should have. Only items 26 and 43 were among those listed in Table 7 (p. 72) as having a large difference in mean scores according to the proficiency a teacher should have. There is some indication, however, that the competencies listed in Table 11 are common and also unique to elementary teachers; the content of the nine competencies is very similar to the objectives and activity suggested in elementary career awareness literature.

The competency items that received a higher mean score for junior high teachers than for elementary teachers, according to the proficiency teachers now have, are listed in Table 12. Only those items with a difference of .34 or greater are shown. All of the competencies shown in Table 12 were among those listed in Table 7 (p. 72) as having a large difference in mean scores according to the proficiency teachers should have and where the higher mean score was with the junior high teachers. This further indicates and identifies a set of competencies that are common and unique to junior high teachers.

Taking into consideration the results shown in Tables 6, 7, 11 and 12, the following competencies, listed in the order they appeared in the questionnaire, can be identified as common career education competencies needed by both elementary and junior high teachers.

1. Direct students in identifying the type of tools, clothes, material, and equipment used by people in various occupations.

Table 12. Competencies with mean scores greater for junior high teachers as to the proficiency teachers now have.

Questionnaire item number	Title of competency	Elem. and Jr. high mean score difference
41	Identify appropriate measuring devices for students to use in assessing their interests, attitudes and aptitudes as they relate to future career decisions.	1.14
18	Identifying the salary levels and working conditions of various occupations studied in subject matter units covered in class.	.50
31	Utilize appropriate measuring devices to guide students in self-understanding of their interests, attitudes and aptitudes as they relate to future career decisions.	.48
11	Using the Dictionary of Occupational Titles (D.O.T.) to identify and describe occupations.	.41
42	Help students recognize advantages of career planning.	.40
10	Obtaining information on manpower trends and needs from the local state employment services.	.40

2. Direct students in studying the occupations involved in the day-to-day operations of your local school system.
5. Direct students in analyzing the career cluster job family concept.
7. Direct students in analyzing how social interactions differ among various careers.
8. Direct students in making a task analysis of their parents' occupation or of others that are of special interest.
9. Direct students in analyzing the direct relationship between competencies developed while in school and those needed in occupations as well as in citizen, avocational, and family life roles.
12. Direct students in identifying the physical and intellectual requirements of occupations related to subject matter units covered in class.
13. Direct students in identifying occupations that are compatible with their interests and abilities.
14. Identify career awareness and/or exploratory resource material such as A. V. material, games, literature, etc.
15. Identify resources and/or services available from the community for enriching the career awareness and/or exploration programs.
16. Utilize developed tests that measure the achievement of career awareness and/or exploratory objectives.
17. Utilize selected resource people in class to present career information closely allied to their occupational specialties.

19. Direct students in developing a questionnaire appropriate for interviewing parents and others about what they do in their jobs.
20. Direct students in identifying those vocations that can become avocations and avocations that can and have become vocations.
21. Direct students in identifying careers that require some form of higher education.
22. Utilize career awareness and/or exploration teaching guides that have been developed.
23. Utilize learning activities that foster wholesome attitudes regarding the worth and function of work in all fields at all levels.
25. Identify people in the local community who are willing to talk to students about their occupations and keep a directory of contacts made.
27. Provide for student discussion of their career aspirations.
28. Utilize career awareness and/or exploratory resource material such as A. V. material, games, literature, etc.
29. Utilize vocational literature and data for class assignments.
30. Establish and maintain working relationships with local business, industrial, and labor personnel in developing and improving career awareness and/or exploratory programs.
32. Discuss and illustrate for students how people in various occupations also function in other life roles as well (i. e. , a citizen, family member, and user of leisure time).

33. Discuss with students the interdependence of occupations and how all work contributes to the effective functioning and well-being of society.
35. Utilize "hands-on" or applied classroom projects in which the tasks of real workers are simulated.
36. Identify for students the career opportunities related to subject matter units covered in class.
40. Distinguish for students relationships between occupations and avocations.
44. Work with guidance and counseling staff to implement and improve the career awareness and/or exploration program.
45. Direct students in assessing the life styles associated with various occupations.
46. Conduct field trips for career awareness and/or exploration.
47. Help students realize that responsibility and decision making are part of career development.
48. Understand the total career education program within your school district and identify your role in the total program.
49. Evaluate for classroom application various sources of career information.
50. Direct students in identifying the tasks performed by people in various occupations.

Analysis of Variance and Covariance Findings

Differences Among Elementary Schools as to the Proficiency Teachers Should Have

The null hypothesis, there is no significant difference among elementary school responses as to the proficiency teachers should have, was tested for all 50 competencies using a one-way classification analysis of variance. With the level of significance set at the .05 level, the null hypothesis was rejected for 11 competencies; the computed F value was greater than the critical value of 2.62 at the .05 level of significance for those 11 competencies.¹ The results of the analysis of variance treatment between elementary schools is shown in Appendix E.

Table 13 shows the 11 rejected competencies, reports the mean score of each school, lists the computed "F" value, and the table value of "F."

Differences Among Junior High Schools as to the Proficiency Teachers Should Have

The one-way classification analysis of variance was also used in testing the null hypothesis, there is no significant difference among

¹ With the level of significance set at .01, the null hypothesis was rejected for only three competencies (see items 2, 11, and 19).

Table 13. Significant differences among elementary schools as to the proficiency teachers should have.

Questionnaire item number	Title of competency	Mean score Elementary schools						Computed "F "	Table ^a "F "
		"1"	"2"	"3"	"4"	"5"	"6"		
2	Direct students in studying the occupations involved in the day-to-day operations of your local school system.	4.40	5.00	4.00	4.40	4.00	3.20	8.27	2.62
11	Direct students in using the Dictionary of Occupational Titles (D.O.T.) to identify and describe occupations.	4.00	4.40	3.40	3.40	3.60	1.40	4.62	2.62
16	Utilize developed tests that measure the achievement of career awareness and/or exploratory objectives.	3.40	4.40	3.20	4.00	4.60	2.40	2.96	2.62
19	Direct students in developing a questionnaire appropriate for interviewing parents and others about what they do in their jobs.	4.00	4.80	3.00	4.00	4.40	3.80	4.08	2.62
21	Direct students in identifying careers that require some form of higher education.	4.60	4.40	3.20	5.00	4.00	3.80	3.48	2.62
24	Develop tests that measure the achievement of career awareness and/or exploratory objectives.	3.20	4.20	3.20	3.80	4.00	2.20	2.91	2.62
30	Establish and maintain working relationships with local business, industrial and labor personnel in developing and improving career awareness and/or exploratory programs.	4.40	4.40	3.00	4.60	3.40	2.80	3.86	2.62
33	Discuss with students the interdependence of occupations and how all work contributes to the effective functioning and well-being of society.	4.60	4.20	3.80	5.00	4.60	4.20	3.10	2.62

Table 13. (Continued)

Questionnaire item number	Title of competency	Mean score						Computed Table	
		Elementary schools							
		"1"	"2"	"3"	"4"	"5"	"6"	"F"	"F"
34	Identify available tests that measure the achievement of career awareness and/or exploratory objectives.	3.40	4.00	3.40	4.20	3.80	2.20	2.93	2.62
35	Utilize "hands-on" or applied classroom projects in whith the tasks of real workers are simulated.	3.60	4.40	2.80	4.60	4.40	3.60	3.85	2.62
50	Direct students in identifying the tasks performed by people in various occupations.	4.40	4.20	4.20	5.00	4.00	3.80	2.69	2.62

^aLevel of significance - .05 percent.

junior high school responses as to the proficiency teachers should have. Again, the test was run for each of the 50 competencies. The results showed very few differences between junior high schools. With the level of significance set at .05 percent, the null hypothesis was rejected for seven competencies.² The computed F value for the seven competencies was greater than the critical value of 2.21 at the .05 level of significance. Appendix F shows the results of the analysis of variance test between junior high schools. Table 14 shows the seven rejected competencies, the mean score of each school, the computed F value, and the table value of "F."

Differences Among Elementary Schools
as to the Proficiency Elementary
Teachers Now Have

The null hypothesis, there is no significant difference among elementary schools as to their responses to the proficiency teachers now have, was retained in 46 out of 50 competencies. The level of significance selected as the critical region for rejection of the hypothesis was .01 percent, and the computed F value for the four competencies was greater than the critical value of 3.90 at the .01 level of significance. Table 15 shows the four rejected competencies, the mean score for each school, the computed "F" value, and the

²At the .01 level of significance, the null hypothesis was retained in all 50 cases.

Table 14. Significant differences among junior high schools as to the proficiency teachers should have.

