

AN ABSTRACT OF THE THESIS OF

RICHARD LORN SMITH for the DOCTOR OF EDUCATION  
(Name) (Degree)  
in EDUCATION presented on June 28, 1971  
(Department) (Date)

Title: A STUDY TO DETERMINE THE PERCEPTIONS OF THE COMPETENCIES  
NEEDED BY ADULT BASIC EDUCATION TEACHERS  
*Redacted for Privacy*

Abstract approved: \_\_\_\_\_  
Keith Goldhammer

This study was an investigation to determine the perceived competency needs of selected adult basic education teachers. For this purpose the 2-way analysis of variance design was chosen with a 2 x 3 model being utilized.

The instrument used was a questionnaire with 100 competencies listed. The subjects were asked to rate each of the competencies on a Likert-type (five-point) response scale. The F-statistic provided the analysis of variance procedures with evidence of hypotheses acceptance or rejection. The .05 probability level was used for testing the individual hypotheses. The F-statistic was formulated according to the fixed model and the sources of variations aligned themselves as follows:

Sources of variations	DF	SS	MS	f
States	2	SSA	SSA/2	MSA/MSD
Certification levels	1	SSB	SSB/1	MSB/MSD
Interaction	2	SSC	SSC/2	MSC/MSD
Error	54	SSD	SSD/54	
Total	59			

The subjects of the study were randomly selected teachers of adult basic education from the states of Oregon, Washington, and Idaho. In order to construct the analysis of variance matrix 10 teachers were selected with elementary certification and 10 with secondary certification in each of the states studied.

The null hypotheses for the study were as follows:

1. There are no significant differences in perceptions among the teachers in the three states regarding needed competencies for adult basic education teachers.
2. There are no significant differences in perceptions among the teachers coming from different previous levels of educational experience.
3. There are no significant differences in interaction effect.

The results of the hypotheses testing were as follows:

1. Generally, there were no differences in the perceptions of adult basic education teachers as to their competency needs in the three states studied, as indicated by the mean scores.
2. There was only one competency that indicated certification had any effect on teachers judgments of its relative importance.
3. Generally, there were no interaction differences according to the hypothesis testing.

The following recommendations were made as a result of this study:

1. That the findings of this study be made available to adult basic education directors in order for them to appraise existing teacher-training workshop programs.
2. The findings should be made available to universities, or other institutions, that are planning to become involved in the preparation and training of adult basic education teachers or to those responsible for the partial training of adult basic education teachers.

3. Additional effort should be made to further identify competencies needed by adult basic education teachers.
4. Although organizing and utilizing adult basic education lay advisory committees received low ranking, this area probably ought to be investigated further, including the identification, importance, and uses of available resources within the community.
5. That studies should be conducted among adult basic education students in an attempt to determine their needs. It would seem an important next step would be to ascertain if there are contradictions between what the student perceives his own educational needs to be and what the teachers perceive as the most important needs of the student.
6. That this study be extended to a larger population, possibly with the inclusion, for comparison purposes, of adult basic education directors. Consideration should also be given to the use of a larger geographic area in further studies.
7. That studies be undertaken to determine the various kinds of learning experiences necessary to acquire the knowledge, skills, and attitudes that are necessary for the effective adult basic education teacher. In other words, an attempt needs to be made to understand how the identified competencies can be translated into a teacher training program.

A Study to Determine the Perceptions of the Competencies  
Needed by Adult Basic Education Teachers

by

RICHARD LORN SMITH

A THESIS

submitted to

Oregon State University

in partial fulfillment of  
the requirements for the  
degree of

DOCTOR OF EDUCATION

June 1972

APPROVED:

*Redacted for Privacy*

\_\_\_\_\_  
Dean, School of Education  
in charge of major

*Redacted for Privacy*

\_\_\_\_\_  
Dean of Graduate School

Date thesis is presented June 28, 1971

Types by Mary Lee Olson for RICHARD LORN SMITH

## TABLE OF CONTENTS

<u>Chapter</u>	<u>Page</u>
I BACKGROUND FOR THE STUDY	1
Introduction	
Statement of the problem	2
Objectives	2
Design of the study	2
Procedures	4
Management strategy	5
Need for the study	6
Limitations of the study	11
Delimitations	12
Definitions of terms	12
II REVIEW OF THE LITERATURE	14
Introduction	14
The undereducated adults	18
Characteristics of the undereducated adult	19
Socio-economic characteristics	20
Social-psychological characteristics	23
Social interaction	26
The kind of teacher needed for adult basic education	30
Research on effective teachers and teaching	36
III THE IDENTIFIED NEEDED COMPETENCIES OF ADULT BASIC EDUCATION TEACHERS	47
IV SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS	61
Summary	61
Conclusions	63
Implications	64
Recommendations	66
BIBLIOGRAPHY	69
APPENDICES	
Appendix A	78
Appendix B	87
Appendix C	90
Appendix D	95
Appendix E	100
Appendix F	104
Appendix G	106

LIST OF TABLES

<u>TABLE</u>		<u>PAGE</u>
1	Results of Tests of Hypotheses	49
2	Twenty-five Highest and Twenty-five Lowest Competencies (States)	52

A STUDY TO DETERMINE THE PERCEPTIONS OF THE COMPETENCIES  
NEEDED BY ADULT BASIC EDUCATION TEACHERS

CHAPTER I

BACKGROUND FOR THE STUDY

Introduction

One of the major resources of any country is its people, and recently there has been increasing interest in the United States to develop more adequately its human resources, as evidenced by the funding of various agencies to upgrade the educational level of its citizenry.

One area receiving special attention is adult basic education, or, education for those people eighteen years or older whose educational attainment is below the eighth grade level. This segment of our society constitutes a massive untapped resource as shown by the 1970 census reports, which indicated there were approximately 17 million people in the United States with less than an eighth grade education.

On August 20, 1964, Congress passed Title II-B of the Economic Opportunity Act (Public Law 88-452) to establish the Adult Basic Education Program in the Office of Economic Opportunity. By this act, adult basic education was recognized as one of the governmental priorities in education. The program became operational in 1965, funded by the Office of Economic Opportunity and administered by the Office of Education through the Adult Education Branch.

### Statement of the problem

The central problem of this study was to determine the perceptions of the professional educational competency needs of teachers of adult basic education. The study included the perceptions of adult basic education teachers who had either an elementary or a secondary teaching background. The determination of the teacher's background was made according to which kind of certificate he held for teaching in the public schools. The subjects of the study were randomly selected from the states of Oregon, Washington, and Idaho.

### Objectives

The objectives for the study were stated in terms of the competency needs of adult basic education teachers and included the following:

1. What were the professional teacher education competency needs of the adult basic education teacher?
2. How could these competencies be identified?

The specific hypotheses for the study reflect the research design and include provisions for analyzing the differences among the three states and the differences between the levels of certification.

### Design of the study

The design of this study was formulated to provide answers to the objectives previously listed. For this purpose a 2-way analysis of variance design was chosen, utilizing a 2 x 3 model. To use the design, assumptions concerned with normality, variance, and equidistant interval data for the dependent variables were made.

The analysis of variance design attempts to answer the following hypotheses:

1. There are no significant differences in perceptions among the teachers in the three states regarding needed competencies for adult basic education teachers.
2. There are no significant differences in perceptions among the teachers coming from different previous levels of educational experience.
3. There are no significant differences in interaction effect.

Analysis of variance provides a forthright procedure for analyzing several levels of two or more factors simultaneously, for such studies, the F statistic is useful in providing an indication of the significance of the interaction effects.

An interaction which is found to be significant is one that is too great to be explained on the basis of chance. When interaction is present, the dependent variable is found to have a different order of magnitude on levels of one of the independent variables in the study.

The study's design provides means and standard deviations for each of the items which are included in the instrument used for the study. The instrument's scale calls for a Likert type (five-point) response, such that each time observations will be represented by the following:

- 1.0 No proficiency required in this activity.
- 2.0 Slight proficiency required in this activity.
- 3.0 Moderate proficiency required in this activity.
- 4.0 Considerable proficiency required in this activity.
- 5.0 Complete proficiency required in this activity.

Basically, the populations for the study were sampled in order to generate the following matrix:

	States		
	1	2	3
Elementary	n=10	n=10	n=10
Levels	n=10	n=10	n=10
Secondary	n=10	n=10	n=10

The F-statistic also provides the analysis of variance procedures with evidence of acceptance or rejection of hypotheses. The .05 probability level was used for testing the individual hypotheses. The F-statistic was formulated according to the fixed model and the sources of variations are as follows:

Sources of Variations	DF	SS	MS	F
States	2	SSA	SSA/2	MSA/MSD
Certification Levels	1	SSB	SSB/1	MSB/MSD
Interaction	2	SSC	SSC/2	MSC/MSD
Error	54	SSD	SSD/54	
Total	59			

#### Procedures

A letter was sent to the state director of adult basic education in each of the three states to obtain names, addresses, and other information as to kind of teaching certificate held.

It was found that Washington had about 325 adult basic education teachers, Oregon approximately 75, and Idaho 25, or a total of 450 teachers. In each state 10 teachers were randomly selected from each

of the certification levels, a total of 20, in order to construct the analysis of variance matrix. An additional 10 were selected from each certification level during the original randomization process. These were sent alternate questionnaires to insure a 100 percent return. Those originally selected in the randomization were sent coded questionnaires printed on white paper and the alternates were sent questionnaires on green paper. Thus, the needed total of 60 could be insured without necessitating follow-up questionnaires being sent and the necessary random sampling procedures could be adhered to.

The instrument was originally designed by Dr. E. Wayne Courtney and used to determine the competency needs of vocational education teachers in a study conducted at Stout State College in Wisconsin. The instrument was refined from an original 130 items to 100 items. Items were selected which seemed to be pertinent to an investigation of adult basic education teachers. The questionnaires were then sent to two adult basic education teachers and two program directors with instructions for them to make comments regarding any necessary changes. They responded with approval of the original instrument.

