

AN ABSTRACT OF THE THESIS OF

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Title: THE COMMON PROFESSIONAL EDUCATION COMPETENCIES OF JUNIOR HIGH SCHOOL TEACHERS.
Abstract approved *Redacted for Privacy*
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The central purposes of this study were to identify the common professional education competencies of junior high school teachers and to

1. Determine the proficiency levels necessary in order to accomplish these tasks.
2. Determine the cognitive domain levels required in order to fulfill these tasks.

The major dimensions of the study were the construction and validation of an interview questionnaire for junior high school teachers, the analysis of variance to determine if there were differences among the junior high schools in their responses to the items, a factor analysis of the competencies and junior high school respondents, a determination of the correlation coefficient between the two sets of dependent variables, and the formulation of implications to be considered in the development of teacher education curricula.

The construction of the teacher questionnaire was validated through a review of the literature, an evaluation by a jury panel of experts, and a field test. An interview questionnaire containing 89 professional

education competencies, together with a five-point Likert-type scale to denote the required proficiency and a five-point hierarchical scale to denote the necessary cognitive domain level was used to gather data. A random sample of 21 teachers from each of four selected junior high schools in Oregon provided the data for the study. The dependent variables were the scores judgmentally assigned by the respondents to denote the level of proficiency and the cognitive domain level which they felt they possessed for each of the 89 competencies.

Analysis of the data revealed that a group of common professional education competencies for junior high school teachers exists and is identifiable. Generally, junior high schools were alike in their responses to the proficiency levels required and the cognitive domain levels necessary in the performance of the identified competencies. Competencies which clustered under the Instruction Factor were judged by teachers to require the highest level of proficiency and the highest cognitive level. Community Relations competencies received the lowest mean and median scores. Generally, those competencies which were identified with the teaching-learning process received higher mean and median values. The further removed the competency was from the actual teaching process, the lower the proficiency requirement and the lower the cognitive requirement.

Respondents indicated that moderate, considerable, or complete proficiency was required with 71 of the 89 competencies and that the cognitive application level or higher was required for 75 of the 89 competencies.

The factor analysis techniques revealed that junior high school teachers resembled one another in their responses and demonstrated that it is possible to generate factors containing clusters of common professional education competencies.

The Common Professional Education
Competencies of Junior High School
Teachers

by

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THE COMMON PROFESSIONAL EDUCATION COMPETENCIES OF JUNIOR HIGH SCHOOL TEACHERS

CHAPTER I

INTRODUCTION

The commission recommends that . . . the teacher institutions, as a primary means of individualizing instruction, begin to develop performance based curricula both for the schools and for their own training programs . . .

This recommendation made to the National Association of State Universities and Land-Grant Colleges by the Commission on Education for the Teaching Profession in November, 1969, is typical of current concerns in the modification of teacher education programs and provides the foundation for this study.

Background of the Problem

The performance-based curriculum concept has as its foundation, the identification of those tasks or competencies which the teacher performs in fulfilling his professional role. Leading teacher education institutions, state boards of education, and public school systems have been engaged in modifying existing curricula to emphasize performance-based courses built upon the competency approach. A statement found in the Oregon Board of Education's Priority for Management Objectives, adopted in 1969, firmly established the need for the development of a modified approach to teacher education:

Assure that Oregon teachers are qualified through training, experience, and competence for the responsibility they hold; place greater stress on the 'performance' factor in teacher education and certification.

The Division of Vocational, Adult, and Community College Education at Oregon State University has been involved in transforming its mission and goals into behavioral objectives which are competency-based. In turn, these objectives have been utilized as a basis for the modification and development of courses and as a basis for instructional materials development.

Teacher training institutions throughout the country have indicated increased interest in identifying those competencies needed by teachers at all grade levels. Pre-service curriculum building, evaluation, and modification focusing on the performance-factor requires empirical data on teacher competencies, their relative importance, and the depth of knowledge required of teachers in order to perform the identified tasks in an effective fashion.

Statement of the Problem

The central problem of this study was to identify the common professional education competency needs of junior high school teachers. The study involved itself with a determination of the importance levels of tasks which were identified as peculiar to teachers and an analysis of the cognitive domain levels necessary for the same tasks. The major dimensions considered in the problem were as follows:

1. To extract a core of performance elements from a review of the pertinent research and develop a list of common professional education competencies for junior high school teachers.
2. The construction and validation of a Professional Education Competencies Teacher Questionnaire for junior high school teachers.

3. The development of an importance–rank ordering of the common professional education competencies for junior high school teachers.
4. The development of a cognitive domain rank ordering of the common professional education competencies for junior high school teachers.
5. The analysis of data to test for significant differences among the dependent variable scores.
6. The factor analysis of data to measure the extent to which the respondents were alike or resembled each other in responding to the proficiency levels and cognitive domains of the competencies.
7. The factor analysis of data to extract common clusters of professional education competencies needed by junior high school teachers.
8. The formulation of implications to be considered in the development of curriculum content, performance objectives, and instructional strategies for teacher education institutions responsible for the preparation of junior high school teachers.

The Rationale of the Study

The need to provide relevant teacher education programs in order to prepare individuals to cope with change, complexity, and increasing demands requires that continual effort be expended to seek out new and better measuring techniques in order to determine the effectiveness of existing teacher preparation practices. Organized professional concern

during the past decade, relative to the improvement of teacher education programs, has attended a redirection of research. This redirection has leveled emphasis away from attacking what the teacher knows, what the teacher is as a person, and what the teacher values (Cyphert, 1969) toward identifying what the teacher actually does in the performance of his assignment. Access to information on what tasks the teacher performs in fulfilling his professional role has implications for the development and evaluation of courses and curricula designed to prepare individuals to become effective teachers. Succinctly, Schalock and Hale (1968) 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).

In a special presentation at the Fourth Annual National Vocational-Technical Teacher Education Seminar, Cotrell (1970) encouraged the development of more courses based upon the present daily activities of teachers. Burroughs (1969), in discussing teacher education for the seventies, stated that effective pre-service teacher programs must provide a clear-cut determination of professional competencies which can be ascertained. Further, he implied that such a program would do much to eliminate any duplications in existing teacher preparation programs.

The need to identify professional education competencies is germane to the application of evaluative criteria to existing teacher preparation programs. O'Conner and Justin (1970) emphasized that some pedagogical skills have been provided during the course of teacher pre-service programs with little, if any, empirical data on the

relevance of these skills to the teaching process. Sarason (1962) asked the following question of teacher educators:

If one described the activities in which a teacher engages and the problems she encounters, to what extent would one find that her teacher training experiences constituted a relevant and adequate preparation (p. 2)?

The identification of teacher competencies has received increasing attention during the past decade. Recently, concern has been generated over determining the relative importance of these tasks and identifying the level of understanding necessary for the teacher. According to Metfessel (1969), the development of a competency hierarchy provides basic information on the required scope and dimension of pre-service curriculum. Research indicated that the competency approach, utilizing a hierarchical structure, has been useful in the modification of vocational education teacher preparation programs. Implications were that this endeavor has direct application to other areas of teacher preparation.

Definitions of Terms

In order that terms used frequently throughout this study may be understood within the context, definitions are provided. Other terms or phrases used are considered to be self-explanatory.

1. Analysis of variance - is a technique for testing whether several samples have come from identical populations.

The assumption tested is that the scores are independently drawn from normally distributed populations and that the means in the normally distributed populations are linear combinations of effects.

2. Common variance - is defined as the sharing of variance by two or more elements. In such a sharing, the elements are highly correlated and measure some trait in common.
3. Competency - The specific skill or ability to perform a task, responsibility, or duty directly related to the professional role of the teacher.
4. Factor - is a matrix of competencies whose intercorrelations are positive or negative with factor loadings equal to, or greater than, a pre-determined critical region.
5. Factor analysis - A statistical method employed in this study which consisted essentially of
 - (a) Ordering respondents according to their responses to the competencies.
 - (b) Ordering competencies according to the responses of the teachers.
6. Factor loading - is the correlation of any particular competency with the other competencies extracted from the same factor.
7. Factor solution - refers to the number of factors the computer was set to extract. Different factor solutions were studied in relation to pre-set criteria in order to select the most appropriate number of factors for analysis.
8. Junior high school - is an educational organization designed to meet the needs, abilities, and interests of boys and girls during early adolescence. For the purposes of this study, the junior high school includes those institutions encompassing grades seven, eight, and nine.

9. Junior high school teacher - is a professionally trained and certificated person teaching a subject or subjects in a junior high school. The teacher subject areas encompassed in this study included English, social studies, English-social studies, science, mathematics, art, music, physical education, health, home economics, industrial arts, business education, career education, self understanding through occupational exploration (S.U.T.O.E.), foreign language, speech, drama, and journalism.
10. Median Test - is a statistical technique used to determine whether the independent teacher groups have been drawn from the same population or from populations with equal medians and is used with ordinal (ranked) data.
11. Pearson product-moment correlation coefficient "r" - is a statistical procedure used to determine the linear relationship between the two sets of variables (proficiency levels and cognitive domains) and to estimate relations between the two sets in terms of the percentage of commonality between them, the strength of the linear relationship, and the direction of the relationship. Hereafter, it is simply referred to as the Pearson "r".
12. Professional Education Competency - refers to a specific duty, task, or understanding required of a teacher in the performance of his teaching assignment.
13. Proficiency - is the level or degree of expertness required in the performance of a competency.

14. Q-mode - is a factor analysis technique which indicated the extent to which respondents were alike or resembled one another with regard to the responses to the proficiency levels and cognitive domains of the listed competencies.
15. R-mode - is a factor analytic technique which examined the relationship of every competency proficiency level with every other competency proficiency. It was also applied to examine the relationships of every competency cognitive domain with every other competency cognitive domain and provided for a clustering of common competencies. This technique orders competencies according to people.
16. Spurious competency - is a competency with a factor loading less than $\pm .50$ for proficiency levels and less than $\pm .45$ for cognitive domains. It is identified as clustering with the factor in which its highest loading occurred even though its loading is less than the critical region.
17. Taxonomy of the cognitive domain - is a method of classifying the various thinking processes. The domains or levels utilized in this study have been adopted from Bloom (1956). Hereafter the taxonomy of the cognitive domain will be referred to as cognitive domain or cognitive level.

Summary

Recent studies on the state and national level, demonstrate the need, the appropriateness, and more importantly, the urgency for research designed to identify teacher competencies. The present study proposed to identify the common professional education competencies of junior

high school teachers and further, to determine the proficiency levels and the cognitive levels necessary for teachers to perform these tasks. This study represented one segment of research into the area of teacher competency needed in order to construct and implement performance-based teacher education programs.

CHAPTER II

THE REVIEW OF LITERATURE

The review of literature related to the topic investigated centered upon three broad areas; research into the preparation of junior high school teachers, general studies, and related methodological studies.

Preparation of Junior High School Teachers

The concern for effective teacher preparation centering at the junior high school level was identifiable in research studies. The studies reviewed focused upon three main areas of investigation; the need for pre-service programs for junior high school teachers, specific course recommendations for pre-service programs, and the performance of junior high school teachers.

Faunce and Clute (1961) provided evidence for the concern over the preparation of junior high school teachers when they indicated that the traditional practice of recruiting junior high school teachers from those prepared for elementary or secondary schools had never proved effective in building a staff with dignity and integrity. Chances were that the elementary teachers recruited were either ineffective or waiting for an opportunity to be assigned to an elementary position. They held the same to be true of those teachers trained to teach in the high school but found themselves assigned to the junior high school level.

Conant (1960) helped focus attention on the needs of the junior high school when he identified the special problems of teacher

preparation at this level related to the transitional nature of these grades. He stated that teachers at this level required an unusual combination of traits including an understanding of children, a major characteristic of elementary school teachers, and considerable knowledge in at least one subject matter field, a major characteristic of high school teachers.

Noar (1961) substantiated the concerns of Conant when she ascribed that teacher education institutions had given little attention to the preparation of teachers specifically trained for teaching the junior high school student partly because of the lack of certification requirements for junior high school teachers in many states.

Certification requirements regulating the training of junior high school teachers were enacted in Oregon in 1961 and implemented in 1965. Concern over the lack of certification standards in Oregon can be traced to 1929 when the Oregon Department of High School Principals organized a Committee for Standards for Junior High Schools at their annual convention. One of the recommendations made by this committee referred specifically to the need for adequately trained teachers for the junior high schools of the state.

Since the enactment of legislation regarding certification, specific programs preparing individuals to teach in junior high schools have increased in the country's teacher education institutions. The problem, therefore, generated into the identification of the components of an effective pre-service program.

Eleven junior high schools participated in a study conducted by Devane (1961) in assessing the particular qualities of outstanding

junior high school teachers. The identification of these qualities was to form the foundation for developing pre-service programs for all junior high school teachers. The necessary data were collected through questionnaires completed by principals, teachers, and pupils of the selected schools. The recommendations developed from this study indicated that teachers at the junior high school level should be provided more course work in education, psychology, English, and the humanities. Additionally, this research suggested that teachers acquire more "breadth and depth".

Maynard (1960) elicited responses from 143 randomly selected junior high school principals in 49 states in attempting to discover a pre-service preparation program which was considered desirable by junior high school principals. Returns indicated that 26 courses were considered essential in an effective pre-service program. Studies by Menninga (1958) and Miller (1957) also made specific course recommendations.

Dean (1956) investigated what teachers judged the most practical preparation for junior high school teachers. Data were secured by questionnaires and treated with analysis of variance to compare the relative importance given to different training areas. Among the recommendations identified was the need to provide pre-service experiences in those areas related directly to the activities which they would be required to perform when they assumed classroom responsibilities. Later studies conducted by Ivie (1966), Riggs (1966), and Howell (1966), lend support to the nature of the recommendations contained in the earlier study.