Questionnaire item number	Title of competency	Me an score									Computed "F"
		Junior high schools									
		"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"I"	
6	Direct students in using classified ads to identify and describe occupations.	4.60	3.20	3.80	3.60	3.80	4.60	4.20	3.40	4.60	2.50 ^a
16	Utilize developed tests that measure the achievement of career awareness and/or exploratory objectives.	4.60	3.40	4.20	3.20	4.00	4.60	3.20	4.00	4.00	2.91
19	Direct students in developing a questionnaire appropriate for interviewing parents and others about what they do in their jobs.	4.60	3.40	4.20	3.60	3.60	4.40	3.60	4.20	3.80	2.38
21	Direct students in identifying careers that require some form of higher education.	4.60	3.60	4.60	3.80	4.40	4.60	3.60	4.20	4.40	2.31
34	Identify available tests that measure the achievement of career awareness and/or exploratory objectives.	4.60	3.20	4.00	3.00	4.40	4.00	3.80	3.80	3.80	2.63
39	Identify for classroom application the national, regional, and local manpower trends and needs.	4.60	3.60	3.60	4.00	3.60	4.60	3.40	3.40	3.60	2.97
41	Identify appropriate measuring devices for students to use in assessing their interests, attitudes and aptitudes as they relate to future career decisions.	4.60	3.60	4.20	3.40	4.40	4.40	3.60	4.00	4.40	2.25

^aTable "F" for each competency was 2.21.
Level of significance - .05 percent.

Table 15. Significant differences among elementary schools as to the proficiency respondents now have.

Questionnaire item number	Title of competency	Mean score						Computed Table*	
		Elementary schools							
		1	2	3	4	5	6	"F"	"F"
35	Utilize "hands-on" or applied classroom projects in which the tasks of real workers are simulated.	2.80	2.80	1.80	4.00	3.40	2.80	4.48	3.90
44	Work with guidance and counseling staff to implement and improve the career awareness and/or exploration program.	3.20	3.80	1.60	3.80	3.60	2.80	3.97	3.90
48	Understand the total career education program within your school district and identify your role in the total program.	3.80	3.60	2.20	4.00	3.80	4.60	5.95	3.90
49	Evaluate for classroom application, various sources of career information.	3.20	3.40	2.20	3.60	4.00	4.20	4.07	3.90

*Level of significance - .01 percent.

table value of "F. "

Differences Among Junior High Schools
as to the Proficiency Junior High
Teachers Now Have

A one-way classification analysis of variance was used to test for significant differences among junior high school responses to the proficiency teachers now have. With the level of significance selected at .01, there were no significant differences among junior high schools. The computed F value for all 50 competencies was less than the critical value of 3.04 at the .01 level of significance.

Differences Between Elementary and Junior
High Schools as to the Proficiency
Teachers Should Have

The null hypothesis, there is no significant difference among elementary and junior high schools as to the proficiency a teacher should have, was tested using a general linear hypothesis analysis of covariance. The analysis of covariance test took into consideration seven independent variables by treating them as covariates and adjusting for them in determining whether there was a significant difference among elementary and junior high schools. The null hypothesis was rejected for eight competencies where the computed F value was greater than the critical value of 4.02 at the .05 level of significance. All eight of these competencies were among those listed in Table 7

(p. 72) as having a difference of .34 or greater between mean scores of elementary and junior high teachers in their response to the proficiency teachers should have. Table 16 lists the eight rejected competencies and shows the computed F value and table value of "F."

Analysis of Covariance Test

The study also sought to determine if certain independent variables were significantly effecting the score assigned by the respondent to the proficiency level teachers should have for each competency. The independent variables under consideration were: work experience other than teaching; years teaching experience; extent of formal schooling; marriage; children of school age or beyond; degree held; and bachelor's degree received in Oregon. All of these independent variables were treated as covariates in a general linear hypothesis analysis of covariance. For each competency, an F value was computed for each independent variable. The analysis of covariance determined significant differences between elementary schools, junior high schools, and between elementary and junior high schools after adjusting for the differences in the independent variables.

This part of the study sought to determine if variations in the dependent variables (differences between schools as they responded to the scale) were partly attributed to variation in the independent variables. This was necessary due to the problem of unmatched subjects.

Table 16. Significant differences between elementary and junior high schools as to the proficiency teachers should have.

Questionnaire item number	Title of competency	Computed "F" value	Table * "F"
4	Doing research on occupations that are of interest to them.	4.106	4.02
6	Using classified ads to identify and describe occupations.	4.410	"
10	Obtaining information on manpower trends and needs from the local state employment services.	9.990	"
11	Using the Dictionary of Occupational Titles (D.O.T.) to identify and describe occupations.	8.138	"
18	Identifying the salary levels and working conditions of various occupations studied in subject matter units covered in class.	4.837	"
41	Identify appropriate measuring devices for students to use in assessing their interests, attitudes and aptitudes as they relate to future career decisions.	4.794	"
42.	Help students recognize advantages of career planning.	5.658	"
43	Involve the parents of class members in presenting information on their career.	4.954	"

*Level of significance - .05 percent.

After adjusting for the independent variables, 43 out of 50 competencies showed no significant difference in responses between elementary schools, junior high schools, or between elementary and junior high schools that could be attributed to variation in the independent variable. Thus, the variations in the independent variable under study were not influencing the dependent variables under consideration in at least 43 of the 50 competencies.

For the remaining seven competencies, the computed F values for one or more group comparisons or for one or more independent variables were significant at either the .05 or .01 level of significance. However, no one independent variable appeared more than twice in the seven competencies. Therefore, in all probability the few differences noted were attributed to chance.

Results of Factor Analysis

The results of the factor analysis were generated through the use of two factor analytic techniques known as the Q-mode and R-mode.

Q-Mode

Results of the Q-mode analysis indicated a very high degree of resemblance among the 75 respondents in the study. The one-factor solution accounted for 97.09 percent of the common variance and had factor loadings ranging from .922 to .995 for all 75 respondents. Due

to the high degree of correlation among respondents, and the high percentage of variance accounted for in the one-factor solution, other factor solutions were not generated. Results of the Q-mode analysis are shown in Appendix I.

R-Mode

The R-mode technique was employed in this study to determine the correlation among competency items. Essentially, the R-mode provided the necessary data that resulted in a grouping or clustering of the competencies according to the respondents in the study.

Data were computer analyzed five separate times using the R-mode with factor solutions of 2, 3, 4, 5, and 7. To assist in determining which factor solution to report, a set of random numbers (random responses to items on the questionnaire) was generated and analyzed by the computer using the R-mode seven-factor solution. Figure 1 shows the comparison of real data with the random data. The comparison showing the point of crossover (between factors 2 and 3) suggests two things: (1) that factors beyond factor 2 cannot be interpreted with authenticity, and (2) that a likely factor solution to use was the two-factor solution.

Based on the results of the above noted comparison, the two-factor solution was chosen for interpretation. It should be noted, however, that there was not much difference in the results of the 2,