#### Management strategy

The study included the following major dimensions or steps:

A. Review the related literature to include:

1. The characteristics of the disadvantaged adult.
2. The needed adult basic education teacher qualities.
3. General teacher education competency studies.

- B. Modify an existing instrument which will measure competencies in basic education teacher preparation. For this step, a jury of two directors and two adult basic education teachers were utilized in the selection of appropriate items for inclusion in the instrument.
- C. Correspond with state boards in the states to be studied, requesting lists of certified teachers in adult basic education.
- D. From the acquired listings, randomly select the samples for the study.
- E. Administered the developed instrument to samples which were selected. In all, a total of sixty (60) respondents were utilized.
- F. Compile and analyze the data.

#### Need for the study

According to the 1970 census there were about 50 million people in the United States, 18 years old or over, with less than a high school education. Approximately 17 million of these had less than an eighth grade education while 9 million adults were with less than five years of schooling. However, in fiscal year 1968, there were only 455,700 students enrolled in adult basic education programs in the nation (86).

Kenneth Hansen commented:

For all our boasting of being an education nation, a nation which provides universal and compulsory education for all its citizens, the cold fact is that we still have a shocking degree of illiteracy in the United States. Complete illiteracy,

total inability to read and write, is not a particularly serious problem in this country. But functional illiteracy (defined by the Bureau of Census as those people with less than five years of education) constitutes a problem of grave importance nationally (59).

The situation in Oregon, Washington, and Idaho is similar to the national problem and must also be considered of equal importance and concern. Since the program began in 1965, there have been 3,848 students enrolled in Oregon through the fiscal year of 1968. This is from a target population of 100,000 people with less than an eighth grade education. The target population of the state of Washington is 191,360 and through 1968 that state's programs had enrolled only 6,255 students. The same disparity between the target population and the actual enrollment is evident in the state of Idaho where the enrollment was 143 students and the target population numbered 38,565.

Prior to these 1968 statistics, Malcolm Knowles asserted that very little actual progress had been made in providing adult education programs for those adults who most needed such programming efforts.

He stated:

The number of functional illiterates was reduced by only about one million in the period from 1950-1960 despite the extensive adult education activities. The present rate of adult illiteracy in the United States is not limited to any particular area. In a typical community of 1,000 persons there will be found 19 illiterates, 37 others who have not completed the fifth grade (functional illiterates), and about 20 aliens with learning difficulties of varying degrees (68).

To improve adult basic education programs and to increase the enrollment of adult basic education classes, up-grading the quality of the teachers is imperative. Indeed, the availability of well trained adult basic educators becomes a particularly important problem in light

of the potential increase in the number of adults desirous of continuing their education.

Beyond the basic statistics which would tend to support the contention that adult basic education programs have only been serving a relatively small proportion of the actual number of adults who could derive benefit from such programs, the Subcommittee on Education of the Committee on Labor and Public Welfare focused upon a second problem facing adult basic education:

It is apparent that adult basic education is a worthy area of study, if only in the area, or in terms of reducing the unemployment figures in America, education can also reduce the barriers of poverty. But the effectiveness of adult basic education programs will be to a large degree dependent on the instructional staff (118).

When an attempt is made to determine the competencies of the adult basic education teacher, the discussion often centers around whether the disadvantaged student needs a teacher with special competencies and, hence, special training, or whether a person that has completed an undergraduate teacher education program is adequate.

Edward Summers explains the exact nature of the problem when he states:

The skills needed by the adults are the same as those needed by the children, but the context and organization are different. Obtaining teachers who can work with adults and supplying adult oriented materials are the two most pressing problems in establishing new adult basic education programs (114).

Hershey adds further insight into the question of whether the disadvantaged adult needs a different kind of teacher when he points out:

The supply of experienced teachers of adult basic education was limited in 1964 and still is, truly trained teachers are almost non-existent. The need for more teachers is obvious. It is evident that adults are different from

children and have to be treated differently. Being treated differently also means being taught differently. In fact, many adults had dropped out of school because the teaching methods were not appropriate for them. Placing the individual into a situation that had not changed much since his last encounter years before would not work (18).

Further information on the need for adult basic education teachers is given by Summers:

Although there is no way of estimating precisely how many teachers are available, it will be impossible to fully meet the demand. Most programs will operate on a limited basis, with make-do teachers, until the gap in this area can be narrowed. Training programs for teachers of the under-educated adult have never existed to any scale in the colleges and universities of this country. Little has been done in defining the type of training needed by such teachers (114).

Frank Weaver has similar feelings about the question of the need for teachers when he makes the following statement:

From the beginning of the adult basic education effort in 1964, one of the most pressing and critical needs was for the trained teacher of illiterate adults. This need has, in part, been answered through national teacher-training institutes and through state training efforts, but these training periods are of necessity short in duration and make it extremely difficult to complete the task of providing the total training necessary for teachers of adult basic education (125).

A different approach showing the importance of this problem has been taken by other writers when they focus on the effects of the adult basic education program rather than on the need for teachers. The basic beliefs undergirding the passage of Public Law 88-452, seem aptly identified by L. A. Van Dyke:

If we grant that the corner-stone of our democracy is a basic commitment to individual worth, personal liberty and equal opportunity, then the primary unifying goal of education is individual opportunity ... that is opportunity for all to develop their talents and fulfill their aspirations (69).

Translated more concretely, the National Center of Educational Statistics concludes:

Adult basic education is for adults whose inability to speak, read or write the English language constitutes a substantial impairment of their ability to get or retain employment commensurate with their real ability ... (adult basic education) is derived to help eliminate such inability with a view of making them less likely to become dependent on others. To improve their ability to benefit from occupational training and otherwise increase their opportunities for more productive and profitable employment, and to make them better able to meet their adult responsibilities (86).

An additional statement regarding the meaning and purposes of adult basic education programs was prepared by the Oregon State Board of Education in their publication entitled, Adult Basic Education in Oregon:

Adult basic education is a program that provides the student with the prime tools for reading, spelling, writing, mathematics ... and a satisfying life. It is specifically for adults over 18 years of age who, because of their lack of basic skills, are functioning at a level that does not permit the full development and involvement in today's fast moving and highly technical society (2).

While each of these statements offer a parameter from which adult basic education can be traditionally defined, Pedro T. Orata adds a new dimension to the possible nature of adult basic education:

The new tool literacy which is acquired in a few weeks by the mechanical method and without the benefit of character and moral training, and without equipping the new literates with a sense of direction and the competencies necessary to achieve a better standard of living ... is both dangerous and useless. (94).

Based upon the foregoing information the nature of the problem facing adult basic education is twofold: 1) there is presently existing a substantial divergence between the number of adults who categorically represent the target population for adult basic education programming and the actual number of these adults now being trained in existing

adult basic education programs, and 2) the actual number of adult basic educators is significantly fewer than the present need, and their present state of preparation for teaching adults is probably inadequate.

It would seem essential in light of the above delineation of the problem, and with the variety of training programs conducted across the country, that specific competencies needed by adult basic educators be identified.

#### Limitations of the study

Adult basic education is a national concern and is consequently receiving priority as a national problem. However, this study is limited to a concern with the students and teachers of adult basic education located within the States of Oregon, Washington, and Idaho. Although many of the findings can probably be generalized to other areas and the characteristics of the disadvantaged population are similar throughout the United States, any application of the study has to be made within the framework of the peculiarities of any given region.

The study is also limited because of the necessity of assuming that adult basic education teachers will rate their competency needs accurately and honestly. A further limitation is that the data was gathered from teachers by the use of a teacher questionnaire with no information gathered from students and no comparisons made as far as student opinions or student needs are concerned.

### Delimitations

The study is limited to a small sample of 60 teachers working in adult basic education in Oregon, Washington, and Idaho. The total population is approximately 450 teachers with 75 teachers in Oregon, 325 in Washington and 50 in Idaho.

Any subsequent user of the data should bear in mind that the teacher sample was conducted during the 1970-1971 school year, and changes in that population may indicate changes in opinions as to the competencies needed by adult basic education teachers.

Finally the questionnaire used was an already existent instrument prepared by Dr. E. Wayne Courtney and previously used in a study to determine the competencies of vocational education teachers. This instrument was modified by this writer with the assistance of Dr. Courtney. The statistics department of Oregon State University was also consulted prior to the mailing of the questionnaire. The instrument was not field tested prior to the data collection.

### Definitions of terms

For the purposes of this study, the following definitions and terms will be adhered to throughout the body of this report. They are taken largely from the Abstract of a Conceptual Model of Adult Basic Education prepared by the United States Office of Education and reflect the most common usage.

Adult - Any individual who is eighteen years old or older.

Adult Education - Services of instruction below the college level for adults who have not obtained a high school certificate of education,

and who are currently not enrolled in public school.

Adult Basic Education - Instruction for those adults whose educational attainment is below the eighth grade level.

Educationally Disadvantaged Population - As used in this study this term is used to correspond to any individual over eighteen years of age who possesses less than an eighth grade education.

Adult Basic Education Target Population - That designated portion of the educationally disadvantaged population that can be served by the resources of the adult basic education program.

Functionally Illiterate - The condition whereby an individual is insufficiently equipped to make a minimal contribution to his immediate society. This often exists and is usually defined as being at the fifth grade level of educational attainment or less.

Educational Attainment - The highest level of education as measured by the formal school system, not including education through self-help or other personal effort. This is not synonymous with one's present functioning level of capability.

## CHAPTER II

## REVIEW OF THE LITERATURE

Introduction

In this chapter an attempt is made to provide a synthesis of research about the sub-culture of poverty that exists within America. Related to this, information is provided about the under-educated adults to allow for greater knowledge of the population with which adult basic education teachers will be working.

Much is written about the need for teachers of adult basic education to receive special training. Authorities appear to believe that successful public school teaching will not necessarily insure successful teaching in adult basic education. Therefore, this chapter also presents a discussion of the available information about the kind of teachers needed for adult basic education.