Conway (1963) completed a study relative to standards for Oregon junior high schools. A portion of the research involved in his findings centered around teacher preparation.

The question of the best type of preparation for junior high school teachers has been one that has received an increasing amount of attention in the literature of the past few years. Probably in no other single aspect concerning the school has there been such a lack of agreement. The only consensus appears to be a dissatisfaction with existing practices, whatever they may be (p. 141).

Historically, the initial concerns of teacher educators over junior high school teacher preparation was both quantitative and qualitative in nature. Legislation regulating the certification of junior high school teachers was accompanied by an increase in the number of pre-service programs designed to prepare teachers for this level. Accompanying this development was the increased concern for the identification of those elements necessary for an effective program. There has been, however, wide discrepancy and conflicting evidence on what those elements, course offerings, and field experiences should be.

The research accomplished in the current study proposed to identify the common professional education competencies required of junior high school teachers. The review of literature indicated that this information should provide the foundation for the development of quality educational programs in the preparation of junior high school teachers.

General or Related Studies

Most educators concur that the ultimate index of an educational program's worth is the degree to which it benefits the learner. The quality of instructional programs, irregardless of the level of the

learner, is a prime consideration at all educational levels. Flanagan (1967) discussed this concern for quality programs by stating:

In its application to education, objectives must be defined, input and output of the system have to be accurately measured, and all relevant conditions described and defined. The specific factors which have prevented effective use of these approaches in education are a lack of well-defined objectives and inadequate measuring procedures to determine whether the student has achieved the objective set for him (p. 28).

In identifying appropriate objectives for pre-service teacher education programs there is a need to identify those elements which the teacher will be required to perform, once he enters the classroom. Cyphert (1969) in addressing himself to new directions in teacher education indicated that what a teacher does as he performs his tasks must be determined before the knowledge and experiences needed in pre-service programs can be ascertained. Evidence indicates that little has been accomplished in attempting to identify the day-to-day experiences of the junior high school teacher as he engages in the teaching act and the other responsibilities, duties, and activities related to his profession.

In identifying those tasks which are accomplished by practicing professionals in the field, considerations of the relative importance and the difficulty of specific tasks provides another critical dimension of the foundation upon which curricula can be developed. According to Popham (1970), it is appropriate to consider some type of framework, in order to provide a systematic consideration of the quality of learner objectives, the content selected, and the experiences provided.

One standard that may be used in developing a framework has been provided by Bloom (1956) when he and his associates attempted to set down the kinds of objectives that were commonly being measured in the schools at that time. As a consequence of their analysis, the many objectives treated in the schools were divided into three categories; the cognitive domain, the affective domain, and the psychomotor domain. Originally, this work created a mild stir, but in recent years, the application of the domains to educational content and learning experiences has generated increased interest.

Gagne (1965) indicated that the identification of varieties of learning in terms of the conditions that produced them obviously had some definite implications for education and educational practices. Precisely, he stated,

The planning that precedes effective design for learning is a matter of specifying with some care, the learning structure of any required task (p. 22).

A significant amount of research has been conducted on identifying learning structures or hierarchies. The work of Bloom (1956) remains a standard but was preceded by a number of studies including John Dewey's (1910) "how we think" which analyzed the thought process into five steps. Johnson (1955) described the thought processes in terms of three states: preparation, production, and judgment. Roberson (1971), in discussing teacher evaluation through self appraisal, utilized the cognitive domain taxonomy developed by Bloom (1956) as the hierarchy whereby classroom teachers could assess the quality and depth of their instructional procedures.

Metfessel (1969) applied Bloom's Cognitive Domain Taxonomy to concepts and activities in educational psychology classes. His purpose was to show how specific behavioral objectives could be formulated within the hierarchy of the major levels and sub-levels of the taxonomies. He indicated in his research that an educational objective should consist of a description of the behavior of an individual in relation to his processing of information embodied in the subject matter - that is, what the learner must be capable of accomplishing with certain properties of subject matter. The behavioral component could then be identified at an appropriate level of the taxonomy.

The need to identify cognitive structures of teaching tasks is an important consideration in the development of a sequential and articulated pre-service educational program and represents an area of interest which was included in this research.

Related Methodological Studies

The review of literature relative to teaching competencies and cognitive domain level determination for identified competencies indicated the need to draw upon research accomplished in vocational education and industrial fields. The area of vocational teacher education has generated several studies germane to this research. This review of literature supported the methodological approach utilized in this study.

Factor analysis was originally designed to investigate ways in which individuals differ from one another; however the results of such analysis also tell us the ways in which individuals resemble one another

Guilford (1965). Consequently, information regarding the factors and their interrelationships gives us basic understandings of individuals, the tasks which they perform, and the interests which they possess. Guilford (1965) applied factor analysis to five kinds of intellectual abilities, classified by operation. The five types of intellectual activity included learning, memory, problem solving, investigation and decision making. He implied a need for educational programs to undergo a transformation with respect to the learner and the concept of learning based upon an identified and verified structure of tasks.

Palmer and McCormick (1961) developed a check list containing a number of descriptive job activities in terms of worker behavior. The data were correlated and subject to factor analysis. The results of this study supported the position that work activities can be identified, measured, and organized simply and economically.

Sjorgen, Schroeder, and Sahl (1967) conducted a study to determine whether common behaviors could be identified across metal-fabricating occupations and agriculture occupations. The basic analytic tool was factor analysis. Factor matrices were isolated with the Varimax procedure. Additionally, mean scores for each variable of 83 occupations were determined.

Studies by Cotrell (1969) and Halfin and Courtney (1970) have been accomplished in the area of vocational teacher education utilizing procedures similar to those in this study. Cotrell (1970) in a special presentation at the Fourth Annual National Vocational-Technical Teacher Education Seminar, encouraged the development of more courses based on the present day activities of teachers. He indicated the need and

stated the evidence directed toward curricula based upon the daily tasks required of vocational teachers.

Research by Halfin and Courtney (1970) has served as a foundation for the research and methodological procedures accomplished in this study. Their methodological approach included the development of a five-point Likert-type scale in relation to an itemized list of professional training needs and requirements for high school vocational teachers. Responses were secured from 150 randomly selected vocational teachers representing ten states. The data were subject to factor analysis and analysis of variance techniques. Results indicated that factor identification may be accomplished when using an occupational groups classification system as a base and that it is possible to secure data for determining interrelationships.

Studies by Gunderson (1971), Lindahl (1971), and Miller (1971) used similar procedures in identifying the common professional education competencies of instructors at the community college level. Miller (1971) obtained data from 160 instructors of business and distributive education in four western states. The instrument used contained 99 competencies identified as being relevant to the vocational professional education area. The respondents indicated the level of proficiency which they felt they possessed in relation to the identified competencies contained in the instrument. Their responses were recorded on a Likert-type scale similar to the one developed by Halfin and Courtney (1970). The data were subject to R-Mode and Q-Mode factor analysis procedures and analysis of variance. The analysis of variance tests indicated that the community colleges were alike in their responses to the competencies contained in the questionnaire.

The analysis of variance procedures indicated that business and distributive education instructors resembled one another in their responses. Further, the results of the study demonstrated that it is possible to generate factors containing clusters of common professional education competencies.

The rationale for an empirically-based procedure for determining the professional educational competencies of teachers is validated as follows:

1. Competencies required by teachers in relation to their daily professional responsibilities, duties, and activities can be identified.
2. The identification of these competencies and their importance has relevance for teacher education curriculum building and modification.
3. The identification of the cognitive domain requirements of these competencies has application to the scope and dimension of pre-service teacher education programs.

CHAPTER III

PROCEDURES

The sections presented in this chapter include: Preparation of the Instrument, The Dependent Variables, The Sample, The Collection of Data, and The Analysis Techniques.

Preparation of the Instrument

The initial step in the development of the instrument used in this research was a review of literature related to teacher competencies and cognition. Studies by Halfin and Courtney (1970), Cottrell (1970), Miller (1971), Lindahl (1971), Gunderson (1971), and Spaziani (1972) identified teacher competencies, proficiency levels for teacher competencies, and/or cognitive domain levels for teacher competencies. The instrument developed by Halfin and Courtney (1970) used 130 items with a five-point Likert-type response scale in assessing the importance of competencies at the high school level and served as a model for the development of the teacher questionnaire utilized in this study. In reviewing literature on cognitive domains, the reports of Bloom (1956), Tuckman (1969), Gagne (1965), Guilford (1965), and Roberson (1971) were considered in relation to the study. The taxonomy developed by Bloom (1956) served as the model for the cognitive domain hierarchical scale used in the research.

The format of the instrument was revised so as to be appropriate to junior high school teachers. Some items were deleted; others were combined or modified as was considered necessary in order to assure the

suitability of the instrument. An initial questionnaire containing 130 items was developed and subsequently revised to 98.

The second step was to present the questionnaire to a jury panel of experts for the purpose of evaluating format, clarity, and content. The jury panel consisted of a representative from the Oregon Board of Education, a member of the faculty from a teacher education institution, two junior high school administrators, and eight junior high school teachers representing a variety of teaching areas. The names and positions of the members of the jury panel are presented in Appendix A. Each member of the jury panel was asked to review the questionnaire, the instructions for the administration of the instrument and to develop a list of recommendations. As a result, seventeen items were modified, thirteen were eliminated or combined with others, and four were added so that the revised instrument consisted of 89 professional education competencies.

A field test of the instrument was conducted on thirteen junior high school teachers representing most subject matter areas found in junior high schools in the state of Oregon. The respondents were interviewed individually by the investigator and asked to respond to each competency according to the proficiency level and cognitive domain level required of them in their position as a junior high school teacher. An interview guide, which was developed in order to standardize the interviewer's presentation, was also critiqued. As a result, modifications were made to the interview guide; seven competencies were modified, and the cognitive domain scale was revised from six levels to five by combining level four (analysis) with level five (synthesis). The

combining of the analysis and synthesis levels, taken from the taxonomies developed by Bloom (1956) was accomplished after further review of literature. Johnson (1964) indicated the need for diversity in cognitive scale development was apparent in reviewing studies on the thinking process and was necessary in order to identify the various intellectual stages required for the successful completion of tasks. The Interview Guide is presented in Appendix B and C and the Professional Education Competencies Teacher Questionnaire used in the study may be found in Appendix D.

The Dependent Variables

The respondents, which were junior high school teachers, were asked to indicate the proficiency level and the cognitive domain required for each of the 89 professional education competencies in relation to their positions as teachers. Each of the competencies was assigned a proficiency level, based upon a five-point Likert-type scale. In addition, each of the competencies was assigned a cognitive domain score based upon a five-point hierarchical scale. The dependent variables in the study were

1. A score judgmentally assigned by respondents to denote their proficiency as teachers in relation to the competency.
2. A score judgmentally assigned by respondents to denote the cognitive level necessary to perform the task.

Each of the 89 competencies were scored independently on the two scales.

The Sample

The sample for the study was drawn from three-year (grades seven, eight, and nine) junior high schools in the state of Oregon. The final selection of the participating schools was based upon three criteria. First, the school had to be of sufficient size to provide an adequate sample of teachers in the various subject areas. Schools were considered if their average daily student membership exceeded 500. Secondly, the administration of the school district had to grant approval for the study to be conducted in one or more of their junior high schools. Lastly, the junior high school principal had to be supportive of the study.

Four junior high schools were arbitrarily selected for the study. A total of 21 teachers from each of the participating schools constituted the sample. A preliminary grouping of teachers by broad subject areas was accomplished prior to randomization in order to assure that teachers of all subjects normally found in most junior high schools were represented in the sample. A Table of Random Numbers was used for selecting the sample from each school. The total sample consisted of 84 junior high school teachers. Table 1 illustrates the composition of the sample.

Collection of The Data

The respondents met with the interviewer individually or in small groups during lunch, during preparation periods, or after normal school hours. The instructions to the respondents, the review of the cognitive domain taxonomy, and the administration of the instrument were

TABLE 1. The Sample

Major teaching assignment

	School "A"	School "B"	School "C"	School "D"	Total
Speech, Journalism		1			21
Foreign Language	1		1	1	
Business Education		1	1		
Career Education	2		1		
Industrial Arts	1	1	2	2	
Home Economics	2	1	1	2	
Physical Education & Health	3	3	2	3	21
Music	1	1	2	2	
Art	1	1	1	1	
Mathematics	3	3	2	3	21
Science	2	2	4	2	
English- Social-Studies	4	1		1	21
Social Studies		2	1	2	
English	1	4	3	2	
Total	21	21	21	21	

standardized with the use of the developed interview guide. The time necessary for a teacher to complete the questionnaire ranged from 40 minutes to two hours and five minutes. Average time for completion of the questionnaire was 70 minutes, including instructions for completion. The collection of data encompassed a four-week period.

The final step in the collection of data was to check and code each questionnaire and transfer the data to IBM cards for computer analysis. The procedure for coding the IBM cards is included in Appendix G.

Analysis Techniques

The central problem of this study was to determine the common professional education competencies of junior high school teachers. Supplementary purposes were to determine the proficiency levels and cognitive domain levels relative to the identified competencies.

The population was representative of junior high school teachers in the state of Oregon. A random sample of 84 teachers provided data by completing an 89-competency-item questionnaire in the presence of an interviewer. Respondents were asked to react to each of the 89 competencies in the instrument by recording the level of proficiency which they felt they possessed and the cognitive level which they possessed. Responses for the proficiency level ranged from a low of 1.0 to a high of 5.0. Responses to the cognitive scale also ranged from 1.0 to 5.0.