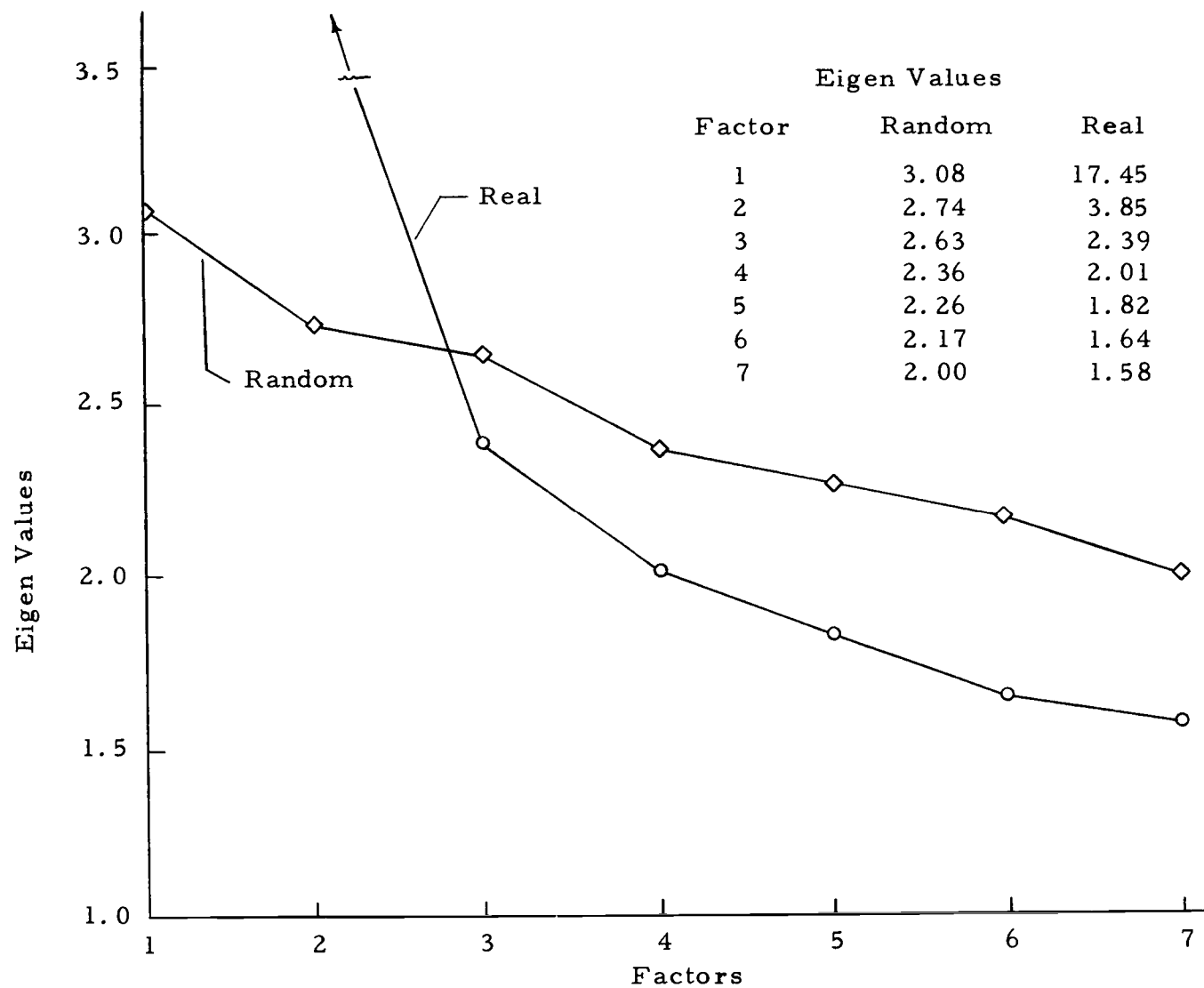


Figure 1. Comparison of real data versus random data--R Mode factor analysis

3, and 4 R-mode factor solutions; each loaded the same 42 competencies with a .50 or higher in the first factor.

The two-factor solution extracted 43 competencies with factor loadings of .50 or higher, 42 of which all loaded in the first factor. This indicated that there was a high degree of correlation among the competencies according to the respondents in the study. In all probability the 42 competencies loading high in the first factor can be identified as career education competencies.

The analysis accounted for 42 percent of the common variance in the two interpretable factors. Table 17 lists the common variance accounted for in each factor in the seven-factor solution (each factor percentage was the same for each factor solution).

Table 17. Percentage of common variance for the R-mode factor analysis technique.

Factor	Percentage	Cumulative percentages
1	34.91	34.91
2	7.70	42.62
3	4.79	47.41
4	4.03	51.44
5	3.65	55.10
6	3.28	58.39
7	3.17	61.57

The last step involved in the factor analysis R-mode technique was to judgmentally assign a name for each factor identified as being interpretable. Inasmuch as such a high percentage of the competencies loaded high in the first factor, only the one factor was named. However, based on the experience of other research studies (Gunderson, 1971; Lindahl, 1971; Miller, 1971), the competencies were judgmentally broken down into six sub-factors. The first factor and subsequent sub-factors are listed in Table 18, which shows factor loadings, means, and standard deviation of the total population. Also listed is the mean rank order as determined by the total population.

Analysis of Where the Competencies Should be Initiated and Completed

The majority of both elementary and junior high school teachers responding to the questionnaire indicated (1) that the undergraduate level is the place where the development of all 50 competencies should be initiated, (2) that the graduate/in-service level is the place where the development of 49 of the 50 competencies should be completed. The majority of both groups felt that the development of competency number 11 (Direct students in using the Dictionary of Occupational Titles (D. O. T.) to identify and describe occupations) should be completed at the undergraduate level.

Table 19 shows the results of the check list totals and percentages for the total survey population as well as for each sub-group

Table 18. Results of the R-mode Two Factor Solution = Factor One - Career Education Competencies.

Questionnaire item number	Title of competency	Factor loading	Mean score	Standard deviation	Mean ranking
<u>Sub-factor: resources</u>					
6	Direct students in using classified ads to identify and describe occupations.	.56	3.81	.94	37
10	Direct students in obtaining information on manpower trends and needs from the local state employment services.	.52	3.74	.95	42
11	Direct students in using the Dictionary of Occupational Titles (D. O. T.) to identify and describe occupations.	.70	3.73	1.16	43
15	Identify resources and/or services available from the community for enriching the career awareness and/or exploration programs.	.59	4.31	.57	7
17	Utilize selected resource people in class to present career information closely allied to their occupational specialties.	.53	4.31	.57	8
22	Utilize career awareness and/or exploration teaching guides that have been developed.	.56	4.13	.62	21
28	Utilize career awareness and/or exploratory resource material such as A. V. material, games, literature, etc.	.61	4.17	.60	15
29	Utilize vocational literature and data for class assignments.	.70	3.92	.78	35
30	Establish and maintain working relationships with local business, industrial and labor personnel in developing and improving career awareness and/or exploratory programs.	.59	3.94	.86	31

Table 18. (Continued)

Questionnaire item number	Title of competency	Factor loading	Mean score	Standard deviation	Mean score
38	Utilize individualized instruction material developed for use in career awareness and/or exploration.	.57	3.90	.808	36
43	Involve the parents of class members in presenting information on their career.	.60	4.00	.788	29
44	Work with guidance and counseling staff to implement and improve the career awareness and/or exploration program.	.77	3.94	.786	32
Sub-factor: evaluation					
16	Utilize developed tests that measure the achievement of career awareness and/or exploratory objectives.	.71	3.81	1.00	38
24	Develop tests that measure the achievement of career awareness and/or exploratory objectives.	.61	3.65	.937	48
31	Utilize appropriate measuring devices to guide students in a self-understanding of their interests, attitudes and aptitudes as they relate to future career decisions.	.73	3.85	.968	37
34	Identify available tests that measure the achievement of career awareness and/or exploratory objectives.	.69	3.70	.926	47
41	Identify appropriate measuring devices for students to use in assessing their interests, attitudes and aptitudes as they relate to future career decisions.	.74	3.78	1.01	40

Table 18. (Continued)

Questionnaire item number	Title of competency	Factor loading	Mean score	Standard deviation	Mean score
Sub-factor: instructional planning					
37	Understand and apply various theories of career development. (e. g. theories of Super, Holland, etc.)	. 57	3. 01	1. 08	50
39	Identify for classroom application the national, regional, and local manpower trends and needs.	. 58	3. 50	1. 00	49
48	Understand the total career education program within your school district and identify your role in the total program.	. 52	4. 33	. 68	4
49	Evaluate for classroom application, various sources of career information.	. 59	4. 15	. 57	18
Sub-factor: teaching strategies - requirements for careers					
3	Direct students in identifying careers that require a high school diploma or a GED.	. 61	4. 01	. 76	26
4	Direct students in doing research on occupations that are of interest to them.	. 59	4. 17	. 68	16
8	Direct students in making a task analysis of their parent's occupation or of others that are of special interest.	. 67	3. 93	. 77	33
12	Direct students in identifying the physical and intellectual requirements of occupations related to subject matter units covered in class.	. 64	4. 20	. 75	11

Table 18. (Continued)

Questionnaire item number	Title of competency	Factor loading	Mean	Standard deviation	Mean ranking
18	Direct students in identifying the salary levels and working conditions of various occupations studied in subject matter units covered in class.	.67	3.70	.881	46
19	Direct students in developing a questionnaire appropriate for interviewing parents and others about what they do in their jobs.	.54	3.96	.743	30
21	Direct students in identifying careers that require some form of higher education.	.64	4.18	.783	14
32	Discuss and illustrate for students how people in various occupations also function in other life roles as well (i.e., a citizen, family member and user of leisure time).	.53	4.17	.742	17
45	Direct students in assessing the life styles associated with various occupations.	.62	3.72	.938	44
50	Direct students in identifying the tasks performed by people in various occupations.	.60	4.18	.651	13
Sub-factor: teaching strategies - career relationships					
5	Direct students in analyzing the career <u>cluster</u> job family concept.	.62	4.06	.905	25
9	Direct students in analyzing the direct relationship between competencies developed while in school and those needed in occupations as well as in citizen, avocational and family life roles.	.57	4.31	.791	6

Table 18. (Continued)

Questionnaire item number	Title of competency	Factor loading	Mean score	Standard deviation	Mean score
13	Direct students in identifying occupations that are compatible with their interests and abilities.	.63	4.15	.75	19
20	Direct students in identifying those vocations that can become avocations and avocations that can and have become vocations.	.63	3.93	.70	34
27	Provide for student discussion of their career aspirations.	.63	4.09	.82	24
33	Discuss with students the interdependence of occupations and how all work contributes to the effective functioning and well-being of society.	.55	4.34	.62	3
35	Utilize "hands-on" or applied classroom projects in which the tasks of real workers are simulated.	.51	4.00	.83	27
36	Identify for students the career opportunities related to subject matter units covered in class.	.67	4.21	.82	10
40	Distinguish for students relationships between occupations and avocations.	.63	4.00	.83	28
42	Help students recognize advantages of career planning.	.67	4.15	.87	20
47	Help students realize that responsibility and decision-making are part of career development.	.56	4.43	.73	1

of the population (i. e., elementary and junior high respondents).