It is still generally accepted that there are certain beliefs and understandings about the general nature of effective teaching that are commonly held throughout the field of education. Thus, it is important to present, in this chapter, a review of the research that has been done on effective teachers and effective teaching as a means for determining, in part, the validity of the perceptions of teachers relative to competencies needed by basic education teachers.

The differences between the disadvantaged and other members of society are such as to suggest that a distinctive sub-culture of poverty has developed within the dominant culture. The crucial factors conducive to the development of a disadvantaged sub-culture lie in the

nature and structure of the economic system through which the resources of society are used and distributed. Thus, substandard housing, inadequate public services, limited employment opportunities, and low income contribute to the formation of a poverty group. At the same time certain social characteristics of those in the poverty group influence their perceptions of and responses to such economic factors. In urban slums, for example, the hard core poor have developed their own self-contained social system in which they exhibit a fluent use of a particular language style that provides both identification or identity to members and protection for the group. This hard core group differs from others in the population with respect to the perception of time, self in social space, and the classification of schemes and causality (31).

For the most part, poverty programs have concentrated on alleviating human suffering by providing a temporary relief instead of concentrating on the causes of poverty. The move from private to public charity has signalled the general acceptance of social responsibility for the existence of poverty, but only minimum subsistence has been provided for its victims. Such public welfare programs neither alter the basic environmental factors nor modify the social characteristics of those who are poor. Consequently, the vicious circle remains unbroken (21).

Barnes points out:

Programs which seek to modify the environment alone are clearly inadequate as they do nothing to alter the social characteristics of the poor, who also must share in the responsibility for the ultimate reduction of poverty. To change the behavior of the poor and to modify their value system is more difficult than to change the environment, yet such behavioral change is an indispensable prerequisite for a solution to poverty. Although the values

and attitudes of disadvantaged adults may be modified through effective educational programs, this matter has not yet received adequate attention in the war on poverty and existing educational programs emphasize literacy and fundamental education as a prerequisite to vocational training (12).

People are realizing that illiteracy reduces national wealth, results in social and cultural lag, weakens national security, and slows technological progress. It breeds suspicions and tensions, endangers democracy, and retards world understanding and cooperation. Illiteracy is closely associated with the major human ills, such as poverty, disease, infant mortality, and superstition (16).

However, Orata points out that the present conception of literacy training as if it were a miracle that will free people from ignorance, poverty and disease, is dangerous and useless. Literacy training must also encompass the areas of character and moral training that will lead to a sense of direction and purpose (94).

In his education message of February 6, 1962, President Kennedy described the price we pay for such educational deficiencies by saying:

The twin tragedies of illiteracy and dependency are often passed on from generation to generation. There is no need for this. Many nations, including our own have shown that this problem can be attacked and virtually wiped out (19).

Our technology is outpacing our human skills on the one hand and our social skills on the other. Many young people are entering the labor force without sufficient training to land many jobs. Many Negroes are unemployable because of educational deficiencies. The number of academically qualified that are unemployed and qualified for retraining is discouragingly small. In West Virginia, a study shows that fifty percent of the state's unemployed are functionally illiterate (20).

Our industrialized society is comprised of a vast network of rapidly moving delicate and complex machines and scientific apparatus. It requires for its efficient and effective operation not only many educated and highly trained experts, but also a vast array of helpers who have an understanding of the relation of these machines and processes and who can read directions and carry out instructions. Increased literacy is absolutely necessary to our expanding economy and technological growth (20).

In summation of the problem of unemployment as a result of technology, Walter L. Slocum commented:

In the automated economy of the future, most men without a high school education may be regarded as unskilled and incompetent ... If those who fail their studies continue to accept personal responsibility for their failure, the results will resemble those obtained in the classical European class system where the lower classes were taught not to aspire above their 'station in life' ... Formal education is likely to become very important as a means of assisting adults to keep abreast of changing occupational requirements (111).

Democracy more than any other form of government calls for a literate population. Our founding fathers recognized this although they did not provide specifically for its achievement. Nevertheless, the principle has been so generally accepted that we have established the most comprehensive system of free universal compulsory education found anywhere in the world. Despite this fact, we still have millions of adult Americans who suffer from the handicap of too little or no education. This causes them to become a drag on society and a potential menace to our democratic way of life.

Adult basic education is the foundation upon which any program to train and retrain large groups of unemployed adults must be built. It

is both the door to vocational training and the path away from social dependency, unemployment, and personal deprivation. Basic education provides an opportunity for the citizen to engage in those fundamental cultural activities and creative endeavors which enrich life and which make it possible to function adequately in today's complex world (18).

### The undereducated adults

Of the thirty million young people who will be seeking unemployment in the next decade there are two million who will not have seen the inside of a high school. Seven million, or nearly one-fourth, will not have finished high school (18).

The 17 million people with eight or less years in school are the adults who dropped out or were forced out during the depression years and whose basic skills grew less and less in an era of development which did not have time to worry about reading and writing, but only about working and eating. They are the educationally handicapped who are prevented from functioning to their own satisfaction in a world to which they want to belong.

Slocum presents some statistics on the undereducation problem:

In 1960, in the United States, 58.5 percent of the white men and 80 percent of the non-white men 25 years of age and over had completed less than four years of high school. At that time, 7.5 percent of the non-white men who were 25 or over were functional illiterates, that is they had less than five years of formal schooling (111).

The latest statistics show that 3,055,000 persons or 2.4 percent of the United States population 15 years old or older, are illiterate. At the present pace, it will take 30 or 40 years to make the population literate. The more than 8 percent of the adult population who had

completed less than five years of schooling are concentrated in the following groups: 1) older persons, both white and non-white; 2) persons living on farms, especially Negroes; 3) persons with rural backgrounds and who have moved to urban centers; and 4) migrant farm workers and other disadvantaged groups. The problem of limited educational attainment is not confined to particular areas or population groups; rather, it is national in scope (20).

#### Characteristics of the undereducated adult

In examining the literature on the undereducated adult the subject was divided into three sub-categories. These divisions were socio-economic, social-psychological, and those studies dealing with social interaction.

Within the socio-economic were included those readings dealing with the characteristics of age, sex, education, income, family size, employment data, marital status, health, and residence of the disadvantaged population.

Under the category of the social-psychological were included the characteristics dealing with the amount of self-confidence, accuracy of perception of need, degree of motivation, and amount of verbal ability.

Social interaction deals with the factors of discrimination, relationships, participation in society, and problems of communication (7).

### Socio-economic characteristics

The disadvantaged adult is probably poor, as many studies have clearly shown that the level of poverty goes hand in hand with the level of education. The disadvantaged adult is caught up in a vicious circle in his life: his poverty fosters cultural and educational deprivation, which, in turn, effects his academic achievement, which leads back again to poverty (29).

Two-thirds of our poor families are headed by persons with less than an eighth grade education. Another one-fifth of them have as their heads, persons with less than a high school education.

The failure of many workers to move out of their low-paying occupations is related to education. This failure may reflect lack of education, physical or mental disability, or unwillingness or inability to move away from familiar surroundings (29).

In a further attempt to determine the effect of low education on the level of income, Anderson and Niemi had this to say:

A low educational achievement results in unemployability for those in the poverty group, and is therefore also related directly to income. An income of \$3,000 per year or less was associated with illiteracy. In an evaluative study of adult basic education in a southern rural community a participant generally had an annual income (family) of less than \$1,000 and frequently had terminated his schooling at the fourth grade level (7).

The deleterious effects of poverty on health, nutrition, and other living conditions are clear. There is to be sure no unanimity on the question of inherited deprivation. Some feel that it is lack of motivation or an innate lack of ability that is transmitted rather than a lack of opportunity.

It is clear that there is a transmission of poverty, as in a recently released study of cases assisted by aid to dependent children families shows that, for a nationwide sample of such families whose cases were closed early in 1961 more than 40 percent of the mothers and fathers were raised in homes where some form of assistance had been received at some time. Nearly half of the cases had received aid to families with dependent children (29).

Some of the results of studies regarding the transmission of poverty are conflicting and difficult to interpret, and much further research seems needed. There seems sufficient basis, however, for adopting as a working hypothesis that perhaps the single medium most conducive to the growth of poverty and dependency is poverty itself. The corollary might be that, although adequate family income alone is not a sufficient condition that children will escape low-income status as adults, it is usually a necessary one. There are people whose only legacy to their children is the same one of poverty and deprivation that they received from their own parents (29).

Several recent studies have shown a relationship between illiteracy and crime, in that the educationally disadvantaged are more likely to be sent to prison than those with more education. A study conducted at the Ohio State Reformatory revealed that 73 out of 142 of its inmates were unable to register an achievement score equivalent to grade one. The mean educational achievement score equivalent was 1.97 and three-quarters of the inmates achieved a grade of 4.3 or less (6).

In Texas, 55.6 percent of the inmates or prison population were classified as functionally illiterate because of an educational achievement of grade five or less (1).

Another area in which the disadvantaged adult generally differs from the rest of the population is in the amount of unemployment found. In general, he is employed less than he wants, and when he is employed, he generally receives part-time or casual work where productivity and income are low. The unemployed history of 160 Minneapolis subjects showed that almost half of the group had been out of work at least half of the time during the preceding five years (124).

An extremely high percentage of the disadvantaged are forced or limited to work on an unskilled job. Thus, they feel trapped by their lack of skills and see no immediate method of escaping the situation as they have no skills necessary for job advancement. A Detroit study of hard-core unemployed found that 1152 male applicants (40%) of the sample were semi-skilled, and 156 or (18.2%) were unskilled (38). Another Minneapolis study disclosed that among the hard-core unemployed there were approximately 65 percent in the unskilled, semi-skilled, and service occupations (124).