Significance Testing

There was an interest in learning if differences existed among the proficiency level mean scores by junior high schools. The hypothesis tested was that there is no significant difference among the junior high

school responses. A four-level, one-way analysis of variance measured for junior high school proficiency level mean score differences and was used to test the hypothesis. The test statistic used to analyze contrasts between mean scores was the F statistic and the critical region was set at the .01 level of significance. The test of Least Significant Differences was used to determine where specific differences existed when the hypothesis was rejected.

Medians and quartile deviations were generated for the cognitive domains for each of the competencies. There was an interest in learning if differences existed among the domain level medians. The Median Test measured the median score differences and was used to test the hypothesis at the .01 level of significance. Yate's correction for continuity was applied when cell frequencies were less than ten. The formula for the correction was:

$$\chi^2 = \sum \frac{(|O - E| - .5)^2}{E}$$

Factor Analysis

Data were analyzed through the use of two factor analytic techniques, the Q-Mode and the R-Mode. The Q-Mode basically involved the ordering of the respondents according to the competencies included for study. An 84 respondent intercorrelation matrix based upon data furnished on 89 competencies was generated. This form of analysis provided a measure of commonality among respondents and indicated the extent to which junior high school teachers were alike or resembled each other with regard to the importance and cognitive domains of the 89 competencies under consideration.

The R-Mode technique factor analysis ordered competencies according to the respondents included in the study. This form of analysis examined the relationship of every competency with every other competency and provided for a clustering of common professional education competencies. An 89 competency intercorrelation matrix based upon data collected from the 84 respondents was generated. Therefore, the 89 competencies were clustered in a manner that best accounted for the greatest proportion of the variability represented by the respondents ratings on the proficiency levels and cognitive domain levels of the competencies. Information on the R-Mode control cards used for computer analysis of data is found in Appendix H.

Additionally, there was an interest in determining the linear relationship between the two sets of variables. The Pearson "r" was applied to determine the correlation of the two sets of scores; the means generated for the proficiency levels, and the medians, generated from the cognitive domain scale. Such computation was used to estimate relations in terms of the percentage of commonality between the two sets of variables, the strength of the linear relationship, and the direction of the relationship. The formula used in computing the Pearson "r" was:

$$r = \frac{\sum XY - \frac{(\sum X)(\sum Y)}{N}}{\sqrt{[N\sum X^2 - (\sum X)^2][N\sum Y^2 - (\sum Y)^2]}}$$

CHAPTER IV

THE FINDINGS

As stated in Chapter I, the data will be organized around the identification of the proficiency levels and cognitive domain levels of the common professional education competencies of junior high school teachers. The topics for the major sections of this chapter have been adapted from previous research on competency proficiency levels and cognitive domains. Specifically, the research accomplished by Halfin and Courtney (1970) was appropriate for topic selection.

The Proficiency Levels

The responses indicated that teachers at the junior high school level believed that moderate, considerable, or complete proficiency was required with 71 of the 89 competencies included in the instrument. Those competencies requiring the greatest proficiency were directly related to classroom instructional procedures. Student evaluation and teacher self-evaluation competencies received high mean scores and constituted five of the top ten rank ordered competencies. Those items requiring the least proficiency as indicated by the responses were allied with community involvement. Table 2 presents the competency items, the proficiency mean ranks, the means, and the standard deviations.

Differences Among Mean Scores

There was interest in the study to determine if significant differences were present among the competency mean scores for the schools

involved in the study. The results of the testing indicated that generally, the schools were alike in their responses. A one-way analysis of variance test was used for testing the hypothesis and $F_{.01, df = 3, 80} > 4.04$ was selected as the critical region for rejecting the hypothesis. The hypothesis was retained in 83 of the 89 tests which were conducted. For the six rejected items, a Least Significant Difference Test was conducted in order to determine where significant differences existed between schools. The results of the F tests are presented in Appendix N and the results of the tests for Least Significant Difference can be found in Appendix O.

Competency Clusters

One of the most important analyses which was conducted in the study was the determination of the clustering of items. R-Mode factor analysis was conducted for the purpose of identifying clusters of common professional education competencies in this study. The data were factor analyzed with the Varimax rotation procedure; the purpose was to select the factor solution which conformed most nearly to the predetermined criteria. The criteria included identifying the solution which generated the largest number of competencies, provided the best balance between factors, and provided the least amount of overlap of competencies between factors. In all, factor solutions of four, five, six, seven, and twelve were generated through the *FAST computer program. The six-factor solution provided the greatest insight into the clustering of the competencies.

The six-factor solution generated 48 competencies with factor loadings at or above $\pm .50$ and accounted for 44 percent of the common

TABLE 2. Rank Ordering of the Common Professional Education Competencies by Proficiency Level Means

<u>ITEM</u>	<u>COMPETENCY</u>	<u>MEAN RANK</u>	<u>MEAN</u>	<u>STANDARD DEVIATION</u>
3	Establish evaluative criteria for student performance.	1	4.214	.713
17	Appraise student performance in relation to instructional goals.	2	4.167	.758
22	Determine student goals.	3	4.107	.776
39	Recognize potential problems of student.	4	4.059	.683
58	Use self-analysis to evaluate one's professional abilities and limitations.	5	4.024	.957
66	Establish frames of reference to enable the students to understand a situation from several points of view.	6	4.012	.752
43	Promote class interaction.	7	3.976	.791
78	Present information through individualized instruction.	8	3.952	.863
57	Formulate acceptable standards of behavior with students.	9	3.940	.826
48	Select methods of evaluating student attainment of lesson objectives.	10	3.928	.889
75	Maintain working relationships with the faculty and administration.	11	3.917	.894
54	Present a principle through a demonstration.	12	3.905	.873
8	Sequence performance goals for a course.	13	3.893	1.030
72	Review student progress to assess the effectiveness of instruction.	14	3.881	.767

TABLE 2. (Continued)

<u>ITEM</u>	<u>COMPETENCY</u>	<u>MEAN RANK</u>	<u>MEAN</u>	<u>STANDARD DEVIATION</u>
21	Maintain ethical standards expected of a professional educator.	15.5	3.869	1.138
30	Direct students in applying problem solving techniques.	15.5	3.869	.861
35	Determine learning experiences for a unit based upon individual differences.	17.5	3.857	.920
1	Identify behavioral objectives for students in your class.	17.5	3.857	.823
42	Identify behavioral objectives of a lesson.	19	3.773	.986
42	Engage in cooperative evaluation of achievement with students.	20	3.762	.900
60	Provide special assignments for slower students.	21	3.750	.774
45	Conduct a personal conference for counseling a student.	22.5	3.690	.969
74	Work with other teachers to help students with individual problems.	22.5	3.690	.891
31	Determine techniques for students to evaluate their own progress.	24	3.688	.958
73	Carry out approved disciplinary action when warranted.	25	3.678	.984
44	Interpret the students' evaluation of instruction.	26.5	3.667	.923
51	Uphold school standards of expected student behavior.	26.5	3.667	.923
24	Devise self-evaluation techniques for use by students.	28	3.655	1.125

TABLE 2. (Continued)

<u>ITEM</u>	<u>COMPETENCY</u>	<u>MEAN RANK</u>	<u>MEAN</u>	<u>STANDARD DEVIATION</u>
28	Exchange observational visits, innovations, and ideas with other teachers.	29	3.619	.943
16	Direct students in instructing other students.	30.5	3.607	.970
49	Employ a variety of questioning strategies.	30.5	3.607	.994
14	Express a philosophy relevant to the basic goals of the teaching profession.	33	3.571	1.144
52	Confer with parents regarding their students' educational achievement.	33	3.571	.923
65	Develop original instructional materials such as charts, transparencies.	33	3.571	.868
29	Involve students in planning activities.	35	3.559	1.010
56	Assist students in developing appropriate study habits.	36.5	3.536	.975
59	Assist in the selection of textbooks.	36.5	3.536	1.058
61	Analyze tests for validity.	38	3.524	1.187
76	Keep up to date through reading literature.	39	3.500	.850
32	Be familiar with career opportunities in your subject area.	41	3.476	1.035
47	Work with a team of professionals from the school on pertinent school problems	41	3.476	1.011

TABLE 2. (Continued)

<u>ITEM</u>	<u>COMPETENCY</u>	<u>MEAN RANK</u>	<u>MEAN</u>	<u>STANDARD DEVIATIONS</u>
85	Illustrate with models and real objects.	41	3.476	1.058
10	Formulate a system of grading consistent with school policy.	43	3.464	.975
15	Identify the unit topics for a course.	44.5	3.429	1.133
25	Be familiar with reference material in the library which is related to your subject.	44.5	3.429	.985
27	Participate in "open house" to familiarize members of the community with the school program.	46	3.404	.983
83	Supervise student teachers.	47	3.393	1.344
67	Analyze tests for reliability	48	3.369	1.239
7	Identify current professional trends.	49.5	3.345	1.024
20	Communicate with the community on the instructional program.	49.5	3.345	1.092
89	Supervise aides, tutors, or other paraprofessionals.	51	3.333	1.274
53	Write a lesson plan.	52	3.321	1.153
11	Recommend reference books related to your subject that should be added to the library.	53	3.319	.933
4	Compile a list of supplies needed for the academic year.	54	3.309	1.140
55	Administer teacher constructed tests.	55.5	3.286	1.178

TABLE 2. (Continued)

<u>ITEM</u>	<u>COMPETENCY</u>	<u>MEAN RANK</u>	<u>MEAN</u>	<u>STANDARD DEVIATIONS</u>
82	Assist in planning the objectives of the total school program.	55.5	3.286	1.178
79	Formulate, cooperatively with students, procedures for their participation in the evaluation of instruction.	57.5	3.262	1.152
86	Obtain information from fellow teachers and supervisory personnel regarding the quality of one's teaching.	57.5	3.262	.946
63	Establish communication patterns for exchanging student information with the guidance counselor.	59.5	3.250	.943
77	Involve students in planning a lesson.	59.5	3.250	1.074
36	Present information by the project method.	61.5	3.178	1.163
70	Involve students in the preparation of instructional materials.	61.5	3.178	1.054
87	Provide supervision of students during extra-curricular activities.	63	3.143	1.132
41	Assist teachers who are new to the system.	64	3.119	1.057
13	Utilize community resources to enrich instruction.	65.5	3.059	.974
26	Provide for student discussion of their career aspirations.	65.5	3.059	.936
50	Formulate essay test items.	67.5	3.048	1.107
84	Prepare ditto or mimeographed material for a lesson.	67.5	3.048	1.307
71	Present information through role-playing techniques.	69	3.036	1.217

TABLE 2. (Continued)

<u>ITEM</u>	<u>COMPETENCY</u>	<u>MEAN RANK</u>	<u>MEAN</u>	<u>STANDARD DEVIATIONS</u>
5	Administer subject matter diagnostic tests.	70	3.024	1.161
23	Conduct group supervised study.	71	3.000	1.212
9	Direct students in gathering information from sources in the community.	72	2.964	.987
88	Present information to students on post-high school training and educational opportunities available to them.	73	2.940	1.057
6	Assist in the development of policies regarding school-community relations.	74	2.905	.977
33	Promote parent involvement in school.	75	2.881	1.046
64	Obtain informal feedback on the educational program through contacts with individuals in the community.	76	2.821	1.161
2	Organize field trips.	77	2.809	1.156
34	Support professional organizations through attendance and membership.	78	2.798	1.226
38	Devise a filing system for materials.	79.5	2.762	1.163
69	Analyze tests for reliability.	79.5	2.762	1.048
81	Arrange for the administration and interpretation of tests for specific students.	81	2.702	1.170

TABLE 2. (Continued)

<u>ITEM</u>	<u>COMPETENCY</u>	<u>MEAN RANK</u>	<u>MEAN</u>	<u>STANDARD DEVIATIONS</u>
62	Provide and maintain record keeping, supply lists and records for the administration.	82	2.690	1.161
80	Supervise students in the halls.	83	2.667	1.057
12	Maintain anecdotal records on students.	84	2.583	1.204
18	Construct a bulletin board.	85.5	2.571	.960
68	Assist students with their problems by working cooperatively with health and welfare agencies.	85.5	2.571	1.164
19	Communicate with new and returning students during the summer.	87	2.464	1.217
46	Serve in community civic, service or social organizations.	88	2.238	1.048
40	Assist with community events.	89	2.226	.923

variance. The factors were analyzed and sub-factors were identified. Names were arbitrarily assigned to each factor and were considered to be indicative of the general nature of the majority of competencies which loaded under that particular factor. A complete listing of the six factors can be located in Appendices S, T, U, V, W, and X.

Factor I - Instruction

Nineteen factors loaded under Factor I, Instruction with loadings at or above the $-.50$ level. Three sub-factors were identifiable within Factor I and they included Instruction Planning, Instruction Execution, and Instruction Evaluation.

The specific characteristics of Factor I were high mean scores, high mean rankings, relatively high factor loadings, and low standard deviations. Mean scores for the Instruction, Evaluation sub-factor were the highest indicating that the 84 teachers believed that the highest proficiency was required in this area.

Factor I accounted for 19 percent of the common factor variance and included the highest number of competencies and spurious competencies.

Factor II - School-Community Relations

Competencies which appeared in this factor were described as possessing low mean scores, high standard deviations, and factor loadings in the average range. Three sub-factors were isolated among the ten competencies which loaded under Factor II. Community Relations, Parent Relations, and Intra-School Relations constituted the major sub divisions. Competencies which grouped under Intra-School Relations

characteristically had higher mean scores than did the other two sub-factors. Mean ranks for those competencies identified under Community-Relations were lowest in comparison with the other sub-factors. As a group, competencies related to Community Relations had the lowest mean scores and mean ranks of all those competencies listed in the instrument. Factor II accounted for 8.5 percent of the common factor variance.