Table 19. Response results as to where career education competencies should be initiated and completed.

	Undergraduate		Graduate /In-service	
	Initiate	Complete	Initiate	Complete
Elementary teachers	1360 (90%)	375 (25%)	150 (10%)	1085 (72%)
Junior high teachers	1950 (86%)	650 (28%)	300 (13%)	1600 (71%)
Totals	3350 (88%)	1025 (27%)	480 (11%)	2685 (71.5%)

With the exception of 13 competencies, the percentages for each individual competency maintained the same consistency as shown in Table 19. Table 20 lists these 13 competencies and shows the percentage of response for each category. The percentages shown are for both elementary and junior high school teachers combined. The responses for each competency were grouped into one of five ranges: 0 to 20%, 20 to 40%, 40 to 60%, 60 to 80%, and 80 to 100%.

There were eight competencies that showed a percentage increase (from the percentages shown in Table 19) in favor of initiating the competency at the graduate/in-service level (see competency items 2, 19, 25, 26, 30, 44, 48, and 49, Table 20). All of these eight competencies are similar in that they basically require tasks of an in-service teacher rather than pre-service perspective teachers.

There were three competencies that showed a percentage increase (from the percentages shown in Table 19) in favor of

Table 20. Thirteen competencies varying from the general pattern of responses as to where each should be initiated and completed.

Questionnaire item number	Title of competency	Undergraduate		Graduate/Inservice	
		Initiate	Complete	Initiate	Complete
1	Identifying the type of tools, clothes, material and equipment used by people in various occupations.	80-100%	<u>0-20%</u>	0-20%	<u>80-100%</u>
2	Studying the occupations involved in the day-to-day operations of your local school system.	<u>60-80%</u>	20-40%	<u>20-40%</u>	60-80%
6	Using classified ads to identify and describe occupations.	80-100%	<u>40-60%</u>	0-20%	<u>40-60%</u>
8	Making a task analysis of their parent's occupation or of others that are of special interest.	80-100%	<u>40-60%</u>	0-20%	<u>40-60%</u>
11	Using the Dictionary of Occupational Titles (D. O. T.) to identify and describe occupations.	80-100%	<u>40-60%</u>	0-20%	<u>40-60%</u>
19	Developing a questionnaire appropriate for interviewing parents and others about what they do in their jobs.	<u>60-80%</u>	20-40%	<u>20-40%</u>	60-80%
24	Develop tests that measure the achievement of career awareness and/or exploratory objectives.	80-100%	<u>0-20%</u>	0-20%	<u>80-100%</u>
25	Identify people in the local community who are willing to talk to students about their occupations and keep a directory of contacts made.	<u>60-80%</u>	0-20%	<u>20-40%</u>	80-100%
26	Identify the careers represented among the parents of your students.	<u>60-80%</u>	20-40%	<u>20-40%</u>	60-80%
30	Establish and maintain working relationships with local business, industrial and labor personnel in developing and improving career awareness and/or exploratory programs.	<u>60-80%</u>	0-20%	<u>20-40%</u>	80-100%

Table 20. (Continued)

Questionnaire item number	Title of competency	Undergraduate		Graduate / Inservice	
		Initiate	Complete	Initiate	Complete
44	Work with guidance and counseling staff to implement and improve the career awareness and/or exploration program.	<u>60-80%</u>	0-20%	<u>20-40%</u>	80-100%
48	Understand the total career education program within your school district and identify your role in the total program.	<u>40-60%</u>	0-20%	<u>40-60%</u>	80-100%
49	Evaluate for classroom application, various sources of career information.	<u>60-80%</u>	0-20%	<u>20-40%</u>	80-100%

completing the competencies at the undergraduate level (see competencies number 6, 8, and 11, Table 20). This indicated a favorable feeling among respondents that the development of these three competencies could possibly be completed at the undergraduate level.

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The Problem Restated

The central purposes of this study were:

1. To identify the common career education competencies that elementary and/or junior high teachers should have as they adopt and utilize concepts of career education.
2. To identify where in the professional preparation of the teacher it is best to include instruction centered around the development of career education competencies.
3. To investigate the proficiency elementary and junior high school teachers now have for each career education competency identified.
4. To determine the significant difference in teacher responses between elementary schools, junior high schools, and between elementary and junior high schools.
5. To determine the significant effect of selected independent variables upon the responses to the questionnaire.
6. To determine the extent to which the competencies tended to cluster or group together based upon the respondents in the study.

Procedures

Data for the study were gathered by means of a 50-item career education competency questionnaire. The questionnaire was administered to 30 elementary school teachers and 45 junior high school teachers within the state of Oregon. Respondents were asked to indicate 1) the proficiency level they now possessed for each competency, 2) the level of proficiency teachers should have for each competency, and 3) where in the professional preparation of the teacher each competency should be initiated and completed.

The data gathered through the questionnaire were analyzed by utilizing analysis of variance, analysis of covariance, and factor analysis analytic techniques.

All 50 competencies were rank ordered according to the proficiency respondents now have as well as the proficiency teachers should have; differences in mean scores between elementary and junior high respondents were noted and discussed.

As to where each competency should be initiated and completed, responses were recorded and percentages computed indicating a preference for the undergraduate or graduate/in-service teacher preparation level.

Summary of Findings

Statistical comparisons between elementary schools, junior high

schools, and elementary and junior high schools revealed the following details:

1. Except for 11 competencies, no significant difference existed between elementary schools as to the proficiency teachers should have. Except for four competencies, no significant difference existed between elementary schools as to the proficiency respondents now have.
2. Except for seven competencies, no significant difference existed between junior high schools as to the proficiency teachers should have. There was no significant difference among junior high schools as to the proficiency respondents now have.
3. For eight competencies, there were significant differences between elementary and junior high schools as to the proficiency teachers should have.
4. The independent variables under study were influencing the responses of elementary and junior high teachers in seven of the 50 competencies; no one independent variable, however, appeared more than twice in the seven cases.

The results of the mean score ranking and comparisons revealed the following:

1. Both elementary and junior high teachers felt that teachers should have at least moderate proficiency in all of the 50 competencies investigated in this study. (Junior high teachers felt that

teachers should have a little less than moderate proficiency in competency item number 37.)

2. There were 20 competencies noted in both groups as needing at least considerable proficiency or more. The content of these 20 competencies centered around identifying and utilizing resources, promoting the dignity of all work, the life role concept, helping students understand the requirements of occupations and the reason for education, and understanding the total career education program. Elementary respondents felt teachers should have at least considerable proficiency in 24 competencies and felt they now possessed above moderate to considerable proficiency in all 24 competencies. Junior high respondents felt teachers should have considerable or above proficiency in 33 competencies and felt they now possessed above moderate to almost considerable proficiency in 28 of the 33 competencies.
3. Seven competencies were ranked low by both groups according to the proficiency teachers should have. These competencies dealt with evaluation, knowing manpower trends and requirements of careers, and theories of career development. Both elementary and junior high teachers felt they were less proficient in these seven competencies than in the 20 high ranked competencies noted above.
4. There were 16 competencies that showed a large difference in

mean scores between the two groups as to the proficiency teachers should have. Except for two of these 16 competencies, the higher mean score was with the junior high group, eight of which were the eight competencies that showed a significant difference in the responses between elementary and junior high schools.

- a. The two competencies with a higher mean score for elementary teachers dealt with identifying and utilizing students' parents relative to career information.
 - b. The eight competencies with a significantly higher mean score for junior high school teachers dealt with career planning, measuring students' interests and abilities, identifying manpower trends, doing research on occupations, studying the requirements of occupations, and using classified ads.
5. There were 34 competencies that showed small differences between the mean scores of elementary and junior high respondents as to the proficiency teachers should have. The content of these 34 competencies centered around the requirements of occupations, resources, career relationships, assessing the attainment of stated objectives, and planning of instruction.

The Q-mode factor analysis indicated that the 75 respondents in the study resembled each other with regard to the scores assigned to the should have portion of the survey instrument.