There are also some studies that tend to prove that the disadvantaged live in isolated areas, which seems to be a factor adding to the problem. In an isolated area the necessary educational facilities frequently are not available. Small high schools generally are limited to programs which are not adapted to the needs of poverty groups. When this is coupled with the fact that other advantages are almost non-existent, such as hospitals, employment opportunities, dental clinics, the more serious the problem becomes (7). Another aspect of the problem of isolation is the lack of knowledge people in isolated areas have about the rest of the world as evidenced by a study conducted in an isolated

area of Kentucky where it was found that of the disadvantaged four-fifths never received a newspaper, about one-half never watched television, and one-third never listened to the radio (100).

It has been shown that about one-half of the adult basic education students come from the minority groups. It is not only that they are in the minority which sets them apart; it is also their educational, social, cultural and economic poverty. The minority groups most prominently represented in adult basic education classes are Negroes, Puerto Ricans, Cubans, Mexican-Americans, and American Indians. The other half of the adult basic education population represent the poor, but white, segment of our population. Most of these are rural people, particularly from the South, the Southwest, and Appalachian states (7).

#### Social-psychological characteristics

President Kennedy stated in a message to the United States Congress on February 28, 1963:

The negro baby born in America today regardless of the section of the country or state which he is born . . . has about one-half as much chance of completing college, one-third as much chance of becoming unemployed, about one-seventh as much chance of becoming employed and earning \$10,000 per year, and a life expectancy which is seven years less, plus the prospects of earning only half as much as the white baby (113).

As a general description of the members of the poverty sub-culture, Skene notes the following characteristics which have been identified by research:

1. The disadvantaged are authoritarian and resort to physical rather than verbal dominance.
2. They are rigidly restrictive especially if they hold religious views which are prohibitive ones.

3. They are pre-disposed to intolerance and prejudice and tend toward black and white thinking.
4. They are more prone to action than to reflection and display anti-intellectual attitudes.
5. They are more inclined to physical or concrete thinking and learning than to impersonal, abstract thinking and learning.
6. They are given to resign themselves to 'fate' and to be pessimistic about a vocational future.
7. They are frequently suspicious and hostile toward police and distrustful of governmental authority.
8. They show little development in imaginative and logical powers.
9. They are markedly reactionary in socio-political areas but somewhat favorable toward economic liberalism.
10. They are prone to have a short time perspective, living to fulfill immediate needs of the present.
11. They are more likely to reveal hostility, tension, and aggression than do those who live well above the subsistence level (110).

Derbyshire made an analysis of personality traits in adult illiterates that tend to substantiate Skene. He lists six of these personality traits:

1. They (the disadvantaged adult) display insecurity which is often manifested by an acting out behavior of boisterousness and by an unwillingness to admit error.
2. They resort to physical aggression because of the frustration which results from the recognized lack of status.
3. They prefer reticence and neglect except when they occasionally react in an explosive manner.
4. They display lethargy and resign themselves to their current status.
5. Their communication is sensitized to the non-verbal cues of those in power.

6. They engage in concrete thinking and are content to refer to concrete objects and situations of personal importance rather than to abstract thought (39).

From their earliest experience of failure in a middle class oriented school system, the disadvantaged develop a concept of low self-esteem and a lack of self-confidence. A survey of literacy programs identified a number of social and psychological barriers closely connected to a lack of self-confidence including the fear of failure, the fear of school, and the fear of change. Contributing further to the lowering of self-confidence was the loss of employment and the necessity to accept jobs at a level below that which the person had previously achieved (115).

Numerous defense mechanisms were noted in observing literacy programs. The extent to which the mechanism may be used by an individual illiterate was directly proportionate to his degree of illiteracy (12).

The lowering of self-esteem, or inadequate development of self-concept was further pointed out in an Illinois study which measured the anxiety experienced by adults before enrollment in an educational program and found that 22.3 percent believed that they would be too dumb, 29.9 percent believed they could not really learn, and 30.6 percent believed they would feel foolish (57).

The disadvantaged generally display a limited perception of the value of education as a means of personal achievement. In answer to a question about how much schooling was necessary for people to get along in the world, 75 percent of the middle class respondents considered it was desirable for the young man to have a high school education, compared to 40 percent of the lower class respondents (31).

Social-psychological factors were important determinants of job seeking behavior by the unemployed. Regardless of educational level, workers who held values stressing achievement were more likely to start looking for a job than those who placed less importance on such values. On the other hand over one-half of the individuals studied exhibited a combination of low achievement and high job view anxiety (78).

### Social interaction

Disadvantaged adults respond to their environment in ways that appear to be pre-destined by the socio-economic and social-psychological factors described previously. Yet the disadvantaged are frequently assumed to have motivations, experiences, and desires to be similar to the dominant society, irrespective of the unique influences exerted by the sub-culture in which they function (83).

When literate and illiterate interact, the illiterate is more likely to be an adapting individual. To an overwhelming degree his is an accomodative mode of existence. His role prescriptions are set down by the larger society; they provide the alternative roles he might take (51).

Schneiderman notes that the principal function of the poverty life style is a purely utilitarian one which enables the group to survive. Hence, each element of this distinctive culture has some relevance for the environment in which the members must live out their lives (107). Consequently, the task of the lower class person is to evolve a way of life that will reduce his insecurity and enhance his power in relation to the rest of society.

The personality characteristics of the disadvantaged are accentuated by the response of the dominant society to them. Members of certain racial and ethnic groups are likely to constitute a large proportion of the disadvantaged population, and they are frequently the victims of discrimination which generated in them both a sense of isolation and of persecution.

As a result of discrimination, the status of the disadvantaged is generally low and they become stereotyped as substandard individuals. A 1961 survey conducted in the United States found that only some 20 percent of the non-white young persons who graduate from high school have white collar jobs, while more than 50 percent of the white high school graduates have such jobs (130).

As its response to rejection and discrimination, the poverty sub-culture is inclined to reject the institutional structure of middle-class society and formalized associational contacts. In the poverty sub-culture participation is accomplished through casual, close and often intimate primary group relationships involving small personal kinships, or friendship groups (123).

Another area where the disadvantaged suffers in our society is in the area of communication. In a manpower retraining study in the United States, it was found that the difficulties in communication were among the most important factors causing the disadvantaged to forego retraining. To overcome such difficulties the use of demonstration techniques were recommended (19).

A statement from the Southeastern Adult Basic Education Teachers Training Institute suggests:

The lack of verbal facility inhibits communication and frequently prevents the development of wider contacts with the community. The disadvantaged often limits themselves to a distinct style of communication and most undereducated adults prefer to communicate on the non-verbal level because of limited vocabulary and limited skill in articulation (113).

Black indicates that the culturally disadvantaged traditionally are inflexible, not open to reason about morality, diet, their family, or educational practices (17).

A further area in which the disadvantaged differ from the rest of the population is in the area of motivation. Many adult basic education students have sunk into apathy, and altogether, when compared with talented or even with solid citizenry who pursue middle class status occupations they show little promise. An important pair of American values is achievement and success. Culturally excluded individuals seldom taste of success or achievement, it seems almost as if the political, economic, education, and religious systems purposefully block the avenues of achievement and success for most disadvantaged or undereducated persons (39).

The problem is not wholly one of motivation, because in many cases deep seated sociological problems attributable to continual exposure to and re-inforcement from the values held by their families and friends is in operation. Their motivation is for tangible results or they will see little need for further education.

A personality characteristic of the adult basic education student, that relates to motivation may be contained in hostility and anxiety toward authority, which Taylor finds characteristic of the low achiever. Taylor states:

The degree to which a student is able to control his anxiety is directly related to his level of achievement, and the student's ability to conform to and or accept authority demands will determine the amount of academic success (116).

In a taxonomy of language usage, Cohen noted four areas which suggested that the social reality of the poor was different from the rest of the society:

1. As for time perception the hard-core poor seem to perceive it as the series of discrete elements or moments understood each in itself, rather than as a continuum.
2. The perception of self in social space is elucidated by the repeated observation that language distributions typically change in the direction of self-references. This suggests that hard-core language users perceive themselves to be placed in the center of their social space.
3. Classification schemes and procedures are identified by the dominance of the descriptive as opposed to analytic abstractions mechanisms. The hard-core language users respond to the external, sensed characteristics of objects and individuals rather than to abstract qualities.
4. As for causality, the dominance of categorical combinations of cause and effect, means and end, the actor and act, the place and its use, all suggest that attention is directed to the unique, rather than the persistent and recurring (33).

It seems that what is needed is democratic organization of the poor which enhances their general level of personal power in relation to affluent persons, and creates conditions which will be more likely to enable the poor to become educated without having to struggle against a negative identity imposed from the outside.

The poor exist in a shrunken social world, largely not defined by them, which provides little space for self-responsible action. They can move in two directions: 1) to transform or re-define their social world; and 2) to expand it within broad limits of present definitions.

The Kind of Teacher needed for adult basic education

If adult basic education is to be effective in reaching the masses, it will have to offer both intrinsic and extrinsic incentives (which show a clear path between basic education offerings and the personal goals of the learners). The basic function of the training program for adult basic education teachers should include knowledge and abilities in the following areas of working with students: intake counseling, pre-vocational instruction, vocational counseling, occupational training, job placement, job development, follow-up and supportive services (113).

Weaver says the adult basic education teacher must have a philosophy that will not permit him to be content with only teaching his students the skills or know-how of subject matter or basic facts. He must possess the desire to help each student raise his standards and broaden his horizons. The teacher must be a 'teacher' last of all. First, he must be inspiration, hope, a source of happiness, advisor, and companion to individuals who come under his guidance (125).

The United States Office of Education report to the President of the United States comments:

The emphasis is on new and improved approaches to teaching undereducated adults. In other words, the same automation and technology that contributed to the plight of the undereducated adult can be used to accelerate the learning process. Undereducated adults must be provided opportunities for continuing education. Adult responsibilities require educational experiences beyond literacy training for a basis of security in a changing society (3).