Factor III - Instructional Related Strategies

Eight competencies loaded under Factor III. The mean rankings for this factor were in the mid-range and the competencies which appeared were characterized as being related to teacher-centered activities and methods. Those competencies directly related to a teaching technique evidenced a wide disparity between means. Presenting a Principle Through a Demonstration, for example, produced a mean rank of 12, while Presenting Information by the Project method had a mean rank of 61.5

The teachers concern for discipline was apparent in several of the factors and these competencies were generally characterized by high proficiency mean scores. Identification of Acceptable Standards of Student Behavior appeared in Factor III with a mean of 3.94 and a mean rank of nine.

Factor III accounted for 5.8 percent of the common factor variance.

Factor IV - Philosophy and Policy

Four competencies loaded under this factor. The highest mean score in this factor was identified with the Ability to Express a Philosophy Relevant to the Basic Goals of the Teaching Profession. The lowest mean score was assigned to Developing Policies Regarding

School and Community Relations. The characteristics of this factor indicated that these competencies ranked in the bottom fifty percent in relation to their mean scores. Factor IV accounted for 4.13 percent of the common variance.

Factor V - Professional Behavior

The characteristics of this factor, which included four competencies, were high standard deviations and wide mean rank range. The need to Maintain Ethical Standards Expected of a Professional Educator exhibited a mean rank of 15.5, while Service in Community Civic, Service, or Social Organizations produced a mean rank of 88, indicating heterogeneous-type responses to those competencies which loaded under this Factor. Factor V accounted for 3.71 percent of the common factor variance in the six-factor solution.

Factor VI - Ancillary Knowledge

This factor consisted of three items which were allied with knowledge considered contributory to the teaching act. These competencies were characterized by average means. Factor VI accounted for 3.32 percent of the common factor variance.

Q-Mode Factor Analysis

A four-factor solution utilizing the Q-Mode Factor Analysis technique was conducted to determine the extent to which the 84 respondents resembled one another in relation to their responses to the required proficiency levels. The Q-Mode generated only one factor. Junior high school teachers exhibited a high degree of relative consistency as a group insofar as their responses to the identified competencies

were concerned. The degree of "alikehood" was indicated by the fact that 92.7 percent of the common factor variance among junior high school teachers was accounted for in the one generated factor.

The Cognitive Domain Levels

The cognitive domain scale which was developed for this research was considered to be hierarchical; therefore, data were ordinal. As such, medians, quartile deviations, the median test, as well as factor analysis, were considered as appropriate analytical techniques.

The responses to the cognitive domain levels necessary to accomplish the identified competencies indicated that junior high school teachers believed that 75 of the 89 competencies required cognitive functioning at the application, analysis, synthesis, or evaluation levels. Those competencies requiring the highest cognitive level were allied with the overall evaluation process. Seven of the ten highest ranked competencies were concerned with student evaluation techniques or teacher self-evaluation techniques. Those competencies requiring the lowest cognitive domain levels were identifiable with responsibilities and activities outside the classroom. Table 3 presents the competency items, their cognitive domain median ranks, medians, and quartile deviations.

Differences Among Median Scores

Median tests were conducted in order to determine the degree to which the four schools involved in the study resembled one another with respect to the way in which they responded to the cognitive domains for the listed competencies. In all, 89 median tests were accomplished and the null hypothesis was retained in 87 instances and

TABLE 3. Rank Ordering of Professional Education Competencies by Cognitive Domain Median Scores.

<u>ITEM</u>	<u>COMPETENCY</u>	<u>MEDIAN RANK</u>	<u>MEDIAN</u>	<u>QUARTILE DEVIATION</u>
17	Appraise student performance in relation to instructional goals.	1	4.776	.498
58	Use self-analysis to evaluate one's professional abilities and limitations.	2	4.763	.547
3	Establish evaluative criteria for student performance.	3	4.708	.519
48	Select methods of evaluating student attainment of lesson objectives.	4	4.676	.669
72	Review student progress to assess effectiveness of instruction.	5	4.643	.697
22	Determine student goals.	6	4.587	.677
31	Determine techniques for students to evaluate their own progress.	7.5	4.567	.951
59	Assist in the selection of textbooks.	7.5	4.567	.921
83	Supervise student teachers.	9	4.545	1.034
1	Identify behavioral objectives for students in your class.	11	4.523	.794
37	Engage in cooperative evaluation of achievement with students.	11	4.523	.732
61	Analyze tests for validity.	11	4.523	.975

TABLE 3. (Continued)

<u>ITEM</u>	<u>COMPETENCY</u>	<u>MEDIAN RANK</u>	<u>MEDIAN</u>	<u>QUARTILE DEVIATION</u>
24	Devise self-evaluation techniques for use by students.	13	4.455	.744
35	Determine learning experiences for a unit based upon individual differences.	14	4.375	.731
39	Recognize potential problems of a student.	15	4.333	.650
52	Confer with parents regarding their student's educational achievement.	16	4.286	1.009
60	Provide special assignments for slower students.	17	4.231	.771
14	Express a philosophy relevant to the basic goals of the teaching profession.	18	4.214	1.224
8	Sequence performance goals for a course.	19.5	4.196	.825
57	Formulate acceptable standards of behavior with students	19.5	4.196	.825
44	Interpret the students' evaluation of instruction.	21	4.167	.832
66	Establish frames of reference to enable the students to understand a situation from several points of view.	22	4.118	.638
74	Work with other teachers to help students with individual problems.	23	4.100	.905
42	Identify behavioral objectives of a lesson.	24	4.083	.891
30	Direct students in applying problem-solving techniques.	25.5	4.056	.817

TABLE 3. (Continued)

<u>ITEM</u>	<u>COMPETENCY</u>	<u>MEDIAN RANK</u>	<u>MEDIAN</u>	<u>QUARTILE DEVIATION</u>
45	Conduct a personal conference for counseling a student.	25.5	4.056	.911
28	Exchange observational visits, innovations and ideas with other teachers.	27	4.038	1.039
82	Assist in planning the objectives of the total school program.	28	3.980	1.047
67	Analyze tests for reliability.	29.5	3.978	1.067
78	Present information through individualized instruction.	29.5	3.974	.912
79	Formulate, cooperatively with students, procedures for their participation in the evaluation of instruction.	31	3.938	1.094
43	Promote class interaction.	32.5	3.900	.742
86	Obtain information from fellow teachers and supervisory personnel regarding the quality of one's teaching.	32.5	3.900	1.098
49	Employ a variety of questioning strategies.	34	3.870	.842
29	Involve students in planning activities.	35	3.860	.882
47	Work with a team of professionals from the school on pertinent school problems.	36	3.833	.993
88	Present information to students on post-high school training and educational opportunities available to them.	37	2.786	.956
21	Maintain ethical standards expected of a professional educator.	38	3.700	1.030

TABLE 3. (Continued)

<u>ITEM</u>	<u>COMPETENCY</u>	<u>MEDIAN RANK</u>	<u>MEDIAN</u>	<u>QUARTILE DEVIATION</u>
54	Present a principle through a demonstration.	39	3.688	.928
65	Develop original instructional materials such as charts, transparencies, etc.	40	3.611	.735
10	Formulate a system of grading consistent with school policy.	41	3.583	1.018
75	Maintain working relationships with the faculty and administration.	42	3.563	.914
53	Write a lesson plan.	43.5	3.500	1.063
89	Supervise aides, tutors, or other para-professionals.	43.5	3.500	1.063
11	Recommend reference books related to your subject that should be added to the library	45	3.455	1.096
56	Assist students in developing appropriate study habits.	46	3.409	.837
77	Involve students in planning a lesson.	47	3.403	.796
73	Carry out approved disciplinary action when warranted.	48	3.395	.925
50	Formulate essay test items.	49	3.364	1.951
15	Identify the unit topics for a course.	50	3.350	1.196
7	Identify current professional trends.	51	3.340	.886
70	Involve students in the preparation of instructional materials.	52	3.333	.797

TABLE 3. (Continued)

<u>ITEM</u>	<u>COMPETENCY</u>	<u>MEDIAN RANK</u>	<u>MEDIAN</u>	<u>QUARTILE DEVIATION</u>
76	Keep up to date through reading literature.	53	3.310	1.168
16	Direct students in instructing other students.	54	3.316	.806
27	Participate in "open house" to familiarize members of the community with the school.	55	3.286	.839
5	Administer subject matter diagnostic tests.	56	3.260	1.168
20	Communicate with the community on the instructional program.	57	3.241	.953
85	Illustrate with models and real objects.	58	3.237	.951
51	Uphold school standards of expected student behavior.	59	3.217	.932
63	Establish communication patterns for exchanging student information with the guidance counselor.	60	3.200	.816
6	Assist in the development of policies regarding school-community relations.	61	3.196	1.020
2	Organize field trips.	62	2.179	1.162
13	Utilize community resources to enrich instruction	63.5	3.176	.767
55	Administer teacher-constructed tests.	63.5	3.176	.993
4	Compile a list of supplies needed for the academic year.	65	3.145	.907
23	Conduct group supervised study.	66	3.139	.708

TABLE 3. (Continued)

<u>ITEM</u>	<u>COMPETENCY</u>	<u>MEDIAN RANK</u>	<u>MEDIAN</u>	<u>QUARTILE DEVIATION</u>
25	Be familiar with reference material in the library which is related to your subject.	67	3.109	1.218
87	Provide supervision of students during extra-curricular activities.	68	3.096	.537
71	Present information through role-playing techniques.	69.5	3.093	.980
81	Arrange for the administration and interpretation of tests for specific students.	69.5	3.093	1.179
36	Present information by the project method.	71	3.086	1.000
41	Assist teachers who are new to the system.	72	3.056	.901
64	Obtain informal feedback on the educational program through contacts with individuals in the community.	73	3.042	1.139
9	Direct students in gathering information from sources in the community.	74	3.028	.700
84	Prepare ditto or mimeographed material for a lesson.	75	3.000	1.082
26	Provide for student discussion of their career aspirations.	76	2.923	.900
38	Devise a filing system for materials.	77	2.894	.994
18	Construct a bulletin board.	78	2.890	.644
33	Promote parent involvement in school.	79	2.794	.823

TABLE 3. (Continued)

<u>ITEM</u>	<u>COMPETENCY</u>	<u>MEDIAN RANK</u>	<u>MEDIAN</u>	<u>QUARTILE DEVIATION</u>
80	Supervise students in the halls.	80	2.775	.923
68	Assist students with their problems by working cooperatively with health & welfare agencies.	81	2.706	.801
32	Be familiar with career opportunities in your subject area.	82	2.682	1.293
12	Maintain anecdotal records on students.	83	2.690	1.109
40	Assist with community events.	84	2.675	.850
62	Provide and maintain record keeping, supply lists and records for the administration.	85	2.672	.992
34	Support professional organizations through attendance and membership.	86	2.656	.851
19	Communicate with new and returning students during the summer.	87	2.571	.954
69	Obtain information from parents relative to their expectations of the school.	88	2.548	.886
46	Serve in community civic, service or social organizations.	89	2.500	.828

rejected in only two cases. Both of the rejected hypothesis were allied to the identification of behavioral objectives. The critical region for the testing was the .01 level with $df = 3 > 11.345$. The complete results of all the median tests are presented in Appendix R.

Competency Clusters

An R-Mode Factor Analysis was conducted for the purpose of identifying the distinct factors present among the competency cognitive domains. In all, a total of six different factor solutions were conducted in order to determine the single solution which came closest to fulfilling the pre-determined criteria. Factor solutions generated included three, four, five, six, seven, and twelve. The criteria called for the factor solution which provided the highest number of competencies with factor loadings above $\pm .45$. The four-factor solution generated 42 competencies and accounted for 33 percent of the common factor variance. Spurious competencies were placed within the appropriate vector according to their highest loading. The results of the four-factor solution can be located in Appendices Y, Z, AA, and BB, and are discussed below.

Factor I - Instruction

A total of 17 competencies appeared in this vector. Three sub-factors were identified and included Instruction Planning, Instruction Execution, and Instruction Evaluation. For this factor, the medians were high, quartile deviations generally were low, and the factor loadings were somewhat higher than for the other factors. Instruction Evaluation medians were generally higher than the other sub-factors but factor loadings were somewhat lower than those listed under

Instruction, Execution. The highest cognitive domain medians were identified with spurious competencies in the Instruction, Evaluation area within Factor I.

Factor II - School-Community Relations

Factor II accounted for 7.56 percent of the common factor variance and included 14 competencies. Three sub-factors were identified and named as Community Relations, Parent Relations, and Intra-School Relations. Generally, median ranks for Intra-School Relations were higher than were the ranks for the other two sub-factors. Community Relations competencies tended to cluster with low medians. There was a wide disparity among the medians for the items in this vector. The range included a low of 2.55 and a median high of 4.29. Quartile deviations ranged from .64 to 1.06.

Factor III - Related Instructional Strategies

This factor accounted for seven competencies which were characterized as teacher-centered. In the main, medians were in the bottom 50 percent when compared with the 89 competencies included in the instrument. Quartile deviations were somewhat lower, as a group, than those of the other three factors. Factor III accounted for 4.83 percent of the common factor variance.

Factor IV - Teacher-Community Interaction

Four competencies clustered in this vector; all related to teacher activities with individuals outside the school. This factor contained the lowest medians, a very narrow median range, and relatively high factor loadings which indicated somewhat of a homogenous type of

response to the competencies in this vector. The common factor variance for Factor IV was 4.09 percent.

Q-Mode Factor Analysis

The Q-Mode factor analysis was conducted on the data to order the respondents according to the competencies. The analysis determined the extent to which the teachers resembled one another according to values assigned to the cognitive domain levels of the 89 competencies. Only one factor was generated with a four-factor solution of the Q-Mode. The results gave strong evidence that teachers, regardless of subjects taught, were quite similar with respect to their responses. One factor loading was identified at $+0.86$, a second at $+0.88$, while the remainder loaded at or above $+0.90$. The likeness of the results was also indicated by the fact that the one factor which was generated accounted for 91 percent of the common variance among the junior high school teachers involved in this study.