The R-mode factor analysis generated a two-factor solution which extracted 43 competencies with factor loadings of .50 or higher. Forty-two of these competencies loaded high (+ .50 or greater) in the first factor, which was given the name career education competencies. The career education competencies were divided into the following sub-factors: Resources; Evaluation; Instructional Planning; Teaching Strategies - requirements of careers; and Teaching Strategies - career relationships.

The majority of respondents felt that all 50 competencies should be initiated at the undergraduate level and (with only one exception) completed at the graduate/in-service level. (The majority of both elementary and junior high respondents felt that competency item number 11 should be completed at the undergraduate level.)

Conclusions

Based on the review of literature and the results of data analysis, the following conclusions have been drawn from this study.

1. All 50 competencies listed in Appendix A can be identified as common career education competencies that elementary and/or junior high school teachers should have as they adopt and utilize concepts of career education. However, not all of the 50 competencies should be developed to the same degree of proficiency for both elementary and junior high school teachers.

- a. There are 14 competencies unique to the needs of junior high teachers (see items 3, 4, 6, 10, 11, 18, 24, 31, 34, 37, 38, 49, 41, and 42, Table 6, p. 70).
 - b. There are two competencies unique to the needs of elementary teachers (see items 26 and 43, Table 6, p. 70).
 - c. There are 34 competencies that are common to both elementary and junior high school teachers according to the proficiency teachers should have. This includes all those competencies listed on p. 89-93.
2. The proficiency level now possessed by the respondents in the study is not the same for all 50 competencies investigated. However, the 30 elementary school respondents now have similar proficiency in all but four of the 50 competencies (see items 35, 44, 48, and 49, Table 15, p. 99); the 45 junior high school respondents now have similar proficiency in all 50 competencies.
3. For all 50 competencies identified in the study, both elementary and junior high school respondents assigned a higher mean score to the proficiency teachers should have rather than the proficiency respondents now have.
- a. The tendency of elementary school respondents was: If a high mean score was assigned to the now have portion of the survey questionnaire, a high mean score was given to the proficiency teachers should have. If a low mean score was

assigned to the now have portion of the survey questionnaire, a low mean score was given to the proficiency teachers should have. This tendency was not so evident in the responses of the junior high school teachers.

4. The few differences that occurred relative to the independent variables in the study were attributed to chance.
5. The preferred place to initiate the development of each competency is at the undergraduate level. The preferred place to complete the development of each competency (with one exception) is at the graduate/in-service level.
6. There is a high degree of similarity in responses between elementary teachers, junior high teachers, and between elementary and junior high school teachers. This high degree of similarity is attributed to a common base of career education in-service activity in which all respondents participated.
7. The career education competencies could be analyzed through factor analysis--Q-mode and R-mode. The R-mode analysis did identify one cluster or group of related competencies which could be used as the basis for developing a curriculum to prepare elementary and junior high school teachers in the area of career education.
8. The identification of career education teacher competencies is a viable step in the design and development of a performance-based curriculum.

Recommendations

In view of the findings and conclusions drawn from this study, the following recommendations are proposed:

1. That instruction centered around the development of career education competencies be initiated in the undergraduate teacher training program.
2. That all 50 competencies investigated in this study be incorporated into programs designed to prepare perspective as well as in-service elementary and junior high school teachers.
3. All 50 competencies listed in Appendix A should be given consideration in the development of a performance-based curriculum that centers around career education concepts. However, those competencies with higher mean scores should be given primary consideration; especially those 20 competencies listed in Table 5 (p. 66) as having a mean score of 4.0 or higher in both groups (i. e. , elementary and junior high school teachers).
4. That in-service teachers be continually involved in identifying the important elements of a pre-service undergraduate teacher training program.
5. That teacher training institutions give serious consideration to the competencies in this study as a possible base for developing behavioral objectives and curriculum material.

6. That teacher training institutions and those involved or responsible for staff development give consideration to the subgroupings of career education competencies identified through the R-mode factor analysis.

Recommendations for Further Study

1. Due to the increasing thrust and growth of career education activity, this study should be replicated on a larger scale--involving teachers from three or four states. It is recommended, however, that before this study is replicated, the 50 identified competencies be examined closely for purposes of refinement.
2. Research should be conducted that focuses only upon the career education competencies of elementary teachers--identifying the needs at each grade level (i. e., grades Kindergarten through sixth).
3. A study should also be accomplished which focuses only upon the career education competencies of junior high school teachers by subject matter taught.
4. It is further recommended that a study of this nature be completed which focuses on career education competencies needed by teachers at the high school and post high school levels.

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APPENDICES

APPENDIX A

CAREER EDUCATION COMPETENCY QUESTIONNAIRE
OREGON STATE UNIVERSITY - SCHOOL OF EDUCATION

1972

Title: A Study of the Career Education Competencies Considered Needed by Elementary and Junior High School Teachers in Selected Schools of Oregon.

Purpose: The purpose of this questionnaire is to gather information which will be useful in the development of curriculum material for colleges and universities seeking to provide career education instruction for all prospective teachers regardless of subject matter and grade level.

Definition: For the purpose of this study, career education is defined as a method or process of teaching, designed to facilitate learning. It calls for a reordering and restructuring of the curriculum to provide a continuum of experiences designed to assist students in leading a useful and productive life. It is that aspect of individual development which focuses upon the occupational role while at the same time seeks to enhance and show relationships of other life roles. It includes career awareness in the elementary grades, career exploration in the intermediate grades, pre-specialization in the upper high school grades, and specialization above high school; all of which encompass the concepts associated with career development, career planning, and career information.

To assist in analyzing the data, will you please provide the following information:

1. Name _____ School _____ School Size _____
(optional) (No. of Students)
2. Check whether you are a () K-6 grade teacher or a () 7th, 8th, or 9th grade teacher
(elementary) (junior high)
3. If elementary, circle grade level K 1 2 3 4 5 6
4. If junior high, please check (✓) in the space provided below the subject matter area you teach most.

() Art	() Home Economics	() Science	() Business
() Industrial Arts	() Social Studies	() English	() Mathematics
() Physical Education	() Foreign Language	() Music	() Combination of several
() S.U.T.O.E.	() Health	() Other _____	equal time in each
		(specify)	(specify)
5. Circle years of teaching experience 1-3 4-7 8-12 over 12
6. Of those, how many have been in Oregon? _____
7. Circle years of work experience other than teaching 0 1 2 3 4 5 over 5
(add summer and part-time work experience together to establish number of years)
8. Check extent of formal schooling: () B.S. () B.S.+15 () B.S.+30 () B.S.+45 () Masters () M.+
9. () Check if received Bachelor's degree in Oregon.
10. () Check if completed an inservice workshop or a formal course in career education.
11. () Check if married.
12. () Check if you have one or more children in school or beyond school age.

Instructions:

The following pages contain a listing of teacher competencies related to career education; competencies related to a teacher's work as the curriculum is given a career emphasis. For each competency you are being asked to respond in three ways: First, by indicating the proficiency you feel you now have in that competency; Second, by indicating the proficiency you feel a teacher should have in that competency. Third, by indicating where you feel the competency should be initiated and completed.

Respond to each item separately even though some may appear similar. Do not take too much time thinking about any particular item. Do not leave out any item. There are no right or wrong answers.

CAREER EDUCATION COMPETENCIES FOR ELEMENTARY AND
JUNIOR HIGH SCHOOL TEACHERS

3

For each item listed below, circle the rating (5, 4, 3, 2, 1) which, in your opinion, best represents: 1) the proficiency you <u>now have</u> in your position as you provide learning experiences in career awareness and/or career exploration. 2) the proficiency a teacher in your position should have as he provides learning experiences in career awareness and/or career exploration. Respond to each item and pick the one which comes closest to your true feeling.											For each item, place a check in the column where, in the preparation of a teacher, you feel the competency should be initiated and where it should be completed.			
COMPETENCY	PROFICIENCY YOU NOW HAVE					PROFICIENCY A TEACHER SHOULD HAVE					WHERE COMPETENCY SHOULD BE INITIATED AND COMPLETED			
	COMPLETE	CONSIDERABLE	MODERATE	SLIGHT	NO	COMPLETE	CONSIDERABLE	MODERATE	SLIGHT	NO	UNDER-GRADUATE		GRADUATE/INSERVICE	
											Initiate	Complete	Initiate	Complete
As you provide learning experiences in career awareness and/or career exploration, what proficiency do you have and what should a teacher have in the ability to:														
0. (Example) Direct students in becoming aware of and/or exploring the occupations of their parents, friends, or others that interest them.	5	④	3	2	1	⑤	4	3	2	1	✓			✓
Direct students in: (Competencies 1 through 13)														
1. identifying the type of tools, clothes, material and equipment used by people in various occupations.	5	4	3	2	1	5	4	3	2	1				
2. studying the occupations involved in the day-to-day operations of your local school system.	5	4	3	2	1	5	4	3	2	1				
3. identifying careers that require a high school diploma or a GED.	5	4	3	2	1	5	4	3	2	1				
4. doing research on occupations that are of interest to them.	5	4	3	2	1	5	4	3	2	1				
5. analyzing the career <u>cluster</u> job family concept.	5	4	3	2	1	5	4	3	2	1				
6. using classified ads to identify and describe occupations	5	4	3	2	1	5	4	3	2	1				
7. analyzing how social interactions differ among various careers.	5	4	3	2	1	5	4	3	2	1				