Marjorie Newman comments on the selection process:

Since the majority of teachers in programs for adults are engaged in teaching on this level only on a part-time basis, it is possible that many of the methods and experiences they provide for the children they teach during the major portion of the day are carried over into adult programs despite the special training provided for them. The inference can be made, therefore, that the means of selecting and preparing teachers of the disadvantaged adult should perhaps be altered or expanded to make possible the involvement and effort necessary for carrying learned objectives into practice (87).

If the students are adults, the teacher must take the more difficult way, which involves recognizing the complex emotional meanings which come with adulthood. It is not possible to suggest accurate and concise methods, but Gardner Murphy suggests practical implications for the teachers of adults when he writes:

One must bear constantly in mind that all content is simultaneously intellectual, emotional, and impulse evolving. The material is not simply material presented in a book or on a blackboard ... it is offered ... as a modification of the person who is learning. There is no escape from the study of such responses in an individualized fashion. The individual learns as a member of the group; and shares with others the goal of learning, interprets the material as something with respect to which he agrees or disagrees with others, constantly gauges for himself the implications of the knowledge or skill for his own words or action and pace in the group (128).

One of the unfortunate developments in adult basic education, as it has traditionally been conducted, has been the separation of the literacy instruction from the goals of the individual. There has always been a stereo-typed approach with respect to the enrollment of adults into specific skills programs (115).

Because the adult basic education teacher's background, more often than not, is very different from that of his students, the teacher may

find that he has a difficult time getting to know people who think so differently, act so differently, and live so differently. But learning will not take place until teacher and student know each other well enough to trust each other (84).

Hallenbeck says:

In teaching adults, any adults, disadvantaged or advantaged, the educational program should be as appropriate to the interests and abilities of the students as it should be when children are being taught. The key to adult education is understanding adults. The teacher who lays great stress upon academic skills only can expect that his students are excelling in this area to the detriment of other important changes. The teacher who emphasizes self-realization in its highest form may expect to graduate students who become better parents, consumers, workers, and citizens. The extent of the change will depend upon the teacher's success in communicating with his students (84).

A study done by the University of Missouri at St. Louis found that the major problems of the adult basic education teacher were: finding a suitable curriculum, fitting the instruction to the background of the student, and finding time in the school day for work on curriculum development, diagnosis, and prescription. These results were found by administering a questionnaire to 15 teachers. Other problems of concern were those involving the adult learner in the learning process. Problems such as helping the slow learner, diagnosing and prescribing effectively, and actively involving every learner in the learning process were assigned relatively high priorities. Other problems of concern to many of the teachers were those of planning independent study effectively, arranging flexible groupings for learnings, and keeping informed on curriculum movements (79).

Another study conducted by Frank C. Pearce at Modesto Junior College in California attempted to determine the qualities necessary to be an

adult basic education teacher. In this study, trainees, teachers, and administrator's identified characteristics of an effective adult basic education teacher. The study showed that maintaining a respect for the student is of primary importance. The teacher must have understanding, flexibility, patience, humor, practicality, creativity, and preparation. All of these attributes lead to the total needs of the effective teacher, that of having the ability to help the students develop and maintain self-confidence (96).

A variety of complex problems surround the undereducated person. In developing the program to meet their learning needs these problems must be recognized and dealt with. Teachers must do far more than merely impart the basic literacy skills of reading, writing, and arithmetic. They must help the adult meet daily problems of life and help them become effective and full participants in this society (27).

David Wiener concludes:

In adult basic education the teachers are symbols of the America that students would like to feel they are a part of, and they feel threatened not only by the demands of a society in which they feel inadequate, but also in the face of the prospects of change, which is what education represents for them. The teacher is for many only a means toward assimilation. The ideal situation, which assumes that students alike actively work to promote a rapport, overlooked two important factors, both of which work against the realization of goals. First, resistance on the part of students to give up old ways and ideas in favor of new ones. This resistance is made up of equal amounts of fear and mistrust of the new, and strong attachments to the old. The second factor is resistance on the part of teachers to see their students objectively and to accept their problems as real and valid (18).

It seems that not only does the volunteer who is not a trained teacher need training in the rudiments of teaching reading, but that

the professional teacher as well is likely to need such training before working with illiterate adults. It is clear that a public school teacher, whatever his experience, cannot move into literacy work and continue to do exactly as he has done in a regular classroom. Modification of his teaching approaches will be essential if he is to be effective (26).

The ideal teacher of adult basic education, according to the Pearce study mentioned earlier, is someone who is people oriented, more interested in individuality than in conformity, and more interested in finding solutions than in following rules. His foremost concern must be to help the student gain self-confidence and hope. Understanding, in terms of active involvement in the student's problems, rather than a sense of sympathy was considered to be of critical importance. It was found that the conditions under which the teacher has lived may be much more important than prior educational experience, for exposure to conditions similar to those in which the students lived produced teachers who accepted students as they were, and were, in turn, accepted by the students (96).

Pearce concludes that there is very little difference between the characteristics needed by the adult basic education teacher and the effective teacher in any other setting. On the other hand, he points out, these characteristics must be present in the basic education setting, while teachers in other programs may not possess such qualities and the programs still manage to survive.

A study by Howard of the relationship between the needs and problems of socially disadvantaged urban children as perceived by the children and by public school personnel, that is, the degree of

understanding of the needs and problems of the children by their teachers, suggest that specialized teacher training methods and special materials not based upon empirical research findings result in many discrepancies between the two. These urban children felt that school related problems were greater, whereas, the teachers tended to over-estimate the number of problems related to student's home environments and family relationships (87).

Burnett adds:

An issue frequently raised in the face of the current emphasis on literacy training is in regard to the type of teacher who will be most effective in teaching adults. Some advocates openly maintain that literacy teachers should not be public school teachers. These persons feel that the likelihood for success in literacy work rests on the relationship developed between teacher and learner. A program which provides a zealous, if untrained teacher, to work with one student is likely to be less rigid in his dealings with an illiterate group and more loose and flexible in his teaching approaches. The literacy trainee needs to identify with his teacher as one who understands the world in which the illiterate lives and who has shared his experiences. A public school teacher with his comfortable middle class educational background is unlikely to possess the empathy necessary for teaching the culturally under-privileged illiterate (26).

It seems evident that teachers in adult basic education programs have a unique opportunity, a difficult but rewarding job, and a challenge completely unlike any other in the teaching profession. Most teachers presently working in the field are anxious to improve. They are interested in their own work and excited about the vast teaching possibilities of adult education. It is imperative that they be given the tools, skills, and knowledge that will assure a greater success potential with their students.

Research on effective teachers and teaching

Many teachers are likely to be recruited from the ranks of those licensed to teach in public school. What kind of public school experience equips a teacher to teach adults? In one program, observations were made with both elementary and secondary teachers teaching adults in reading. The impressionistic reactions were that elementary teachers seemed better able to teach in small steps, to program the learning more in small increments, to draw out their students more with a greater pupil involvement in class activities, to make more use of demonstration, to be more likely to reach individuals rather than to teach to the group. Secondary prepared teachers tended to lecture more than elementary teachers, to focus on larger concepts without giving heed to building in the small mechanical skills, and to teach to the group without making allowances for individual differences in readiness to learn or in the amount of practice required for mastery of a specific principle (26).

Popham and Baker elucidate on the effective teacher:

One of the enduring and distressing problems in education has been our inability to develop satisfactory measures of teacher effectiveness. Although the amount of attention which this problem has received during the past sixty years is considerable, few really promising advances have occurred (98).

They add that generally, three classes of criterion measures have been employed in previous empirical studies; ratings, observations, and pupil gains. The ultimate criterion of teacher competence should be pupil growth and usually ratings and observations of the teacher's behavior have been used as indications of the instructor's probable influence on the pupil. The major difficulty in using student change

as a measure of teaching effectiveness is that different teachers often seek to accomplish different objectives (98).

Dr. Arthur Combs defines the effective teacher as a unique human being who has learned to use himself effectively to carry out his own and society's purposes in the education of others. He lists 12 attributes of good teachers:

1. They perceive their purpose in teaching to be one of freeing rather than controlling students.
2. They seem to be more concerned with larger rather than smaller issues.
3. They are more likely to be self-revealing than self-concealing.
4. They tend to be personally involved rather than alienated.
5. They are concerned with furthering processes rather than achieving goals.
6. They are helping rather than dominating.
7. They are understanding rather than condemning.
8. They are accepting rather than rejecting.
9. They value integrity rather than violating integrity.
10. They are positive rather than negative.
11. They are open rather than closed to experience.
12. They are tolerant of ambiguity rather than intolerant (34, p. 25).

If Combs statements are accurate, then it seems obvious that a teacher training program, in whatever area, must be established which expand teachers as human beings.

Turner and Fattu have built a compelling argument that since teacher's objectives vary from situation to situation, it is impossible to use measures of training effectiveness which do not take account of such

variability, and thus inappropriate to compare teachers on the basis of their students growth toward dissimilar goals (117). These researchers have attempted to use as an index of teaching skill the teachers ability to solve paper and pencil problems which represent selected teaching tasks. In their approach, the teacher is required to perform several different types of tasks, such as determining the order of materials according to their difficulty level for pupils.

Ryans' massive Teacher Characteristics Study is an effort to understand teacher performance skills. In his study he points out that teacher behavior is social behavior and that, therefore, the relation between teacher behavior and pupil behavior may be of a reciprocal nature. Teacher behavior is also a product of social conditioning and takes place relative to the cultural setting in which the teaching takes place. He also found that neither amount of teaching experience nor age appeared to be very highly associated with teacher attitudes, although there was a tendency for attitudes of secondary teachers of greater experience to be more favorable toward administrator's and less favorable toward pupils. Generally, the attitudes of elementary school teachers were more favorable toward pupils than were similar attitudes of secondary teachers (106).

Flanders brings into consideration a second aspect of the teacher-student relationship that has implications for adult basic education in saying that, to change teaching methods involves both emotional and intellectual problems (48).