Correlation Between Mean and Median Scores

During the initial stages of this research, the investigator assumed that there would be a positive relationship between the two sets of scores; the proficiency means and the cognitive domain medians. Upon completion of other statistical procedures, the Pearson "r" was computed to test the assumption. The analysis generated a $+0.82$ which represented a high, positive correlation with marked relationship between the two sets of scores.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The Problem Restated

The central purposes of this study were to identify the common professional education competencies of junior high school teachers and to

1. Determine the proficiency levels necessary in order to accomplish these tasks.
2. Determine the cognitive domain levels required in order to fulfill these tasks.

The major dimensions of the study were the construction and validation of an interview questionnaire for junior high school teachers, the analysis of variance to determine if there were differences among the junior high schools in their responses to the items, a factor analysis of the competencies and junior high school respondents, a determination of the correlation coefficient between the two sets of dependent variables, and the development of implications to be considered in the formulation of teacher education curricula.

Summary of the Findings

The analysis of the data revealed the following information relative to the stated purposes of the research:

1. Those competencies which were identified with the teaching-learning process received higher mean and median values when compared with competencies not directly related to the teaching act.

2. The four junior high schools were alike in their responses to the proficiency levels and cognitive levels necessary for the competencies.
3. The junior high school teachers, regardless of subjects taught, resembled one another in the way they responded to competency proficiency levels and cognitive domains.
4. Factor analysis operations on the proficiency levels with a six-factor solution was an effective technique for identifying clusters of competencies which provided insight into competencies which were responded to in like fashion.
5. Factor analysis operations on the cognitive domains with a four-factor solution was an effective technique for identifying clusters of competencies which provided insight into those competencies which were responded to in a similar manner.
6. There was a high degree of correlation between the responses to the proficiency levels and the responses to the cognitive levels.

Conclusions

Specific conclusions as a result of the review of literature, the analysis of the data, and the interviewing by the researcher, were developed:

1. There is a group of common professional education competencies for junior high school teachers which exists and is identifiable.

2. The proficiency levels and the cognitive domains for the common professional education competencies can be identified through the personal interview technique, utilizing an interview questionnaire.
3. The identification of teacher competencies has relevance for the development of curricula for teacher education institutions.
4. The current emphasis on developing professional education curricula on an inter-disciplinary basis is valid.
5. Factor analysis is one approach in the identification of clusters of common professional education competencies which have a logical relationship to one another.
6. There is a direct relationship between the difficulty of a task and the importance of that task.

The procedures involved in this research constituted a valid approach to the identification of common professional education teacher competencies. Originally, the review of literature revealed that factor analysis was an acceptable procedure for the identification of common teacher competencies in the area of vocational education. As the study progressed, the researcher concluded that Oregon State University had assumed a prominent leadership role in the identification of competencies in vocational education and had made significant progress in the development of performance-based curricula founded upon identified competencies.

Recommendations

Based upon the procedures identified, the data analysis, and the subsequent conclusions, the following recommendations are submitted:

1. Comprehensive evaluation of junior high school teacher preparation programs should give serious consideration to the identified common professional education competencies.
2. The common professional education competencies identified in this study should be used as a foundation for developing performance-based curricula for the preparation of junior high school teachers.
3. Learning activities and learning units designed to develop the competencies in prospective teachers should be developed and implemented into existing teacher preparation programs.
4. The common core of pre-service professional courses for junior high school teachers should be planned and implemented on an inter-disciplinary basis.
5. Pre-service courses and learning activities should place greater emphasis on competencies directly related to the teaching process.
6. In developing pre-service programs for junior high school teachers, the formulated courses and materials should reflect the cognitive levels identified in this research.
7. The involvement of inservice teachers in the identification of teacher competencies, proficiency levels, and cognitive domains should serve as a priority criteria for the

development of pre-service and in-service programs for junior high school teachers.

8. Curriculum developers should not overlook those competencies with low factor loadings yet possessing high proficiency means and/or high cognitive domain medians.

Suggestions for Further Study

1. This study should be replicated in the near future because of the continual change in public school programs which requires that the teacher educator remain current with the changing roles and responsibilities of the classroom teacher.
2. Research should be conducted to determine if the professional education competencies, proficiency levels, and cognitive domains identified in this study are appropriate to teachers at other levels.
3. Research is needed in order to identify professional education competencies required in the affective domain and the psychomotor domain.
4. A study should be accomplished in the area of the professional education competencies required by junior high school counselors and administrators.
5. The identified competencies with high mean scores and high cognitive domain medians, identified as a result of this research, should be written in behavioral form. Learning packages should be developed including these objectives, and an experimental study should be conducted to determine if differences exist between teachers who are trained

using the packaged materials and those who do not use the developed learning packages.

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APPENDICES

APPENDIX A

Members of the Jury Panel of Experts

Dr. Kenneth Myers
Oregon College of Education

Mrs. Marlene Pederson, Teacher
Western View Junior High School
Corvallis, Oregon

Dr. Kenneth Hills
Oregon Board of Education

Mr. William Vukovich, Teacher
Thurston Junior High School
Springfield, Oregon

Mr. George Coon
Principal, Western View
Junior High School
Corvallis, Oregon

Mr. Jack Whitney, Teacher
Western View Junior High School
Corvallis, Oregon

Mr. Gary Connor, Principal
Thurston Junior High School
Springfield, Oregon

Mr. Ralph Grieve, Teacher
Western View Junior High School
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Mr. Larkin Mazer, Teacher
Thurston Junior High School
Springfield, Oregon

Mrs. Susan Powell, Teacher
Thurston Junior High School
Springfield, Oregon

Mr. James Baldwin, Teacher
Western View Junior High
School
Corvallis, Oregon

Mrs. Flossie Gray, Teacher
Thurston Junior High School
Springfield, Oregon

APPENDIX B

Professional Education Competencies InstrumentInterviewer Checklist

- () Introduce yourself briefly.
- () Give an introduction to the study.
 - A. The purpose of the study.
 - B. Discuss the planned utilization of the results of the study.
 - C. Discuss the basis for selecting schools for participation.
 - D. Discuss the basis for their participation. (Random sampling)
- () Describe what is required of the participant.
- () Solicit questions or concerns.
- () Provide a brief overview of Bloom's Cognitive Taxonomy, verbally, utilizing the attached paper as a guide.
- () Solicit questions.
- () Hand out the Professional Education Competencies Instrument.
- () Read the instructions for completion of the instrument aloud as the participant reads them silently.
- () Solicit questions.
- () Have the participant complete the questionnaire in your presence.
- () Answer questions as necessary.
- () Collect the completed instrument.
- () Thank the participant and indicate that a copy of the results will be furnished their school upon completion.

APPENDIX C

Bloom's Cognitive Taxonomy - Interview Guide

Taxonomy is defined as a method of classifying elements according to their mutual relationship. The cognitive taxonomy developed by Bloom, et al. (1956) is an attempt to classify educational objectives and tasks. It was developed to assist teachers, administrators and curriculum workers who deal with curriculum and evaluation problems. "Cognitive" refers to such mental processes as remembering, recalling, thinking and problem solving. Bloom organized different categories representing the cognitive domain.

The categories are arranged in a hierarchical order, from the simplest to the most complex. For example, the cognitive domain start with knowledge outcomes and then proceeds through the increasingly complex levels of comprehension, application, analysis, synthesis and evaluation. Each category is assumed to include the behavior at the lower levels. The five categories used in the teacher question are summarized as follows:

1. Knowledge - Remembering previously learned material from simple facts to complex theories. All that is required is the bringing to mind of the appropriate information. Knowledge represents the basic category of the cognitive domain.
2. Comprehension - The ability to grasp the meaning of material and communicate this meaning. This can be done verbally, in writing, going from words to numbers.
3. Application - The ability to apply concepts or knowledge in new and concrete situations. This may include the application of such things as rules, methods, laws, principles and theories.
4. Analysis and Synthesis - Analysis is the ability to break down material into its component parts. Being able to distinguish between fact and fiction, this includes seeing relationships and recognizing principles involved. Synthesis is the ability to put parts together to make a new whole. Synthesis could also include organizing separate pieces into a plan. The stress is the development of new and creative patterns or structures.
5. Evaluation - The ability to make judgments about the value of materials, methods, and processes. These judgments are based on definite criteria.

APPENDIX D

 Name

 Junior High School

OREGON STATE UNIVERSITY

Teacher Questionnaire

A Study of the Professional Education Competencies of Junior High School
Teachers in the State of Oregon

Purpose: The purpose of this questionnaire is to seek your assistance in providing information which will be useful in the development of curriculum for colleges and universities seeking to offer relevant teacher education courses for junior high school teachers.

In the spaces provided, check () the appropriate subject matter area in which you teach most of your courses.

- | | |
|-----------------------|------------------------|
| () Art | () Mathematics |
| () Business | () Music |
| () English | () Physical Education |
| () Foreign Languages | () Science |
| () Health | () Social Studies |
| () Home Economics | () S.U.T.O.E. |
| () Industrial Arts | () Other _____ |
- Specify

Instructions for the completion of this Questionnaire

This questionnaire contains a list of tasks which have been identified as being related to the teaching profession. We are attempting to determine the degree to which these tasks apply to junior high school teachers in the state of Oregon.

For each statement:

1. Circle the rating (1,2,3,4,5) which best indicates YOUR FEELING about the importance of this task in relation to your position as a junior high school teacher.
2. Circle the classification (1,2,3,4,5) which represents YOUR FEELING about the cognitive level required to perform this task.

Let's take an example:

What proficiency as a teacher do you need and at which cognitive level must you attain in order to:

1. Construct a bulletin board.

No proficiency Slight proficiency Moderate proficiency Considerable proficiency Complete proficiency	Knowledge Comprehension Application Analysis or Synthesis Evaluation
1 2 3 4 5	1 2 3 4 5

This person in marking a "4" rating under performance felt that his job required considerable proficiency with this activity. He also felt that the cognitive level required of him in order to perform this task was at the application level due to the fact that he circled the "3".

Circle the choice which comes closest to representing your feeling. If your exact feeling is not found in one of the choices, pick the one which comes closest. Please do not leave out any items and do not spend too much time thinking on any one item. We are primarily concerned with how you feel.

If you have any questions, please ask the interviewer.

What proficiency as a teacher do you need and at which cognitive level must you attain in order to:

	No proficiency	Slight proficiency	Moderate proficiency	Considerable proficiency	Complete proficiency	Knowledge	Comprehension	Application	Analysis or Synthesis	Evaluation
1. Identify behavioral objectives for students in your class.	1	2	3	4	5	1	2	3	4	5
2. Organize field trips.	1	2	3	4	5	1	2	3	4	5
3. Establish evaluative criteria for student performance.	1	2	3	4	5	1	2	3	4	5
4. Compile a list of supplies needed for the academic year.	1	2	3	4	5	1	2	3	4	5
5. Administer subject matter diagnostic tests.	1	2	3	4	5	1	2	3	4	5
6. Assist in the development of policies regarding school-community relations.	1	2	3	4	5	1	2	3	4	5
7. Identify current professional trends.	1	2	3	4	5	1	2	3	4	5
8. Sequence performance goals for a course.	1	2	3	4	5	1	2	3	4	5
9. Direct students in gathering information from sources in the community.	1	2	3	4	5	1	2	3	4	5
10. Formulate a system of grading consistent with school policy.	1	2	3	4	5	1	2	3	4	5
11. Recommend reference books related to your subject that should be added to the library.	1	2	3	4	5	1	2	3	4	5
12. Maintain anecdotal records on students.	1	2	3	4	5	1	2	3	4	5
13. Utilize community resources to enrich instruction.	1	2	3	4	5	1	2	3	4	5
14. Express a philosophy relevant to the basic goals of the teaching profession.	1	2	3	4	5	1	2	3	4	5
15. Identify the unit topics for a course.	1	2	3	4	5	1	2	3	4	5
16. Direct students in instructing other students.	1	2	3	4	5	1	2	3	4	5

17. Appraise student performance in relation to instructional goals.	1 2 3 4 5	1 2 3 4 5
18. Construct a bulletin board.	1 2 3 4 5	1 2 3 4 5
19. Communicate with new and returning students during the summer.	1 2 3 4 5	1 2 3 4 5
20. Communicate with the community on the instructional program.	1 2 3 4 5	1 2 3 4 5
21. Maintain ethical standards expected of a professional educator.	1 2 3 4 5	1 2 3 4 5
22. Determine student goals.	1 2 3 4 5	1 2 3 4 5
23. Conduct group supervised study.	1 2 3 4 5	1 2 3 4 5
24. Devise self-evaluation techniques for use by students.	1 2 3 4 5	1 2 3 4 5
25. Be familiar with reference material in the library which is related to your subject.	1 2 3 4 5	1 2 3 4 5
26. Provide for student discussion of their career aspirations.	1 2 3 4 5	1 2 3 4 5
27. Participate in "open house" to familiarize members of the community with the school.	1 2 3 4 5	1 2 3 4 5
28. Exchange observational visits, innovations and ideas with other teachers.	1 2 3 4 5	1 2 3 4 5
29. Involve students in planning activities.	1 2 3 4 5	1 2 3 4 5
30. Direct students in applying problem-solving techniques.	1 2 3 4 5	1 2 3 4 5
31. Determine techniques for students to evaluate their own progress.	1 2 3 4 5	1 2 3 4 5
32. Be familiar with career opportunities in your subject area.	1 2 3 4 5	1 2 3 4 5
33. Promote parent involvement in school.	1 2 3 4 5	1 2 3 4 5
34. Support professional organizations through attendance and membership.	1 2 3 4 5	1 2 3 4 5
35. Determine learning experiences for a unit based upon individual differences.	1 2 3 4 5	1 2 3 4 5