COMPETENCY	PROFICIENCY YOU NOW HAVE					PROFICIENCY A TEACHER SHOULD HAVE					WHERE COMPETENCY SHOULD BE INITIATED AND COMPLETED			
	COMPLETE	CONSIDERABLE	MODERATE	SLIGHT	NO	COMPLETE	CONSIDERABLE	MODERATE	SLIGHT	NO	UNDER-GRADUATE		GRADUATE/INSERVICE	
											Initiate	Complete	Initiate	Complete
As you provide learning experiences in career awareness and/or career exploration, what proficiency do you have and what should a teacher have in the ability to:														
8. making a task analysis of their parent's occupation or of others that are of special interest	5	4	3	2	1	5	4	3	2	1				
9. analyzing the direct relationship between competencies developed while in school and those needed in occupations as well as in citizen, avocational and family life roles.	5	4	3	2	1	5	4	3	2	1				
10. obtaining information on manpower trends and needs from the local state employment services.	5	4	3	2	1	5	4	3	2	1				
11. using the Dictionary of Occupational Titles (D.O.T.) to identify and describe occupations.	5	4	3	2	1	5	4	3	2	1				
12. identifying the physical and intellectual requirements of occupations related to subject matter units covered in class.	5	4	3	2	1	5	4	3	2	1				
13. identifying occupations that are compatible with their interests and abilities.	5	4	3	2	1	5	4	3	2	1				
14. Identify career awareness and/or exploratory resource material such as A.V. material, games, literature, etc.	5	4	3	2	1	5	4	3	2	1				
15. Identify resources and/or services available from the community for enriching the career awareness and/or exploration programs.	5	4	3	2	1	5	4	3	2	1				
16. Utilize developed tests that measure the achievement of career awareness and/or exploratory objectives	5	4	3	2	1	5	4	3	2	1				
17. Utilize selected resource people in class to present career information closely allied to their occupational specialties.	5	4	3	2	1	5	4	3	2	1				

COMPETENCY	PROFICIENCY YOU NOW HAVE					PROFICIENCY A TEACHER SHOULD HAVE					WHERE COMPETENCY SHOULD BE INITIATED AND COMPLETED			
	COMPLETE	CONSIDERABLE	MODERATE	SLIGHT	NO	COMPLETE	CONSIDERABLE	MODERATE	SLIGHT	NO	UNDER-GRADUATE		GRADUATE/INSERVICE	
											Initiate	Complete	Initiate	Complete
As you provide learning experiences in career awareness and/or career exploration, what proficiency do you have and what should a teacher have in the ability to:														
Direct students in: (Competencies 18 through 21)														
18. identifying the salary levels and working conditions of various occupations studied in subject matter units covered in class.	5	4	3	2	1	5	4	3	2	1				
19. developing a questionnaire appropriate for interviewing parents and others about what they do in their jobs.	5	4	3	2	1	5	4	3	2	1				
20. identifying those vocations that can become avocations and avocations that can and have become vocations.	5	4	3	2	1	5	4	3	2	1				
21. identifying careers that require some form of higher education.	5	4	3	2	1	5	4	3	2	1				
22. Utilize career awareness and/or exploration teaching guides that have been developed	5	4	3	2	1	5	4	3	2	1				
23. Utilize learning activities that foster wholesome attitudes regarding the worth and function of work in all fields at all levels.	5	4	3	2	1	5	4	3	2	1				
24. Develop tests that measure the achievement of career awareness and/or exploratory objectives	5	4	3	2	1	5	4	3	2	1				
25. Identify people in the local community who are willing to talk to students about their occupations and keep a directory of contacts made.	5	4	3	2	1	5	4	3	2	1				
26. Identify the careers represented among the parents of your students.	5	4	3	2	1	5	4	3	2	1				

COMPETENCY	PROFICIENCY YOU NOW HAVE					PROFICIENCY A TEACHER SHOULD HAVE					WHERE COMPETENCY SHOULD BE INITIATED AND COMPLETED			
	COMPLETE	CONSIDERABLE	MODERATE	SLIGHT	NO	COMPLETE	CONSIDERABLE	MODERATE	SLIGHT	NO	UNDER-GRADUATE		GRADUATE/INSERVICE	
											Initiate	Complete	Initiate	Complete
As you provide learning experiences in career awareness and/or career exploration, what proficiency do you have and what should a teacher have in the ability to:														
27. Provide for student discussion of their career aspirations	5	4	3	2	1	5	4	3	2	1				
28. Utilize career awareness and/or exploratory resource material such as A.V. material, games, literature, etc.	5	4	3	2	1	5	4	3	2	1				
29. Utilize vocational literature and data for class assignments.	5	4	3	2	1	5	4	3	2	1				
30. Establish and maintain working relationships with local business, industrial and labor personnel in developing and improving career awareness and/or exploratory programs.	5	4	3	2	1	5	4	3	2	1				
31. Utilize appropriate measuring devices to guide students in a self-understanding of their interests, attitudes and aptitudes as they relate to future career decisions.	5	4	3	2	1	5	4	3	2	1				
32. Discuss and illustrate for students how people in various occupations also function in other life roles as well. (ie, a citizen, family member and user of leisure time).	5	4	3	2	1	5	4	3	2	1				
33. Discuss with students the interdependence of occupations and how all work contributes to the effective functioning and well-being of society.	5	4	3	2	1	5	4	3	2	1				
34. Identify available tests that measure the achievement of career awareness and/or exploratory objectives.	5	4	3	2	1	5	4	3	2	1				
35. Utilize "hands-on" or applied classroom projects in which the tasks of real workers are simulated.	5	4	3	2	1	5	4	3	2	1				
36. Identify for students the career opportunities related to subject matter units covered in class.	5	4	3	2	1	5	4	3	2	1				

COMPETENCY	PROFICIENCY YOU NOW HAVE					PROFICIENCY A TEACHER SHOULD HAVE					WHERE COMPETENCY SHOULD BE INITIATED AND COMPLETED			
	COMPLETE	CONSIDERABLE	MODERATE	SLIGHT	NO	COMPLETE	CONSIDERABLE	MODERATE	SLIGHT	NO	UNDER- GRADUATE		GRADUATE/ INSERVICE	
											Initiate	Complete	Initiate	Complete
As you provide learning experiences in career awareness and/or career exploration, what proficiency do you have and what should a teacher have in the ability to:														
37. Understand and apply various theories of career development. (e.g. theories of Super, Holland, etc.)	5	4	3	2	1	5	4	3	2	1				
38. Utilize individualized instruction material developed for use in career awareness and/or exploration.	5	4	3	2	1	5	4	3	2	1				
39. Identify for classroom application the national, regional, and local manpower trends and needs.	5	4	3	2	1	5	4	3	2	1				
40. Distinguish for students relationships between occupations and avocations.	5	4	3	2	1	5	4	3	2	1				
41. Identify appropriate measuring devices for students to use in assessing their interests, attitudes and aptitudes as they relate to future career decisions.	5	4	3	2	1	5	4	3	2	1				
42. Help students recognize advantages of career planning	5	4	3	2	1	5	4	3	2	1				
43. Involve the parents of class members in presenting information on their career.	5	4	3	2	1	5	4	3	2	1				
44. Work with guidance and counseling staff to implement and improve the career awareness and/or exploration program.	5	4	3	2	1	5	4	3	2	1				
45. Direct students in assessing the life styles associated with various occupations.	5	4	3	2	1	5	4	3	2	1				
46. Conduct field trips for career awareness and/or exploration.	5	4	3	2	1	5	4	3	2	1				
47. Help students realize that responsibility and decision making are part of career development	5	4	3	2	1	5	4	3	2	1				

COMPETENCY	PROFICIENCY YOU NOW HAVE					PROFICIENCY A TEACHER SHOULD HAVE					WHERE COMPETENCY SHOULD BE INITIATED AND COMPLETED			
	COMPLETE	CONSIDERABLE	MODERATE	SLIGHT	NO	COMPLETE	CONSIDERABLE	MODERATE	SLIGHT	NO	UNDER-GRADUATE		GRADUATE/INSERVICE	
											Initiate	Complete	Initiate	Complete
As you provide learning experiences in career awareness and/or career exploration, what proficiency do you have and what should a teacher have in the ability to:														
48. Understand the total career education program within your school district and identify your role in the total program	5	4	3	2	1	5	4	3	2	1				
49. Evaluate for classroom application, various sources of career information.	5	4	3	2	1	5	4	3	2	1				
50. Direct students in identifying the tasks performed by people in various occupations.	5	4	3	2	1	5	4	3	2	1				

THANK YOU!