Indeed, in the Ryans study, teachers were judged relative to understanding, friendly classroom behavior, stimulation, imaginative classroom

behavior, favorable attitudes toward democratic classroom practices, verbal understanding, and emotional climate and stability, and the most traditional learning-centered or academic approaches were obtained by teachers in communities judged to be about average in socio-economic level. The teachers in communities judged to be low socio-economic or high socio-economic in status had teachers who made higher scores on the above criteria and seemed to have more permissive educational viewpoints (106).

In a study over a two year period that attempted to determine the effects of teaching style on children, Sears and Sherman found the most important environmental condition or style was that of the personality of the teacher (108).

Openshaw outlines the problem of attempting to define good teaching when he asserts that a systematic approach toward gaining understanding of the nature and complexities of teaching is still lacking. There is no one accepted theory of teaching or satisfactory set of models to conceptualize teaching and its effect on learning (93).

Openshaw comments:

No approach to research on teaching has been used more persistently during the last fifty years than the analysis of teacher personality characteristics and their relationships to teaching effectiveness. Studies falling into this category are so numerous they cannot be reported on. There have been well over 1,000 such studies. After years of extensive effort to relate teacher personality traits to teaching, most of the results still remain in the theoretical state. Additional refinement and verification would be required before the conceptual and experimental limitations of this type of research would be overcome (93).

In 1963, Getzels and Jackson examined numerous studies of teacher characteristics and concluded that very little is known for certain

about the nature and measurement of teacher personality, or about the relation between teacher personality and teacher effectiveness. Many of the findings have not produced significant results. For example, it is said after the usual inventory tabulation, that good teachers are friendly, cheerful, sympathetic, and morally virtuous rather than cruel, depressed, unsympathetic and morally depraved. This does not reveal much that is particularly useful in an analysis of teaching for what conceivable human interaction is not the better if people involved are friendly, cheerful, sympathetic, and virtuous rather than the opposite? What is needed is research that leads to the discovery of specific and distinctive features of teacher personality and of the effective teacher (51).

Openshaw states the classification of teacher behaviors developed thus far can be divided roughly into the following three categories:

1. Those dealing with psychological climate or classroom interaction.
2. Those dealing with attempts to measure classroom behavior per se, to describe quantitatively what goes on in the classroom.
3. Those dealing with substantive objectives or cognitive aspects of teaching-learning (93).

Historically teacher leadership in the classroom has been conducted with conceptualized respect to polarized models, dominative versus integrative, authoritarian versus democratic, teacher centered versus learner centered, direct versus indirect. Efforts have been devoted increasingly toward identifying and analyzing teaching behaviors that are observable in the classroom. Most of the studies of psychological climate have used direct observational procedures in selected classrooms

where teaching is going on, and, therefore restrict the basic source of the data to verbal behaviors of teachers (93).

Most of the studies of the psychological environment originated with Anderson, where classroom climate was defined in terms of the dominative or integrative acts of the teacher. Two major hypotheses resulted from these efforts. The hypotheses of the growth circle which states that socially integrative behavior in one person tends to induce socially integrative behaviors in others, and the hypothesis of the vicious circle which states that dominative behavior in one person tends to incite domination and resistance in others. Research over several years led to these conclusions:

1. Integrative behavior in one child induced integrative behavior in the companion, domination incited domination. Integration and domination are psychologically different (9, p. 132).
2. The data confirmed the hypotheses that integration in the teacher induces integrative behavior in the child. Moreover, children with the more dominating teacher showed significantly higher frequencies of non-conforming behavior, directly supporting the hypotheses that domination incites resistance. The behaviors of children also supported the further hypothesis that severe domination produces not resistance but submission and atrophy (9, p. 136).

Perkins found that differences in social and emotional climate produced significant differences in group learning as revealed in the verbal statements made by six groups of inservice teachers participating in an established program of child study. He concluded:

... that an individual's learning and development cannot be treated as a series of discrete and unrelated experiences. It is evident that the changes in the learner influence and are affected by the total experience. The part played by teacher-pupil relations is extremely significant, for to a greater extent these relations shape the climate of the classroom. Climate appears to be a key ingredient in

inter-personal experience, for it will in a large measure determine the learning and satisfaction of emotional needs of groups, outcomes which provide a realization of some of the broader objectives of education (97, p. 119).

The most intensive, long-range program of the psychological dimensions of classroom teaching has been conducted under the leadership of Flanders. His original investigation reported that teacher-centered behaviors fostered more negative feelings on the part of students and resulted in higher anxiety and greater concern with inter-personal problems than did student-centered behaviors. Conversely, student-centered behaviors were characterized by a greater concern with learning problems (47).

Flanders' subsequent research was directed toward describing the effects of teacher behaviors on classroom climate and learning goals. Classroom behaviors were classified through the use of an instrument employing ten behavioral categories. Seven of the ten describe teacher behavior as: 1) accepts feelings; 2) praises or encourages; 3) accepts or uses ideas of student; 4) asks questions; 5) lecturing; 6) giving directions; or 7) criticizing or justifying authority. The first four he identifies as "indirect" teacher influence, and the last three as "direct influence". Two other categories describe student behaviors as either (8) student talk-response or (9) student talk-iniation. The last category is used to record (10) silence or confusion. Indirect influence is assumed to expand the freedom of action the student has, afford more opportunity for him to express his ideas, and make him less dependent upon the teacher. By categorizing types of behaviors into interaction analysis matrices, the concentration of indirect and direct influence may be determined. From the ratio of the types

of influence, inferences as to the impact of teaching behaviors on students may be made (48, 49).

Hughes and Associates conducted a study at about the same time as the Flanders study. They too, analyzed teaching in terms of degrees of control and freedom in the classroom. The research centered upon classroom life and studied the interaction of the teacher with one pupil, the teacher and a group of pupils and the teacher and the whole class. The major effort was directed toward describing good teaching.

Teaching was defined as the interaction of teacher with children, individually or as a group. Teacher power was considered to be the dominant element in the teacher-pupil relationship. This power finds rewards in the decisions and punishments meted out by the teacher.

Hughes system of categorization was developed from a content analysis of nearly 1,000 written records of actual teaching of some sixty teachers in both elementary and secondary schools. The analysis was for the purpose of determining the function, for the learners, of the identifiable verbal teaching behaviors. The result of the analysis was the identification of thirty-one functions that teachers performed in classrooms in their interactions with pupils. The primary functions were ordered under seven major categories of behavior; controlling, imposition, facilitating, content development, response, positive affectivity and negative affectivity.

When the teacher-learner relationship was viewed from this framework of interaction, it was found that regardless of the situation the teacher behaves in one of several ways:

1. to control, command, and direct pupils; to impose personal values on pupils;

2. to ignore, threaten, scold, punish, and indices of disapproval;
3. to act in a relatively neutral manner to facilitate what is going on;
4. to act within the framework of a problem or content under consideration to clarify, elaborate, evaluate, or serve as resource in answer to pupil's questions;
5. to respond in a personal manner to pupils on matters other than those centered in the content or problem on which the class is working;
6. to offer approval, praise, commendation, acceptance, and encouragement.

After observation of teacher behaviors, the results were categorized according to its function in relationship to the situation of which it was a part, and a model pattern for teacher behaviors for the elementary school was developed. The model was based on the frequencies of teacher acts falling into the major categories of the instrument, and from this Hughes inferred certain qualities of teaching and the impact upon students. "Good teaching" was represented by patterns of behavior falling within the following limits:

Controlling Behaviors	20 - 40 percent
Imposition	1 - 3 percent
Facilitating Behaviors	5 - 15 percent
Content Development Behaviors	20 - 40 percent
Personal Response Behaviors	8 - 20 percent
Positive Affectivity Behavior	10 - 20 percent
Negative Affectivity Behavior	3 - 10 percent

Hughes found no significant differences between the rated "good" teachers and the "representative" teachers; (In the study twenty-five of the teachers had been rated good by the county school staff and ten

were selected that were considered representative of a single large school within the same school system.) however, when the thirty-five were ranked in three groups according to deviation from the mean of the six teaching records most like the model of good teaching, there were significant differences between the good and poor groups. The two groups differed in controlling functions, developing content, personal response and negative affectivity. No differences in groups were discovered on positive affectivity. Dominative functions were used excessively by all teachers. Hughes established that it was possible for one to describe many of the complexities of teaching by direct observation of classroom behavior (64).

However, Ryans points up the inadequacy of current evaluation in effective teaching in that relatively little progress has been made toward the adequate description of competent teaching or the identification of the effective teacher.

Ryans states:

Effective or ineffective teachers cannot be identified with any assurance because so little is known about how the various concepts of effective teaching actually are related to successful teaching in practice, and the validity of the various assumptions and opinions regarding teaching cannot be readily tested because there is little understanding, and no adequate measures of the criteria of teacher effectiveness. For the same reason we cannot test the validity of the hypotheses upon which our teacher curricula are based (106).

Four general types of measures of teaching efficiency are summarized by Barr:

1. those which study the teacher performance;
2. tests of qualities commonly associated with teaching success;
3. those examining mental prerequisites to teaching efficiency;

#### 4. pupil change as a measure of teaching efficiency (14).

A passage from the work of Arthur Combs will sum up the things said about effective teaching:

As we have seen, research on the competencies has been unable to isolate any common trait or practice of good teachers. But this unanimous failure in itself demonstrates an important fact, the fact that a good teacher is primarily a unique personality ... A good teacher is first and foremost a person, and this fact is the most important and determining thing about him. He has competence, to be sure, but not a common set of competencies like everyone else ... apparently, there can be no such thing as a good or bad method of teaching (34, p. 6).

It would seem from the above research findings that it is probably futile to attempt to build a composite profile of the "good" teacher. It seems more appropriate to attempt to identify a given set of competencies within a particular field of teaching and provide those experiences in a training program that would produce those competencies.