36. Present information by the project method.	1 2 3 4 5	1 2 3 4 5
37. Engage in cooperative evaluation of achievement with students.	1 2 3 4 5	1 2 3 4 5
38. Devise a filing system for materials.	1 2 3 4 5	1 2 3 4 5
39. Recognize potential problems of a student.	1 2 3 4 5	1 2 3 4 5
40. Assist with community events.	1 2 3 4 5	1 2 3 4 5
41. Assist teachers who are new to the system.	1 2 3 4 5	1 2 3 4 5
42. Identify behavioral objectives of a lesson.	1 2 3 4 5	1 2 3 4 5
43. Promote class interaction.	1 2 3 4 5	1 2 3 4 5
44. Interpret the students' evaluation of instruction.	1 2 3 4 5	1 2 3 4 5
45. Conduct a personal conference for counseling a student.	1 2 3 4 5	1 2 3 4 5
46. Serve in community civic, service or social organizations.	1 2 3 4 5	1 2 3 4 5
47. Work with a team of professionals from the school on pertinent school problems.	1 2 3 4 5	1 2 3 4 5
48. Select methods of evaluating student attainment of lesson objectives.	1 2 3 4 5	1 2 3 4 5
49. Employ a variety of questioning strategies.	1 2 3 4 5	1 2 3 4 5
50. Formulate essay test items.	1 2 3 4 5	1 2 3 4 5
51. Uphold school standards of expected student behavior.	1 2 3 4 5	1 2 3 4 5
52. Confer with parents regarding their student's educational achievement.	1 2 3 4 5	1 2 3 4 5
53. Write a lesson plan.	1 2 3 4 5	1 2 3 4 5
54. Present a principle through a demonstration.	1 2 3 4 5	1 2 3 4 5
55. Administer teacher constructed tests.	1 2 3 4 5	1 2 3 4 5
56. Assist students in developing appropriate study habits.	1 2 3 4 5	1 2 3 4 5

57. Formulate acceptable standards of behavior with students.	1 2 3 4 5	1 2 3 4 5
58. Use self-analysis to evaluate one's professional abilities and limitations.	1 2 3 4 5	1 2 3 4 5
59. Assist in the selection of textbooks.	1 2 3 4 5	1 2 3 4 5
60. Provide special assignments for slower students.	1 2 3 4 5	1 2 3 4 5
61. Analyze tests for validity.	1 2 3 4 5	1 2 3 4 5
62. Provide and maintain record keeping, supply lists and records for the administration.	1 2 3 4 5	1 2 3 4 5
63. Establish communication patterns for exchanging student information with the guidance counselor.	1 2 3 4 5	1 2 3 4 5
64. Obtain informal feedback on the educational program through contacts with individuals in the community.	1 2 3 4 5	1 2 3 4 5
65. Develop original instructional materials such as charts, transparencies, etc.	1 2 3 4 5	1 2 3 4 5
66. Establish frames of reference to enable the students to understand a situation from several points of view.	1 2 3 4 5	1 2 3 4 5
67. Analyze tests for reliability.	1 2 3 4 5	1 2 3 4 5
68. Assist students with their problems by working cooperatively with health & welfare agencies.	1 2 3 4 5	1 2 3 4 5
69. Obtain information from parents relative to their expectations of the school.	1 2 3 4 5	1 2 3 4 5
70. Involve students in the preparation of instructional materials.	1 2 3 4 5	1 2 3 4 5
71. Present information through role-playing techniques.	1 2 3 4 5	1 2 3 4 5
72. Review student progress to assess effectiveness of instruction.	1 2 3 4 5	1 2 3 4 5
73. Carry out approved disciplinary action when warranted.	1 2 3 4 5	1 2 3 4 5

74. Work with other teachers to help students with individual problems.	1 2 3 4 5	1 2 3 4 5
75. Maintain working relationships with the faculty and administration.	1 2 3 4 5	1 2 3 4 5
76. Keep up to date through reading literature.	1 2 3 4 5	1 2 3 4 5
77. Involve students in planning a lesson.	1 2 3 4 5	1 2 3 4 5
78. Present information through individualized instruction.	1 2 3 4 5	1 2 3 4 5
79. Formulate, cooperatively with students, procedures for their participation in the evaluation of instruction.	1 2 3 4 5	1 2 3 4 5
80. Supervise students in the halls.	1 2 3 4 5	1 2 3 4 5
81. Arrange for the administration and interpretation of tests for specific students.	1 2 3 4 5	1 2 3 4 5
82. Assist in planning the objectives of the total school program.	1 2 3 4 5	1 2 3 4 5
83. Supervise student teachers.	1 2 3 4 5	1 2 3 4 5
84. Prepare ditto or mimeographed material for a lesson.	1 2 3 4 5	1 2 3 4 5
85. Illustrate with models and real objects.	1 2 3 4 5	1 2 3 4 5
86. Obtain information from fellow teachers and supervisory personnel regarding the quality of one's teaching.	1 2 3 4 5	1 2 3 4 5
87. Provide supervision of students during extra-curricular activities.	1 2 3 4 5	1 2 3 4 5
88. Present information to students on post-high school training and educational opportunities available to them.	1 2 3 4 5	1 2 3 4 5
89. Supervise aides, tutors or other para-professionals.	1 2 3 4 5	1 2 3 4 5

APPENDIX E

February 17, 1971

Dr. Edwin E. Goodling
Parkrose Heights Jr. High School
12456 N.E. Brazee Street
Portland, Oregon 97230

Dear Dr. Goodling:

The School of Education, Oregon State University, is in the process of developing criteria for a modification of pre-service teacher education programs. We are identifying basic competencies required of junior high school teachers in the hopes that this information may provide a foundation for curriculum modifications to our programs. We are contacting selected junior high schools in the state of Oregon to determine whether or not they might be available to participate with us in this process.

Teachers from participating junior high schools will be randomly selected and asked to complete a questionnaire in the presence of an interviewer from our institution. A summary of the findings will be made available to all participants, however, the names of those participating will not be identified in the reporting procedures.

Dr. Carvel Wood, of our staff, is aware of our efforts and suggested that I contact you concerning the possible participation of Parkrose Heights Jr. High School. We would be most pleased if your school would be able to participate. I am enclosing a self-addressed response card to indicate whether or not your school will be able to participate and I should be looking forward to hearing from you at your convenience.

Sincerely,

Richard E. Gardner
Curriculum Specialist

Encl.

APPENDIX F

Participating Junior High Schools

- School "A" Judson Junior High School
Salem, Oregon

Principal, Mr. Henry Ercolini
- School "B" Parkrose Heights Junior High School
Portland, Oregon

Principal, Dr. Edwin Goodling
- School "C" Thurston Junior High School
Springfield, Oregon

Principal, Mr. Gary Connor
- School "D" Western View Junior High School
Corvallis, Oregon

Mr. Monty Markham, Acting Principal

APPENDIX G

Coding of Data Cards

Data for each of the 84 respondents was coded on data cards for computer statistical analysis procedures.

A) Card 1

<u>Column</u>	<u>Code</u>
1-3	A01 to A84. Represents one of the 84 junior high school teachers.
4	Represents one of the four junior high schools.
5-6	1 to 14. Represents one of fourteen subject matter areas in which the respondents taught.
7	1. Data card number one.
8-80	Data. Response values of 1,2,3,4, or 5 which indicated the importance assigned to 73 competencies.

B) Card 2

<u>Column</u>	<u>Code</u>
1-6	Same as above.
7	2. Data card number 2.
8-24	Data. Response values of 1,2,3,4, or 5 which indicated the importance assigned to 16 competencies.

C) Card 3

<u>Column</u>	<u>Code</u>
1-6	Same as above.
7	1. Data card number one.
8-80	Data. Response values of 1,2,3,4, or 5 which indicated the cognitive level assigned to competencies.

D) Card 4

<u>Column</u>	<u>Code</u>
1-6	Same as above.
7	2. Data card number two.
8-24	Data. Response values of 1,2,3,4, or 5 which indicated the cognitive level assigned to competencies.

APPENDIX H

R-Mode Factor Analysis Control Cards

```
⌘JOB,700105,4136,RICHARD E. GARDNER
⌘TIME=10000
⌘MFBLKS=500
⌘COPY, =80
*GO
*DATA, CARDS=2, ITEM=89, OUTPUT.
*CORR,RMODE,DIAG=ONE,PRINTCUT=BOTH, OUTPUT
*FACTOR,NUMFAC=6,EIGEN,OUTPUT.
*OUTPUT,VARI, NONSTD, OUTPUT
*TITLE PROFEDCOMP
*LABEL, S01$S02$S03$ . . . . .S89$
*FORMAT (7X,73F1.0/7X,16F1.0)
*END
Data cards inserted here
***
⌘⌘
⌘REWIND, 80
⌘FAST
⌘LOGOFF
```

APPENDIX I

Control Cards for One-way Analysis of Variance

⌘JOB,708105,4136RICHARD E. GARDNER

⌘TIME=300

⌘MFBLKS=300

⌘*ANOVA12

04731 60 SCHOOLS TAXONOMIES

(3X,11,3X,73F1.0/)

Data cards inserted here

⌘⌘

⌘LOGOFF

APPENDIX J. Ten highest ranked professional education competencies based upon mean scores. (Importance)

<u>MEAN RANKING</u>	<u>COMPETENCY NUMBER</u>	<u>COMPETENCY</u>	<u>MEAN</u>	<u>FACTOR</u>
1	3	Establish evaluative criteria for student performance.	4.214	I
2	17	Appraise student performance in relation to instructional goals.	4.167	I
3	22	Determine student goals.	4.107	I
4	39	Recognize potential problems of student.	4.059	I
5	58	Use self-analysis to evaluate one's professional abilities and limitations.	4.024	* I
6	66	Establish frames of reference to enable the students to understand a situation from several points of view.	4.012	* I
7	43	Promote class interaction.	3.976	I
8	78	Present information through individualized instruction.	3.952	I
9	57	Formulate acceptable standards of behavior with students.	3.940	III
10	48	Select methods of evaluating student attainment of lesson objectives.	3.928	I

* Spurious Factor

APPENDIX K. Eleven lowest ranked professional education competencies based upon mean scores. (Importance)

<u>MEAN RANKING</u>	<u>COMPETENCY NUMBER</u>	<u>COMPETENCY</u>	<u>MEAN</u>	<u>FACTOR</u>
79.5	38	Devise a filing system for materials.	2.762	* V
79.5	69	Analyze tests for reliability.	2.762	II
81	81	Arrange for the administration and interpretation of tests for specific students.	2.702	* II
82	62	Provide and maintain record keeping, supply lists and records for the administration.	2.690	* V
83	80	Supervise students in the halls.	2.667	* V
84	12	Maintain anecdotal records on students.	2.583	* II
85.5	18	Construct a bulletin board.	2.571	* VI
85.5	68	Assist students with their problems by working cooperatively with health and welfare agencies.	2.571	* II
87	19	Communicate with new and returning students during the summer.	2.464	* II
88	46	Serve in community civic, service or social organizations.	2.238	V
89	40	Assist with community events.	2.226	II

* Spurious Factor

APPENDIX L. The twelve highest ranked professional education competencies based upon cognitive median scores.

<u>MEDIAN RANK</u>	<u>COMPETENCY NUMBER</u>	<u>COMPETENCY</u>	<u>MEDIAN</u>	<u>FACTOR</u>
1	17	Appraise student performance in relation to instructional goals.	4.776	* I
2	58	Use self-analysis to evaluate one's professional abilities and limitations.	4.763	* I
3	3	Establish evaluative criteria for student performance.	4.709	* I
4	48	Select methods of evaluating student attainment of lesson objectives.	4.676	* I
5	72	Review student progress to assess effectiveness of instruction.	4.643	I
6	22	Determine student goals.	4.587	I
7.5	31	Determine techniques for students to evaluate their own progress.	4.567	I
7.5	59	Assist in the selection of textbooks.	4.567	* II
9	83	Supervise student teachers.	4.542	* IV
11	1	Identify behavioral objectives for students in your class.	4.523	I
11	37	Engage in cooperative evaluation of achievement with students.	4.523	I
11	61	Analyze tests for validity.	4.523	I

*Spurious competency

APPENDIX M. Ten lowest ranked professional education competencies based upon cognitive median scores.