APPENDIX B

PARTICIPATING SCHOOLS AND PROJECTS

Elementary Schools

School "1"	Marysville Elementary School Portland, Oregon Principal, Mr. Harold Cook
School "2"	James Templeton Elementary School Tigard, Oregon Principal, Mr. Robert Post
School "3"	Astoria Area Astoria, Oregon IED Career Education Director, Mr. Chuck Dymond
School "4"	Brattain Elementary School Springfield, Oregon Principal, Mr. Harry Peters
School "5"	Mt. Vernon Elementary School Springfield, Oregon Principal, Mr. Roy VanHorn
School "6"	Pleasant Hill Elementary School Pleasant Hill, Oregon Principal, Mr. Darrell Jones

Junior High Schools

School "A"	Whitaker Elementary School Portland, Oregon Principal, Mr. Bill Warner Contact person, Mr. Harry Burnham
School "B"	Rivergate Project Portland, Oregon Director, Mr. John Ries

Junior High Schools (continued)

School "C"	Marysville Elementary School Portland, Oregon Principal, Mr. Harold Cook
School "D"	Twality Junior High Tigard, Oregon Principal, Mr. Arthur Bieberman
School "E"	Astoria Area Astoria, Oregon IED Director of Career Education, Mr. Chuck Dymond
School "F"	Judson Junior High Salem, Oregon Principal, Mr. Henery Ercolini
School "G"	Hamlin Junior High Springfield, Oregon Principal, Mr. Hugh Hassell
School "H"	Thurston Junior High Springfield, Oregon Principal, Mr. Gary Connor
School "I"	Cascade Junior High Turner, Oregon Principal, Mr. Vernon Todd

APPENDIX C

MEMBERS OF THE JURY PANEL OF EXPERTS

Mr. Francis Rogers	Project Director Tigard Career Awareness Project Tigard, Oregon
Mrs. Claudia Bruneau	Teacher Templeton Elementary School Tigard, Oregon
Dr. Cas Heilman	Project Director of C. O. R. E. Oregon State University Corvallis, Oregon
Dr. Dick Gardner	Oregon State University Project C. O. R. E. Corvallis, Oregon
Dr. Dan Dunham	Research Specialist Oregon Board of Education Salem, Oregon
Mr. LeRoy Wallis	Career Education Specialist Portland Area II Portland, Oregon
Mrs. Cathy Williams	Teacher Marysville School Portland, Oregon
Mr. Darrell Jones	Principal Pleasant Hill Elementary School Pleasant Hill, Oregon
Mrs. Sandy DePuis	Teacher Pleasant Hill Elementary School Pleasant Hill, Oregon
Mr. Chuck Dymond	IED Career Education Coordinator Clatsop County Astoria, Oregon

APPENDIX D

CODING OF DATA CARDS

A) Card 1

Column

1-2	01 to 75. Represents one of the 75 elementary or junior high school respondents.
3	1 to 2. Represents card one or two - each respondent had two cards.
4-5	01 to 65. Represents one of 15 schools.
6	1 to 9. Represents size of school. (100 to 900 in student population)
7	1 to 2. Represents one of two school levels (elementary or junior high).
8	1 to 7. Represents one of six elementary grade levels (kindergarten to sixth).
9-10	01 to 15. Represents one of 15 different junior high subject matter areas in which respondents taught.
11	1 to 4. Represents years teaching experience.
12	1 to 4. Represents years taught in Oregon.
13	1 to 7. Represents years of work experience for each respondent.
14	1 to 6. Represents extent of schooling.
15	1 to 2. Represents whether or not respondent received their degree in Oregon.
17	1 to 2. Represents respondents' marital status.

Column

18	1 to 2. Represents whether respondents have children of school age or beyond.
19-68	1 to 5. Data. Response values of 5, 4, 3, 2, or 1 which indicated the proficiency level a teacher <u>should have</u> .

B) Card 2

Column

1-18	Same as card number 1.
19-68	1 to 5. Data. Response values of 5, 4, 3, 2, or 1 which indicated the proficiency respondents <u>now have</u> .

APPENDIX E

RESULTS OF ANALYSIS OF VARIANCE TEST BETWEEN ELEMENTARY SCHOOLS
AS TO THE PROFICIENCY TEACHERS SHOULD HAVE

Questionnaire item no.	Computed "F"	Hypothesis ^a	Questionnaire item no.	Computed "F"	Hypothesis ^a
1	1.31	retain ^b	26	1.44	retain
2	8.27	reject	27	1.65	"
3	1.68	retain	28	2.03	"
4	1.01	"	29	1.48	"
5	.93	"	30	3.86	reject
6	.70	"	31	1.60	retain
7	1.50	"	32	1.32	"
8	.79	"	33	3.10	reject
9	.81	"	34	2.93	"
10	1.89	"	35	3.85	"
11	4.62	reject ^b	36	.08	retain
12	1.50	retain	37	2.29	"
13	1.05	"	38	1.81	"
14	1.91	"	39	1.58	"
15	.60	"	40	1.07	"
16	2.96	reject	41	2.11	"
17	1.96	retain	42	2.27	"
18	1.17	"	43	1.77	"
19	4.08	reject ^b	44	.98	"
20	1.80	retain	45	1.96	"
21	3.48	reject	46	1.76	"
22	1.49	retain	47	.63	"
23	1.51	"	48	.12	"
24	2.91	reject	49	1.06	"
25	1.44	retain	50	2.69	reject

^a The level of significance was .05 percent. Tabular "F," with 5 degrees of freedom for the numerator mean square and 24 degrees of freedom for the denominator mean square was $F > 2.62$.

^b Competencies rejected at the .01 level of significance.

APPENDIX F

RESULTS OF ANALYSIS OF VARIANCE TEST BETWEEN JUNIOR HIGH SCHOOLS
AS TO THE PROFICIENCY TEACHERS SHOULD HAVE

Questionnaire item no.	Computed "F"	Hypothesis ^a	Questionnaire item no.	Computed "F"	Hypothesis ^a
1	1.18	retain	26	.64	retain
2	.77	"	27	1.20	"
3	.79	"	28	1.59	"
4	.52	"	29	1.47	"
5	.77	"	30	.41	"
6	2.50	reject	31	1.10	"
7	1.74	retain	32	.65	"
8	1.28	"	33	1.17	"
9	.69	"	34	2.63	reject
10	.93	"	35	.86	retain
11	1.26	"	36	1.12	"
12	.75	"	37	.44	"
13	1.22	"	38	1.67	"
14	2.00	"	39	2.97	reject
15	.64	"	40	.53	retain
16	2.91	reject	41	2.25	reject
17	1.00	retain	42	1.24	retain
18	1.10	"	43	1.94	"
19	2.38	reject	44	.88	"
20	1.42	retain	45	1.38	"
21	2.31	reject	46	1.17	"
22	1.10	retain	47	1.36	"
23	.68	"	48	1.62	"
24	1.16	"	49	1.20	"
25	.23	"	50	1.03	"

^aThe level of significance was .05 percent. The tabular "F," with 8 degrees of freedom for the numerator mean square and 36 degrees of freedom for the denominator mean square, was $F > 2.21$.

APPENDIX G

ANALYSIS OF VARIANCE BETWEEN ELEMENTARY SCHOOLS AS TO
THE PROFICIENCY RESPONDENTS NOW HAVE

Questionnaire item no.	Computed "F"	Hypothesis ^a	Questionnaire item no.	Computed "F"	Hypothesis ^a
1	.20	retain	26	2.40	retain
2	1.06	"	27	.40	"
3	1.17	"	28	2.64	"
4	.51	"	29	.71	"
5	1.29	"	30	2.50	"
6	.10	"	31	1.10	"
7	.97	"	32	1.38	"
8	2.33	"	33	1.89	"
9	1.85	"	34	3.68	"
10	.15	"	35	4.48	reject
11	1.32	"	36	.83	retain
12	.78	"	37	1.06	"
13	.74	"	38	2.50	"
14	2.40	"	39	.60	"
15	2.14	"	40	1.10	"
16	.90	"	41	1.39	"
17	2.84	"	42	1.28	"
18	.17	"	43	3.37	"
19	3.15	"	44	3.97	reject
20	3.09	"	45	.44	retain
21	2.58	"	46	3.78	"
22	2.29	"	47	1.16	"
23	2.43	"	48	5.95	reject
24	2.94	"	49	4.07	"
25	1.66	"	50	1.06	retain

^aThe level of significance was .01 percent. The tabular "F" with 5 degrees of freedom for the numerator mean square and 24 degrees of freedom for the denominator mean square was $F > 3.90$.