It seems evident from the information contained in this chapter that a concise profile of the effective teacher, or a definition of effective teaching, has not yet been formulated. There does appear to be some general conceptions about good teaching that are commonly held by most educators and probably should be included in any teacher education program without regard to the population the teacher will eventually be teaching.

The specific concern of most writers in the field of adult basic education is centered around the belief that this area of teaching requires special abilities that are peculiar to working with disadvantaged adults. They maintain that using public school teachers to teach adults, without the benefit of a special training program will be inadequate.

## CHAPTER III

THE IDENTIFIED NEEDED COMPETENCIES OF ADULT  
BASIC EDUCATION TEACHERS

The purpose of this study was to determine perceptions of the professional educational competency needs of the adult basic education teacher. This was accomplished by asking selected teachers of adult basic education in Oregon, Washington and Idaho what they perceived their competency needs to be and to judge the relative need of each competency on a five-point scale. In order to determine the competency needs the analysis of variance design was used in order to test the following hypotheses:

1. There are no significant differences in perceptions among the teachers in the three states regarding the needed competencies for adult basic education teachers.
2. There are no significant differences in perceptions among the teachers coming from different previous levels of educational experience.
3. There are no significant differences in interaction effect.

Hypotheses 1 stated: There are no significant differences in perceptions among the teachers in the three states regarding the needed competencies for adult basic education teachers. The test statistic for the hypothesis was the F statistic and the following formula was

$$F_{.05, 2, 60 \text{ d.f.}} = 3.15$$

used to determine hypothesis acceptance or rejection. In 92 of the competencies examined there were no significant differences between

the states and the null hypothesis was accepted. In eight of the 100 items the null hypothesis was rejected. Further analysis of these eight items is presented later in this chapter.

Hypothesis 2 stated: There are no significant differences in perceptions among the teachers coming from different previous levels of educational experience. The formula used to determine hypothesis acceptance or rejection in this case was also based on the F statistic and used the following formula:

$$F .05 1,60 \text{ d.f.} = 4.00$$

Competency 74 was the only one which showed a significant difference between levels by taking responsibilities for leadership in civic and community activities. Thus, the null hypothesis was accepted for the other 99 competencies.

Through an examination of the literature and research on adult basic education and discussion with teachers and directors of adult basic education programs it is immediately apparent that most people feel there are wide differences between elementary and secondary teachers in their abilities to be effective adult basic education instructors. Generally, it seems most people believe elementary certificated persons would be more effective teachers and would be more understanding of adult basic education students than secondary teachers. In fact, in a study by Burnett which was cited earlier, his impressions were that elementary teachers were more effective in working with adults.

Although this study did not attempt to compare teachers in effectiveness, it does not appear to support the above theory if one accepts the idea that there is a relationship between teachers perceived competency needs and their effectiveness.

Hypothesis 3 stated: There are no significant differences in interaction effect. The F statistic was used to determine hypothesis acceptance or rejection according to the following formula:

$$F_{.05, 2, 60 \text{ d.f.}} = 3.15$$

There were no significant differences in interaction among states and levels studied in 93 of the items. Therefore, the null hypothesis was accepted. There were significant differences in interaction and the null hypothesis was rejected in seven of the competencies. Table 1, which follows, shows the results of the hypotheses (F) testing.

TABLE 1. Results of Tests of Hypotheses (F)

Competency	States	Levels	Interaction
1	.5270	.0000	1.0946
2	1.3445	.1098	.3567
3	1.4538	.0923	.3000
4	.2268	.0000	.6804
5	.4649	.2980	.8702
6	1.7045	1.0909	.2727
7	.2176	.1832	2.0038
8	.1700	1.7957	.2975
9	.6553	.0922	.0000
10	.5268	.3659	1.6390
11	.2555	.7074	1.8275
12	.5102	.1276	1.1906
13	.2803	1.6919	3.1635*
14	1.0309	.0655	2.5641
15	.4031	.9375	.4594
16	.7200	.0000	2.5650
17	.1462	.4923	1.0692
18	.8632	2.7736	3.8349
19	.2616	.4747	.3003
20	.5948	.0637	.7648
21	.2479	.0763	.0191
22	2.0848	.7291	3.1557*
23	.2493	.4723	.8265
24	1.0286	.9918	1.9102
25	.0879	.2638	.6156
26	4.8400*	.6533	2.5733
27	.1180	.000	.6573
28	.1140	.4657	1.0644

TABLE 1. (Continued)

Competency	States	Levels	Interaction
29	.7761	.3731	.2388
30	1.1894	.0843	.0281
31	1.5000	.0496	.8306
32	3.9711*	.1561	.6763
33	.5558	1.0689	1.1971
34	.8577	.0000	.6697
35	.8050	.4571	.3563
36	.5175	.1663	.6653
37	.6505	.6825	2.3140
38	.3140	.0000	2.1977
39	1.5280	1.0746	1.0243
40	.5251	.5984	1.1113
41	.5333	.0000	.4000
42	1.3921	.0000	1.2626
43	1.4623	1.2211	.8593
44	4.3936*	.0000	.4105
45	.2677	.0510	1.9249
46	5.2279*	.7941	.0662
47	3.8657*	1.2090	2.8209
48	.1330	.7241	4.0936
49	.7028	.1678	.5140
50	4.1441*	.0000	2.1696
51	.5064	.4353	.2221
52	.2659	.1260	1.3017
53	.3356	.9707	1.8695
54	.3323	.1196	.1196
55	2.6717	.9973	.4802
56	1.0160	.0080	.0560
57	.4621	.0660	1.7384
58	.0872	.1816	.0291
59	3.5043*	.2069	3.8922*
60	.3509	.5547	.5547
61	2.9498	.2408	1.6856
62	1.0113	1.8186	.2876
63	1.2612	.0122	.6000
64	.6963	.3741	.4053
65	.1054	.0602	.7375
66	.5418	1.1057	.7408
67	.3927	.0000	.6873
68	1.2582	1.2277	2.9628
69	1.2308	.0989	.9231
70	.8076	.2656	.1700
71	.3407	.0110	.4066
72	.3682	.0086	.4196
73	.8647	1.8223	1.2366
74	.9839	4.1290*	4.1774*
75	.3252	.1045	.0000

TABLE 1. (Continued)

Competency	States	Levels	Interaction
76	3.4866*	.1930	1.5322
77	.4249	.5549	1.1012
78	.4907	.1680	.6923
79	1.6420	.6049	.7531
80	.2655	.2236	.6009
81	.0550	.0000	2.1468
82	.1973	1.2293	1.4115
83	.9808	.0108	.1401
84	.3714	.0286	2.6000
85	.3870	.0893	2.7089
86	.9918	.5329	.3109
87	1.7729	.5533	.4178
88	1.0317	.0136	.7059
89	.1398	.0968	2.1613
90	.0289	.0868	.3762
91	.8478	.0652	4.3696*
92	.5380	.0145	2.5444
93	.6357	3.2691	1.1200
94	.1319	1.6154	.2308
95	.2471	.4682	1.5217
96	1.6859	.0000	.3423
97	1.0762	.5795	.2247
98	.1812	.0604	.4228
99	.9240	.1027	1.3346
100	1.0704	.0874	1.3325

\*indicates that the F statistic was significant at the .05 probability level.

Table 2 shows the 25 competencies that were ranked the highest and the 25 that received the lowest scores when the mean score averages were computed. Numbers 12, 36, and 85 received the lowest scores. These competencies were: (12) use sociograms; (36) build a display; and (85) evaluate your subject matter teaching performance compared to college grades obtained in that subject.

The three competencies receiving the highest scores were 98, 41, and 2 which stated: (98) be stimulating in your work as a teacher; (40) make a classroom lesson meaningful to the individual student;

and (2) make a classroom demonstration meaningful to the individual student.

TABLE 2. Twenty-five Highest and Twenty-five Lowest Competencies (States)

Competency	Lowest	Competency	Highest
12	1.85	98	4.75
36	2.01	41	4.63
85	2.25	2	4.46
33	2.33	27	4.46
70	2.38	11	4.36
47	2.41	25	4.35
97	2.41	80	4.23
34	2.46	43	4.21
74	2.56	3	4.20
67	2.60	84	4.18
9	2.61	100	4.13
5	2.65	46	4.10
20	2.65	6	4.06
28	2.65	65	4.06
17	2.66	10	4.05
1	2.70	54	4.01
78	2.71	21	3.93
79	2.71	88	3.91
15	2.76	86	3.83
64	2.76	95	3.83
13	2.78	96	3.83
42	2.80	8	3.81
58	2.95	92	3.81
94	2.96	38	3.80
60	2.98	71	3.78

In an attempt to analyze and interpret the data in a more meaningful way the competencies were grouped into the following categories for discussion:

1. Community related - those competencies dealing with public relations, staff relations, advisory councils, understanding of state board plans.
2. Evaluation - student testing procedures and measures of teacher effectiveness.

3. Teaching strategies - demonstrations, motivation, discussion procedures, and so on.
4. Clerical - budget keeping, student record keeping, anecdotal records, etc.
5. Selection and Development of educational materials-audio-visual materials, field trips, and textbooks.
6. Student - counseling abilities, student problems, and understanding of student background.
7. Teacher - knowledge of history of education, of vocational education, of goals of education.
8. Vocational Information - competencies dealing with abilities to find jobs for students, provide occupational information, etc.
9. Miscellaneous - competencies that did not readily seem to fit in any of the above categories.

Competencies listed under the category of community-related were: 1, 7, 19, 33, 45, 68, 71, 72, 74, 79, 82, 89, 90, and 97. An example of these would be (1) participate in the civic and community activities not related to the school; and (71) utilize the services of state and local agencies responsible for adult basic education. Of the 14 competencies in this category, three ranked in the lowest one-fourth and only one, number 71 above, ranked in the highest one-fourth of the 100 competencies examined when mean-score averages are considered. It would seem this area of a training program would be in a somewhat neutral position of emphasis. In fact, only three of the competencies received a composite score of 3.5 or better.