<u>MEDIAN RANK</u>	<u>COMPETENCY NUMBER</u>	<u>COMPETENCY</u>	<u>MEDIAN</u>	<u>FACTOR</u>
80	80	Supervise students in the halls.	2.775	III
81	68	Assist students with their problems by working cooperatively with health and welfare agencies.	2.706	IV
82	32	Be familiar with career opportunities in your subject area.	2.682	* I
83	12	Maintain anecdotal records on students.	2.680	III
84	40	Assist with community events.	2.675	IV
85	62	Provide and maintain record keeping, supply lists, and records for the administration.	2.672	III
86	34	Support professional organizations through attendance and membership.	2.656	* IV
87	19	Communicate with new and returning students during the summer.	2.571	* IV
88	69	Obtain information from parents relative to their expectations of the school.	2.548	* II
89	46	Serve in community civic, service or social organizations.	2.500	IV

*Spurious competency

APPENDIX N

Results of Analysis of Variance on Competency Proficiency Levels

COMPETENCY	COMPUTED F	HYPOTHESIS	COMPETENCY	COMPUTED F	HYPOTHESIS
1	3.88	Retain	43	1.25	Retain
2	1.37	"	44	.93	"
3	.90	"	45	.48	"
4	1.24	"	46	.20	"
5	.38	"	47	.96	"
6	1.52	"	48	1.19	"
7	2.06	"	49	4.63	Reject
8	.97	"	50	1.81	Retain
9	2.63	"	51	1.00	"
10	.47	"	52	.10	"
11	.30	"	53	4.63	Reject
12	.90	"	54	1.94	Retain
13	.34	"	55	1.13	"
14	1.30	"	56	.95	"
15	3.17	"	57	.47	"
16	.96	"	58	.29	"
17	.30	"	59	.63	"
18	1.07	"	60	2.06	"
19	3.78	"	61	1.37	"
20	1.16	"	62	.40	"
21	1.37	"	63	.36	"
22	.12	"	64	.71	"
23	2.41	"	65	1.59	"
24	.03	"	66	1.15	"
25	.55	"	67	.43	"
26	3.31	"	68	.05	"
27	1.14	"	69	1.04	"
28	1.45	"	70	1.49	"
29	.69	"	71	4.28	Reject
30	1.05	"	72	1.40	Retain
31	.02	"	73	.56	"
32	.03	"	74	2.01	"
33	4.38	Reject	75	2.57	"
34	.53	Retain	76	1.76	"
35	.07	"	77	.58	"
36	1.77	"	78	3.17	"
37	.11	"	79	.72	"
38	1.74	"	80	2.62	"
39	.09	"	81	1.08	"
40	1.41	"	82	2.14	"
41	.81	"	83	.37	"
42	.43	"	84	4.45	Reject

APPENDIX N (Continued)

COMPETENCY	COMPUTED F	HYPOTHESIS
85	4.50	Reject
86	.72	Retain
87	5.86	Reject
88	1.83	Retain
89	1.08	"

The level of significance was the .01 level. The critical region with df 3, 80, $>F = 4.04$.

The least significant difference test was used to compare means for the rejected items.

APPENDIX O

Test of Least Significant Difference

Competency 33-Promote parent involvement in school. Computed F = 4.3793

School "A" mean = 2.952

School "B" mean = 2.667 LSD .05 = .606

School "C" mean = 3.476

School "D" mean = 2.428

There is a significant difference in the means between School "C" and School "B" and between School "C" and School "D".

Competency 49-Employ a variety of questioning strategies.

Computed F = 4.627

School "A" mean = 3.905

School "B" mean = 3.000

LSD .05 = .574

School "C" mean = 3.571

School "D" mean = 3.952

There is a significant difference in the means between School "A" and School "B" and between School "D" and School "B".

Competency 53-Write a lesson plan.

Computed F = 4.630

School "A" mean = 3.762

School "B" mean = 2.619 LSD .05 = .665

School "C" mean = 3.286

School "D" mean = 3.619

There is a significant difference between the mean scores for School "C" and School "B". Schools "A" and "D" have mean scores which are superior to the mean scores for Schools "B" and "C".

APPENDIX 0 (Continued)

Competency 71 - Present information through role-playing techniques.

Computed F = 4.2776

School "A" mean = 2.857

School "B" mean = 2.381 LSD .05 = .706

School "C" mean = 3.428

School "D" mean = 3.476

There is a significant difference between the mean scores for School "C" and School "B" and between the mean scores for School "D" and School "B".

Competency 84 - Prepare ditto or mimeographed material for a lesson.

Computed F = 4.451

School "A" mean = 2.238

School "B" mean = 3.333 LSD .05 = .756

School "C" mean = 3.095

School "D" mean = 3.523

There is a significant difference between the mean scores for School "C" and School "A". The mean scores for School "A" and "D" are superior to the mean score of School "C".

Competency 85 - Illustrate with models and real objects.

Computed F = 4.503

School "A" mean = 3.190

School "B" mean = 3.428 LSD .05 = .611

School "C" mean = 3.143

School "D" mean = 4.143

There is a significant difference between the mean scores for School "D" and School "A", and the mean scores for School "D" and School "C".

APPENDIX P

Results of Cognitive Level Q-Mode Analysis

<u>Teacher number</u>	<u>Factor loading</u>	<u>Teacher number</u>	<u>Factor loading</u>	<u>Teacher number</u>	<u>Factor loading</u>
01	.918	29	.961	57	.954
02	.940	30	.911	58	.941
03	.962	31	.976	59	.981
04	.984	32	.938	60	.980
05	.972	33	.941	61	.982
06	.964	34	.932	62	.971
07	.979	35	.939	63	.950
08	.963	36	.971	64	.969
09	.911	37	.963	65	.967
10	.954	38	.977	66	.960
11	.904	39	.980	67	.984
12	.920	40	.959	68	.957
13	.960	41	.969	69	.970
14	.903	42	.943	70	.974
15	.974	43	.972	71	.971
16	.955	44	.966	72	.946
17	.952	45	.967	73	.967
18	.951	46	.922	74	.947
19	.907	47	.958	75	.921
20	.901	48	.862	76	.939
21	.981	49	.948	77	.968
22	.983	50	.953	78	.947
23	.962	51	.969	79	.976
24	.968	52	.881	80	.939
25	.954	53	.936	81	.947
26	.972	54	.962	82	.963
27	.958	55	.912	83	.960
28	.922	56	.911	84	.954

APPENDIX Q

Results of Importance Level Q-Mode Analysis

<u>Teacher number</u>	<u>Factor loading</u>	<u>Teacher number</u>	<u>Factor loading</u>	<u>Teacher number</u>	<u>Factor loading</u>
01	.932	29	.969	57	.971
02	.968	30	.942	58	.957
03	.982	31	.976	59	.982
04	.977	32	.942	60	.988
05	.974	33	.970	61	.981
06	.975	34	.943	62	.976
07	.985	35	.965	63	.958
08	.982	36	.972	64	.979
09	.920	37	.964	65	.979
10	.963	38	.950	66	.977
11	.948	39	.938	67	.981
12	.953	40	.955	68	.951
13	.954	41	.951	69	.960
14	.951	42	.936	70	.978
15	.981	43	.981	71	.979
16	.971	44	.984	72	.947
17	.971	45	.959	73	.952
18	.970	46	.950	74	.958
19	.948	47	.978	75	.942
20	.888	48	.969	76	.939
21	.981	49	.961	77	.965
22	.967	50	.951	78	.973
23	.958	51	.985	79	.975
24	.980	52	.901	80	.979
25	.955	53	.971	81	.947
26	.973	54	.985	82	.948
27	.965	55	.978	83	.971
28	.952	56	.962	84	.952

APPENDIX R

Results of Median Tests on Cognitive Levels

COMPETENCY	MEDIAN TEST		COMPETENCY	MEDIAN TEST	
	SCORE	HYPOTHESIS		SCORE	HYPOTHESIS
1	11.959	Reject	43	5.524	Retain
2	2.845	Retain	44	1.248	"
3	.125	"	45	5.139	"
4	1.892	"	46	3.810	"
5	.395	"	47	1.929	"
6	2.106	"	48	.232	"
7	4.037	"	49	2.904	"
8	4.065	"	50	.431	"
9	1.082	"	51	.474	"
10	4.243	"	52	2.058	"
11	.048	"	53	1.500	"
12	1.879	"	54	7.500	"
13	3.733	"	55	2.696	"
14	1.208	"	56	.748	"
15	6.270	"	57	4.068	"
16	1.616	"	58	.278	"
17	.123	"	59	.144	"
18	6.711	"	60	4.065	"
19	.686	"	61	1.668	"
20	.637	"	62	.566	"
21	2.569	"	63	.395	"
22	.23	"	64	6.938	"
23	8.786	"	65	3.960	"
24	.905	"	66	7.742	"
25	1.697	"	67	.460	"
26	1.782	"	68	.081	"
27	.441	"	69	.493	"
28	.830	"	70	4.941	"
29	.446	"	71	1.317	"
30	6.222	"	72	.177	"
31	.127	"	73	1.538	"
32	1.167	"	74	10.335	"
33	.566	"	75	3.245	"
34	.730	"	76	3.076	"
35	1.675	"	77	.918	"
36	.000	"	78	3.029	"
37	.176	"	79	1.847	"
38	1.478	"	80	.819	"
39	.048	"	81	.665	"
40	1.120	"	82	2.265	"
41	5.292	"	83	.909	"
42	14.060	Reject	84	6.094	"

APPENDIX R (Continued)

<u>COMPETENCY</u>	<u>MEDIAN TEST SCORE</u>	<u>HYPOTHESIS</u>
85	7.925	Retain
86	3.837	"
87	4.131	"
88	.825	"
89	3.955	"

The level of significance was the .01 level. The critical region with $df= 3$, $\chi^2=11.345$.

APPENDIX S. Factor I - Instruction (Proficiency)

ITEM	COMPETENCIES	FACTOR LOADING	\bar{X}	<i>S</i>	\bar{X} RANK
1 Planning	Identify behavioral objectives for students in your class.	.56505	3.8571	.82349	17.5
3 Evaluation	Establish evaluative criteria for student performance.	.54063	4.2142	.71256	1
8 Planning	Sequence performance goals for a course.	.50768	3.8928	1.0298	13
17 Evaluation	Appraise student performance in relation to instructional goals.	.51190	4.1667	.7578	2
22 Planning	Determine student goals.	.57650	4.1071	.77642	3
24 Evaluation	Devise self-evaluation techniques for use by students.	.73525	3.6547	1.1247	27
30 Execution	Direct students in applying problem-solving techniques.	.51717	3.8690	.86120	15.5
31 Evaluation	Determine techniques for students to evaluate their own progress.	.73122	3.7381	.95840	22
35 Planning	Determine learning experiences for a unit based upon individual differences.	.56155	3.8571	.92022	17.5
37 Evaluation	Engage in cooperative evaluation of achievement with students.	.68737	3.7619	.90005	20

APPENDIX S (Continued)

ITEM	COMPETENCIES	FACTOR LOADING	\bar{X}	<i>S</i>	\bar{X} RANK
39	Recognize potential problems of a student.	.54965	4.0595	.68286	4
42 Planning	Identify behavioral objectives of a lesson.	.54303	3.7738	.98606	19
43 Execution	Promote class interaction.	.53554	3.9762	.79116	7
44 Evaluation	Interpret the students' evaluation of instruction.	.60730	3.6667	.92271	25.5
48 Evaluation	Select methods of evaluating student attainment of lesson objectives.	.63853	3.9286	.88883	10
49 Execution	Employ a variety of questioning strategies.	.53062	3.6071	.99417	29.5
72 Evaluation	Review student progress to assess effectiveness of instruction.	.58707	3.6786	.98373	24
78 Execution	Present information through individualized instruction.	.52900	3.9523	.86296	8
79 Evaluation	Formulate, cooperatively with students, procedures for their participation in the evaluation of instruction.	.50245	3.2619	1.1525	57.5

APPENDIX S (Continued)

ITEM	COMPETENCIES	FACTOR LOADING	\bar{X}	<i>S</i>	\bar{X} RANK
	<u>SPURIOUS COMPETENCIES</u>				
16	Direct students in instructing other students.	.41797	3.607	.970	30.5
28	Exchange observational visits, innovations and ideas with other teachers.	.35207	3.619	.943	29
29	Involve students in planning activities.	.42541	3.559	1.010	35
45	Conduct a personal conference for counseling a student.	.43006	3.690	.969	22.5
56	Assist students in developing appropriate study habits.	.38118	3.536	.975	36.5
58	Use self-analysis to evaluate one's professional abilities and limitations.	.46877	4.024	.957	5
60	Provide special assignments for slower students.	.48925	3.750	.774	21
61	Analyze tests for validity.	.42738	3.524	1.187	38
66	Establish frames of reference to enable the students to understand a situation from several points of view.	.49232	4.012	.752	6
67	Analyze tests for reliability.	.39951	3.369	1.239	48
71	Present information through role-playing techniques.	.42809	3.250	1.074	59.5
77	Involve students in planning a lesson.	.37246	3.036	1.217	69

APPENDIX T. Factor II - School-Community Relations (Proficiency)

ITEM	COMPETENCIES	FACTOR LOADING	\bar{X}	<i>S</i>	\bar{X} RANK
9 Community	Direct students in gathering information from sources in the community.	.51461	2.9643	.98722	72
13 Community	Utilize community resources to enrich instruction.	.53989	3.0595	.97377	65.5
33 Parent	Promote parent involvement in school.	.60857	2.8810	1.0460	75
40 Community	Assist with community events.	.57919	2.12262	.92295	89
41 Intra-School	Assist teachers who are new to the system.	.52007	3.1190	1.0574	64
52 Parent	Confer with parents regarding their student's educational achievement.	.50174	3.5714	.97296	33
63 Intra-School	Establish communication patterns for exchanging student information with the guidance counselor.	.53707	3.2500	.94263	59.5
69 Parent	Obtain information from parents relative to their expectations of the school.	.62929	2.7619	1.0484	79.5
74 Intra-School	Work with other teachers to help students with individual problems.	.54563	3.6905	.89141	22.5
83 Intra-School	Supervise student teachers.	.55716	3.3928	1.3445	47

APPENDIX T (Continued)

ITEM	COMPETENCIES	FACTOR LOADING	\bar{X}	<i>S</i>	\bar{X} RANK
	<u>SPURIOUS COMPETENCIES</u>				
2	Organize field trips.	.47536	2.809	1.156	77
12	Maintain anecdotal records on students.	.44321	2.583	1.204	84
19	Communicate with new and returning students during the summer.	.44536	2.464	1.217	87
47	Work with a team of professionals from the school on pertinent school problems.	.43120	3.476	1.035	41
64	Obtain informal feedback on the educational program through contacts with individuals in the community.	.46228	2.821	1.161	76
68	Assist students with their problems by working cooperatively with health and welfare organizations.	.45753	2.571	.960	85.5
70	Involve students in the preparation of instructional materials.	.41576	3.178	1.054	61.5
81	Arrange for the administration and interpretation of tests for specific students.	.39333	2.702	1.170	81
82	Assist in planning the objectives of the total school program.	.44416	3.286	1.178	55.5