APPENDIX H

RESULTS OF ANALYSIS OF VARIANCE BETWEEN JUNIOR HIGH SCHOOLS AS
TO THE PROFICIENCY RESPONDENTS NOW HAVE

Questionnaire item no.	Computed "F"	Hypothesis ^a	Questionnaire item no.	Computed "F"	Hypothesis ^a
1	1.20	retain	26	.66	retain
2	.33	"	27	1.68	"
3	.54	"	28	1.73	"
4	2.07	"	29	1.09	"
5	.67	"	30	1.89	"
6	1.13	"	31	2.63	"
7	1.09	"	32	2.43	"
8	.84	"	33	1.42	"
9	.19	"	34	1.47	"
10	.59	"	35	1.71	"
11	.93	"	36	.16	"
12	.78	"	37	1.42	"
13	1.20	"	38	.78	"
14	1.76	"	39	2.65	"
15	1.50	"	40	.93	"
16	1.93	"	41	1.34	"
17	.81	"	42	.93	"
18	.36	"	43	1.16	"
19	.81	"	44	1.24	"
20	1.31	"	45	.70	"
21	.86	"	46	.99	"
22	1.50	"	47	1.65	"
23	1.05	"	48	.91	"
24	2.32	"	49	1.24	"
25	1.70	"	50	.84	"

^aThe level of significance was .01 percent. The tabular "F," with 8 degrees of freedom for the numerator and 36 degrees of freedom for the denominator, was $F > 3.04$.

APPENDIX I

RESULTS OF Q-MODE FACTOR ANALYSIS

Respondent number	Factor loading	Respondent number	Factor loading
1	.99	39	.98
2	.92 ^a	40	.99
3	.99	41	.99
4	.98	42	.99
5	.99	43	.99
6	.98	44	.99
7	.98	45	.99
8	.99	46	.98
9	.99	47	.99
10	.99	48	.98
11	.94	49	.98
12	.97	50	.99
13	.99	51	.98
14	.98	52	.97
15	.99	53	.98
16	.94	54	.98
17	.99	55	.99
18	.99	56	.98
19	.99	57	.99
20	.99	58	.99
21	.99	59	.98
22	.98	60	.99
23	.98	61	.98
24	.98	62	.99
25	.99	63	.98
26	.97	64	.99
27	.94	65	.99
28	.97	66	.99
29	.93	67	.99
30	.94	68	.99
31	.99	69	.98
32	.99	70	.97
33	.97	71	.99
34	.99	72	.97
35	.99	73	.99
36	.98	74	.99
37	.98	75	.98
38	.99		

^a Lowest factor loading.

APPENDIX J

COMPOSITION OF SAMPLE AS TO EXTENT
OF FORMAL SCHOOLING

Schooling	Junior high schools									Total
	A	B	C	D	E	F	G	H	I	
BS	2		1							3
BS + 15					1	1			1	3
BS + 30		1	1		1	1			2	6
BS + 45		2	1	1	2	1	1	1	2	11
Masters				1		1		1		3
MS +	3	2	2	3	1	1	4	3		19

Schooling	Elementary schools						Total	Total combined (elementary & junior high)
	1	2	3	4	5	6		
BS	1	1	2	1		3	8	11
BS + 15		3		1			4	7
BS + 30		1	1				2	8
BS + 45	2		2		3	1	8	19
Masters	1			1		1	3	6
MS +	1			2	2		5	24

APPENDIX K

COMPOSITION OF SAMPLE AS TO DEGREE IN OREGON,
MARRIAGE, AND CHILDREN

	Junior high schools									Total
	A	B	C	D	E	F	G	H	I	
Obtained degree in Oregon	5	3	4	4	5	4	5	4	2	36
Are married	5	3	4	4	5	5	3	4	3	36
Do have school age children or beyond	5	3	4	3	3	5	5	4	3	35

	Elementary schools						Total	Total combined (elementary & junior high)
	1	2	3	4	5	6		
Obtained degree in Oregon	3	5	5	4	3	4	24	60
Are married	3	4	2	4	5	5	23	59
Do have school age children or beyond	3	1	3	4	3	3	17	52

APPENDIX L

COMPOSITION OF SAMPLE AS TO YEARS OF WORK
EXPERIENCE OTHER THAN TEACHING

No. of years	Junior high schools									Total
	A	B	C	D	E	F	G	H	I	
0		1						1		2
1							1	1		2
2	1		1			1	1	1		5
3		1		2			1		2	6
4				1	1	1	2			5
5	2		1			1				4
Over 5	2	3	3	2	4	2		2	3	21

No. of years	Elementary schools						Total	Total combined (elementary & junior high)
	1	2	3	4	5	6		
0	1		1			1	2	4
1	2		1	1	1		5	7
2		2			1	1	4	9
3			2		1		3	9
4							0	5
5	2			1	1	1	5	9
Over 5		3	1	3	1	2	10	31

APPENDIX M

COMPOSITION OF SAMPLE AS TO YEARS
TEACHING EXPERIENCE

Yrs. teaching experience	Junior high schools									Total
	A	B	C	D	E	F	G	H	I	
1-3	1							1	3	5
4-7		1	1	1	2	2			2	9
8-12		2	1	1	1	1	2	1		9
Over 12	4	2	3	3	2	2	3	3		22

Yrs. teaching experience	Elementary schools						Total	Total combined (elementary & junior high)
	1	2	3	4	5	6		
1-3		2	2	1	2	2	9	14
4-7	1	2		1			4	13
8-12	1	1		1	2	1	6	15
Over 12	3		3	2	1	2	11	33

APPENDIX N

LETTER TO PRINCIPALS CONFIRMING MEETING TIMES

This letter is in reference to our telephone conversation last week concerning the involvement of some of the (name of school) staff in filling out a career education competency questionnaire. As arranged, I have on my calendar a meeting scheduled on (date and time) with five (or more) teachers.

As I indicated over the phone, each teacher involved should have had an in-service workshop in career education.

Please find enclosed a brief summary of our study.

I'll be looking forward to meeting with you on the (date) and thank you again for making this possible.

Sincerely,

Richard E. Holloway

APPENDIX O

LETTER TO CASCADE JUNIOR HIGH SCHOOL PARTICIPANTS

Mr. Todd has given me permission to contact you in regard to a teacher education in career education project here at O. S. U. Jim Sipe has helped us and may have already contacted you. Let me explain briefly what we are attempting to do.

In our project, we are engaged in a concerted effort throughout the state of Oregon to establish pre-service training programs that would provide all prospective pre-service teachers with instruction in career education. In order to provide a firm base from which instructional material can be developed, we are seeking your assistance in helping to identify the competencies needed by teachers as they function in the area of career education or as they give the curriculum a career emphasis.

The enclosed career education competency questionnaire has been constructed specifically for this purpose. The questionnaire contains a list of 50 competency items and utilizes a Likert-type scale for respondents to judgmentally score the importance of that competency to teaching performance. Five other teachers from Cascade are filling this out as well as 65 other teachers from throughout the state.

Your opinion regarding the career education competencies will provide valuable information which will be useful in training teachers, both pre-service and in-service. I would appreciate it very much if you would take time to complete the questionnaire and return it in the enclosed envelope by April 21st.

Jim Sipe has already completed the instrument on a pilot test of the questionnaire. If you have any questions, he should be able to help.

Thank you very much for your assistance and willingness to help improve the teacher training program.

Sincerely,

Richard E. Holloway
Coordinator, Teacher Education Project

APPENDIX P

LETTER TO JURY PANEL MEMBERS
(all were contacted first by telephone)

Dear Jury Panel Member:

Enclosed you will find a copy of the proposed questionnaire on career education competencies needed by elementary and junior high school teachers.

The questionnaire is in two parts: Part B contains the competency items which have been separated from the main body (Part A) of the questionnaire. This was done so that you as a member of the jury can respond to each item as indicated. The competency items to be included on the final questionnaire will be selected based on these responses.

As you critique the material, please use the following guidelines.

- 1) Rate each item as indicated on Part B. In other words, is that competency item appropriate for inclusion on the questionnaire?
- 2) Check each item for wording, consistency, duplication, and clarity.
- 3) Is the design and structure of the questionnaire suitable? If not, what changes need to be made?
- 4) Are there any competencies not included that should be listed?

Space has been provided on each competency item for any necessary corrections.

If you have any questions, please contact me at your convenience.

Sincerely,

Richard E. Holloway, Coordinator
Teacher Education in Career Education Project
754-3681