APPENDIX T (Continued)

ITEM	COMPETENCIES	FACTOR LOADING	\bar{X}	<i>s</i>	\bar{X} RANK
86	Obtain information from fellow teachers and supervisory personnel regarding the quality of one's teaching.	.36732	3.262	1.152	57.5
88	Present information to students on post-high school training and educational opportunities available.	.48043	2.904	1.057	73
89	Supervise aides, tutors or other para-professionals.	.44397	3.333	1.271	51

APPENDIX U. Factor III - Special Instructional Strategies (Proficiency)

ITEM	COMPETENCIES	FACTOR LOADING	\bar{X}	<i>S</i>	\bar{X} RANK
4	Compile a list of supplies needed for the academic year.	.63037	3.3095	1.1405	54
15	Identify the unit topics for a course.	.51979	3.4286	1.1331	44.5
36	Present information by the project method.	.57472	3.1786	1.1633	61.5
54	Present a principle through a demonstration.	.50799	3.9048	.87287	12
57	Formulate acceptable standards of behavior with students.	.50441	3.9405	.82653	9
75	Maintain working relationships with the faculty and administration	.59853	3.1967	.89453	11
76	Keep up to date through reading literature.	.64696	3.5000	.88495	39
85	Illustrate with models and real objects.	.64210	3.4762	1.0582	41
<u>SPURIOUS COMPETENCIES</u>					
65	Develop original instructional materials such as charts, transparencies, etc.	.48108	3.571	.868	33
73	Carry out approved discipline action when warranted.	.45128	3.678	.984	25

APPENDIX V. Factor IV - Philosophy and Policy (Proficiency)

ITEM	COMPETENCIES	FACTOR LOADING	\bar{X}	<i>S</i>	\bar{X} RANK
6	Assist in the development of policies regarding school-community relations.	.59151	2.9048	.97708	74
11	Recommend reference books related to your subject that should be added to the library.	.53149	3.3214	.93346	53
14	Express a philosophy relevant to the basic goals of the teaching profession.	.60987	3.5714	1.1437	33
50	Formulate essay test items.	.54669	3.0476	1.1075	67.5
<u>SPURIOUS COMPETENCIES</u>					
5	Administer subject matter diagnostic tests.	.29161	3.024	1.161	70
7	Identify current professional trends.	.46175	3.345	1.024	49.5
20	Communicate with the community on the instructional program.	.41603	3.345	1.092	49.5
23	Conduct group supervised study.	.40185	3.000	1.212	71
26	Provide for student discussion of their career aspirations.	.46157	3.059	.936	65.5
53	Write a lesson plan.	.36825	3.321	1.153	52
59	Assist in the selection of textbooks.	.29560	3.536	1.058	36.5

APPENDIX W. Factor V - Professional Behavior (Proficiency)

ITEM	COMPETENCIES	FACTOR LOADING	\bar{X}	<i>S</i>	\bar{X} RANK
21	Maintain ethical standards expected of a professional educator.	.55157	3.8690	1.1383	15.5
34	Support professional organizations through attendance and membership.	.58945	2.7976	1.2201	78
46	Serve in community civic, service or social organizations.	.52762	2.2380	1.0485	88
55	Administer teacher constructed tests.	.59241	3.2857	1.1778	55.5
<u>SPURIOUS COMPETENCIES</u>					
10	Formulate a system of grading consistent with school policy.	.36381	3.464	.975	43
38	Devise a filing system for materials.	.48498	2.762	1.168	79.5
62	Provide and maintain record keeping, supply lists and records for the administration.	.37674	2.690	1.161	82
80	Supervise students in the halls.	.30246	2.667	1.057	83
84	Prepare ditto or mimeographed material for a lesson.	.49336	3.048	1.307	67.5
87	Provide supervision of students during extra-curricular activities.	.46060	3.143	1.132	63

APPENDIX X. Factor VI - Ancillary Knowledge (Proficiency)

ITEM	COMPETENCIES	FACTOR LOADING	\bar{X}	<i>u</i>	\bar{X} RANK
25	Be familiar with reference material in the library which is related to your subject.	.56161	3.4286	.98526	44.5
32	Be familiar with career opportunities in your subject area.	.59924	3.4762	1.0352	41
51	Uphold school standards of expected student behavior.	.57590	3.6667	.92272	25.5
<u>SPURIOUS COMPETENCIES</u>					
18	Construct a bulletin board.	.49147	2.571	.960	85.5
27	Participate in "open house" to familiarize members of the community with the school.	.45941	3.404	.983	46

APPENDIX Y - Factor I - Instruction (Cognitive Domain)

ITEM	COMPETENCY	FACTOR LOADING	MEDIAN	QUARTILE DEVIATION	MEDIAN RANK
1 Planning	Identify behavioral objectives for students in your class.	.46659	4.523	.794	11
8 Planning	Sequence performance goals for a course.	.55275	4.196	.825	19.5
14	Express a philosophy relevant to the basic goals of the teaching profession.	.52169	4.214	1.224	18
23 Execution	Conduct group supervised study.	.45016	3.139	.708	66
30 Execution	Direct students in applying problem-solving techniques.	.68724	4.056	.817	25.5
35 Planning	Determine learning experiences for a unit based upon individual differences.	.51623	4.375	.731	14
37 Evaluation	Engage in cooperative evaluation of achievement with students.	.67952	4.523	.732	11
39	Recognize potential problems of a student.	.46670	4.333	.650	15
42 Planning	Identify behavioral objectives of a lesson.	.58742	4.083	.891	24
43 Execution	Promote class interaction.	.67847	3.900	.742	32.5
49 Execution	Employ a variety of questioning strategies.	.53104	3.870	.842	34

APPENDIX Y (Continued)

ITEM	COMPETENCY	FACTOR LOADING	MEDIAN	QUARTILE DEVIATION	MEDIAN RANK
50	Formulate essay test items.	.46350	3.364	1.051	49
53 Planning	Write a lesson plan.	.50414	3.500	1.063	43.5
56	Assist students in developing appropriate study habits.	.44982	3.409	.827	46
61	Analyze tests for validity.	.50734	4.523	.975	11
72 Evaluation	Review student progress to assess effectiveness of instruction.	.47562	4.643	.617	5
78 Execution	Present information through individualized instruction.	.57254	3.974	.912	29.5
<u>SPURIOUS FACTORS</u>					
3	Establish evaluative criteria for student performance.	.31625	4.708	.519	3
5	Administer subject matter diagnostic tests.	.28193	3.260	1.168	56
7	Identify current professional trends.	.34672	3.340	.886	51
10	Formulate a system of grading consistent with school policy.	.18325	3.583	1.013	41
11	Recommend reference books related to your subject that should be added to the library.	.21487	3.455	1.096	45

APPENDIX Y (Continued)

ITEM	COMPETENCIES	FACTOR LOADING	MEDIAN	QUARTILE DEVIATION	MEDIAN RANK
15	Identify the unit topics for a course.	.37129	3.350	1.196	50
17	Appraise student performance in relation to instructional goals.	.38329	4.776	.498	1
22	Determine student goals.	.419740	4.587	.677	6
24	Devise self-evaluation techniques for use by students.	.29170	4.455	.744	13
25	Be familiar with reference material in the library which is related to your subject.	.35666	3.109	1.218	67
26	Provide for student discussion of their career aspirations.	.33160	2.923	.900	76
28	Exchange observational visits, innovations, and ideas with other teachers.	.35348	4.038	1.039	27
29	Involve students in planning activities.	.29032	3.860	.882	35
32	Be familiar with career opportunities in your subject area.	.39409	2.682	1.293	82
47	Work with a team of professionals from the school on pertinent school problems.	.44339	3.833	.993	36
48	Select methods of evaluating student attainment of lesson objectives.	.38492	4.676	.669	4
58	Use self-analysis to evaluate one's professional abilities and limitations.	.44058	4.763	.547	2

APPENDIX Y (Continued)

ITEM	COMPETENCIES	FACTOR LOADING	MEDIAN	QUARTILE DEVIATION	MEDIAN RANK
60	Provide special assignments for slower students.	.43054	4.231	.771	17
63	Establish communication patterns for exchanging information with the guidance counselor.	.36073	3.200	.816	60
67	Analyze tests for reliability	.28449	3.978	1.067	29.5
77	Involve students in planning a lesson.	.22253	3.403	.796	47
79	Formulate, cooperatively with students, procedures for their participation in the evaluation of instruction.	.36662	3.938	1.094	31
82	Assist in planning the objectives of the total school program.	.41295	3.980	1.047	28

APPENDIX Z. Factor II - School-Community Relations (Cognitive Domain)

ITEM	COMPETENCY	FACTOR LOADING	MEDIAN	QUARTILE DEVIATION	MEDIAN RANK
9 Community	Direct students in gathering information from sources in the community.	.44564	3.028	.700	74
13 Community	Utilize community resources to enrich instruction.	.56630	3.176	.767	63.5
20 Community	Communicate with the community on the instructional program.	.48004	3.241	.953	57
27 Community	Participate in "open house" to familiarize members of the community with the school.	.47126	3.286	.839	55
44	Interpret the students' evaluation of instruction.	.48510	4.167	.832	21
52 Parent	Confer with parents regarding their student's educational achievement.	.57762	4.286	1.009	16
57	Formulate acceptable standards of behavior with students.	.48990	4.176	.825	19.5
65	Develop original instructional materials such as charts, transparencies, etc.	.44538	3.611	.735	40
66	Establish frames of reference to enable the students to understand a situation from several points of view.	.59450	4.118	.638	22
69 Parent	Obtain information from parents relative to their expectations of the school.	.55045	2.548	.886	88

APPENDIX Z - (Continued)

ITEM	COMPETENCY	FACTOR LOADING	MEDIAN	QUARTILE DEVIATION	MEDIAN RANK
73	Carry out approved disciplinary action when warranted.	.48533	3.395	.925	48
Intra- school 74	Work with other teachers to help students with individual problems.	.51955	4.100	.905	23
Intra- school 75	Maintain working relationships with the faculty and administration.	.51636	3.563	.914	42
Intra-school 89	Supervise aides, tutors or other para-professionals.	.50881	3.500	1.063	43.5
<u>SPURIOUS COMPETENCY</u>					
2	Organize field trips.	.38410	3.179	1.162	62
12	Maintain anecdotal records on students.	.39702	2.690	1.109	83
16	Direct students in instructing other students.	.41467	3.316	.806	54
18	Construct a bulletin board.	.33435	2.890	.644	78
21	Maintain ethical standards expected of a professional educator.	.33806	3.700	1.030	38
36	Present information by the project method.	.37478	3.086	1.000	71
38	Devise a filing system for materials.	.20647	2.894	.994	77
41	Assist teachers who are new to the system.	.40519	3.056	.901	72

APPENDIZ Z (Continued)

ITEM	SPURIOUS COMPETENCY	FACTOR LOADING	MEDIAN	QUARTILE DEVIATION	MEDIAN RANK
45	Conduct a personal conference for counseling a student.	.42096	4.056	.911	25.5
59	Assist in the selection of textbooks.	.26289	4.567	.921	7.5
64	Obtain informal feedback on the educational program through contacts with individuals in the community.	.35788	3.042	1.139	73
70	Involve students in the preparation of instructional materials.	.42484	3.333	.797	52
71	Present information through role-playing techniques.	.31032	3.093	.980	69.5
86	Obtain information from fellow teachers and supervisory personnel regarding the quality of one's teaching.	.36874	3.900	1.098	32.5

APPENDIX AA - Factor III - Instructional Related Strategies (Cognitive Domain)

ITEM	COMPETENCY	FACTOR LOADING	MEDIAN	QUARTILE DEVIATION	MEDIAN RANK
4	Compile a list of supplies needed for the academic year.	.47713	3.145	.907	65
54	Administer teacher constructed tests.	.62539	3.176	.993	53.5
55	Present a principle through a demonstration.	.56442	3.688	.928	39
80	Supervise students in the halls.	.46128	2.775	.923	80
84	Prepare ditto or mimeographed material for a lesson.	.55416	3.000	1.082	75
85	Illustrate with models and real objects.	.59648	3.237	.951	58
87	Provide supervision of students during extra-curricular activities.	.49415	3.096	.537	68
<u>SPURIOUS COMPETENCIES</u>					
51	Uphold school standards of expected student behavior.	.37996	3.217	.932	59
62	Provide and maintain record keeping, supply lists and records for the administration.	.27186	2.672	.992	85
76	Keep up to date through reading literature.	.38465	3.310	1.168	53
81	Arrange for the administration and interpretation of tests for specific students.	.38843	3.093	1.179	69.5

APPENDIX BB - Factor IV - Teacher-Community Interaction (Cognitive Domain)

ITEM	COMPETENCY	FACTOR LOADING	MEDIAN	QUARTILE DEVIATION	MEDIAN RANK
33	Promote parent involvement in school.	.62997	2.794	.823	79
40	Assist with community events.	.59617	2.675	.850	84
46	Serve in community civic, service or social organizations.	.58955	2.500	.828	89
68	Assist students with their problems by working cooperatively with health and welfare agencies.	.44668	2.706	.801	81
<u>SPURIOUS COMPETENCIES</u>					
19	Communicate with new and returning students during the summer.	.41026	2.571	.954	87
34	Support professional organizations through attendance and membership.	.34705	2.656	.851	86
83	Supervise student teachers.	.42456	4.545	1.034	9
88	Present information to students on post-high school training and educational opportunities available to them.	.32991	2.786	.956	37