In the second category, Evaluation, only one of the competencies (100) evaluate teaching effectiveness through student achievement received a composite mean score of 3.5 or higher. Of the competencies, 16, 26, 50, 59, 61, 63, 76, 83, 99 and 100, the remaining nine received scores between 2.98 and 3.49.

Teaching strategies appears to be the area in which teachers see the greatest amount of need for competency. There were 21 competencies grouped in this category: 2, 3, 6, 11, 27, 30, 40, 41, 43, 44, 54, 65, 69, 75, 77, 80, 92, 96, and 98. Out of that total 14 were among the top one-fourth of the 100 competencies studied, and only four received composite mean scores below 3.5. This seems to be in agreement with the problem of adult basic education as outlined earlier when it was pointed out that the two major problems were locating effective teachers and preparing and finding adult-oriented materials. Those competencies listed under teaching strategies are those often found in studies of teacher effectiveness and seem to be the area in which teachers feel they need the highest degree of proficiency.

The clerical competencies (15, 24, 42, 62, and 94) are probably seen by teachers as the least necessary in which to maintain a degree of competency. This is not surprising as teachers and the profession in general seems to be moving away from having teachers do many of the clerical tasks previously expected. Three of the five competencies in this area ranked in the lowest one-fourth in composite mean scores. Competency 62 (Maintain the necessary report forms required by state agencies) received the highest score, and this could be more as a result of reports teachers need to keep because of rules imposed from external sources rather than a felt need of their own.

Competencies related to selection and development of educational materials and expenses (4, 8, 9, 18, 21, 25, 36, 49, 52, 53, 81, and 84) received comparatively high scores. Of the 12 competencies in this group, six received mean score averages of 3.5 or higher. Two of the 12 received scores that would rank them among lowest 25 competencies examined, and four received scores placing them in the top 25 of those studied. Once again, this is in accord with much of the writing in adult basic education which has expressed the point of view that selection, availability, and preparation of adult materials is the second major problem facing adult basic education.

There were 12 competencies which related to the student needs and background (29, 35, 64, 73, 88, and 12). In this area, three received a composite mean score of 3.5 or higher. Two were among the 25 lowest, and only one among the 25 highest. It is interesting to note that much of the literature seems to reflect a concern that adult basic education teachers will be incapable of identifying with and understanding their students. The scores on the competencies grouped in this area of concern show that teachers do not seem to place a high priority on this need, and there is a disparity between the concerns reflected in the research and literature studied and the opinions of the teachers.

There were 12 competencies associated with the educational and personal background of the teachers (5, 10, 14, 23, 34, 37, 38, 39, 60, 67, 85, and 91). In this group, four were ranked in the lowest 25, and two received scores that would place them in the top 25. There were five competencies in this category which received mean score averages of 3.5 or higher. Generally those competencies which received low

scores were related to the history and philosophy of education. Those obtaining high scores were related to an understanding of the goals of education, and the ability to use personal avocational interests to enrich instruction.

There were six competencies grouped in the area of vocational or occupational information. None of the competencies in this category were ranked among the highest 25, and only two received composite mean scores of 3.5 or better. There were three competencies that received scores that would place them among the lowest 25. This data is unusual because when one examines the total adult basic education spectrum the emphasis is always on eventually leading the student into meaningful work. A person wonders whether the teachers do not see this as an ultimate goal or whether they feel it should be or is a part of a program following the segment they teach. It would seem further study is in order to determine if the teachers see adult basic education as simply literacy instruction rather than the total broad program as outlined in most state courses of study.

There were nine competencies that did not seem to fit in any of the above eight groups. These competencies were related to maintenance of discipline, teacher liability, classroom organization, constructing daily lesson plans, dealing with administrator's, special education students, and understanding of the state's plan for adult basic education. None of these competencies were ranked among the top 25, and only one, take the initiative in dealing with the administrator, received a mean score average of 3.5 or better. Four of these competencies were ranked in the lowest 25. These were the competencies related to classroom discipline, teacher liability, and making daily lesson plans.

The competencies which received a composite mean score of 3.5 or better among the three states were tabulated and are shown in the Appendix. A 3.5 mean score average would rank between, three, moderate proficiency, and four, considerable proficiency, on the five-point scale used on the questionnaire. Of the competencies, 42 received a composite mean average of 3.5 or better. Those competencies which ranked the highest were generally in the area of teaching strategies or methods. Those receiving the lowest scores were usually found in the areas outside of the teacher-pupil relationship, or those duties usually considered non-teaching.

There were significant differences among the states according to the F-statistic in the following competencies:

- 26 Develop objective tests to measure achievement.
- 32 Take the initiative when dealing with administrator.
- 44 Select standardized tests to measure achievement.
- 46 Develop appropriate course objectives.
- 47 Conduct community surveys for purposes of improving instruction.
- 50 Assess the validity of teacher made tests.
- 59 Assess the reliability of teacher made tests.
- 76 Develop performance tests to measure achievement.

The analysis of variance test does not provide for individual mean comparisons with every other mean being considered; it only looks at the overall group of means together. Therefore, on the eight items where a significant difference was indicated the Least Significant Difference Test was used to determine where the least significant

difference exists and to make comparisons as to which of the means are different from one another. The Least Significant Difference Test was computed by use of the following formula:\*

$$\text{L.S.D.} = t_{.05} \sqrt{2s^2/N} \quad s^2 = \text{MS error}$$

There were seven of the competency items which a significant difference in interaction was present. These were competencies:

- 13 Aid the student in obtaining work placement during adult basic education classes.
- 18 Develop visual materials for instructional purposes.
- 22 Interpret the results of vocational interest inventories.
- 48 Use the information contained in professional journals for personal improvement purposes.
- 59 Assess the reliability of teacher made tests.
- 74 Take responsibilities for leadership in civic community activities.
- 91 Use the information contained in professional journals for the improvement of instruction.

The F statistic provides an indication of the significance of the interaction effects. It does not indicate where the interaction occurs if it is significant.

An interaction which is found to be significant is one that is too large to be explained on the basis of chance. When interaction is present, the dependent variable is found to have a different order of magnitude on levels of one of the independent variables in the study.

---

\*See the Appendices for the computed Least Significant Difference Tests.

Interaction can be discussed in two basic frames of reference, it is either ordinal or disordinal. If the computed F value is smaller than the tabular value for the interaction source of variation, interaction can be considered to be non-existent.

When ordinal interaction is present the existing means may indicate clearly that one variable is superior to another variable on a certain level, but that the difference is not the same over all levels.

An interaction is considered to be disordinal when one treatment is significant for one level of a variable but a second treatment is better for a second level of the variable.

When interaction is present by plotting the means it can be determined whether the type of interaction is ordinal or disordinal and provides a comparison among the levels being studied. A significant interaction effect is ordinal when the plotted mean lines do not cross and are not parallel. In disordinal, the interaction is such that the plotted mean lines actually cross one another.

Those seven competencies that showed significant interaction have been plotted and those graphs are found in the Appendix.

The following ten competencies were those perceived to be most necessary by the teachers and are listed below in order of their ranking according to mean score averages:

- 98 Be stimulating in your work as a teacher.
- 41 Make a classroom lesson meaningful to the individual student.
- 2 Make a classroom demonstration meaningful to the individual student.
- 27 Motivate the student in the classroom.

- 11 Provide appropriate practice for classroom learning experience.
- 25 Select instructional materials for the classroom.
- 80 Motivate the student in the classroom.
- 43 Provide appropriate practice for skill learning experiences.
- 3 Use questions during the classroom presentations to aid student learning.
- 84 Select instructional materials for the classroom.

It is interesting to note that motivation of the student, and selection of materials were repeated questions and in both cases received high scores.

The ten competencies ranked the highest would indicate that teachers are much concerned with making the lessons meaningful, understand the student in terms of motivation, understanding how to conduct adequate discussions, and the selection of classroom materials.

## CHAPTER IV

## SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

This chapter provides a summary of the study, the conclusion drawn, the implications of the data, and recommendations for further study.

Summary

The purpose of this study was to determine the perceptions of the professional educational competency needs of the adult basic education teacher. The following factors contributed to the justification of such a study:

1. The overwhelming number of illiterates or functional illiterates in our nation, or the number of persons who have not achieved a level of education which allows them to function adequately in today's society.
2. An expressed need by many of the current writers in the field of adult basic education for a specially trained teacher.
3. That little has been done to identify and define the type of training or the competencies needed by adult basic education teachers.
4. The lack of knowledge of the perceptions of those teachers presently working in the field of adult basic education regarding their stated competency needs.

The preliminary phase of the study included a review of the literature to provide a further understanding of the adult basic

education program and of the problems encountered within that program.

Areas of investigation that were reviewed included:

1. Material that has been written on the sub-culture of poverty that has developed in America.
2. Studies of the characteristics of the disadvantaged adult.
3. The available information regarding the kind of teacher needed for the successful operation of adult basic education programs.
4. Studies attempting to determine a profile of the effective teacher, or to define the concept of effective teaching.

The second phase of the study was an attempt to determine the relative importance of 100 selected competencies according to the perceptions of teachers presently teaching in adult basic education. It also seemed necessary to determine if there were differences in the perceptions of elementary trained teachers when compared with those with secondary training.

The study was limited to a random selection of teachers in the states of Oregon, Washington, and Idaho. The teachers were divided according to whether they held an elementary or secondary public school teaching certificate prior to the random selection. They were then sent the competency list and asked to rank each one of the five-point scale.

Analysis of variance and the F test for significance were employed to determine any significant differences in the ratings of the competencies by the teachers, and to determine the presence of interaction.

The .05 level of confidence was chosen as a basis for rejecting the null hypotheses of no differences in opinion among the population samples. When significant differences were found to exist, either further testing, or the plotting of interaction was employed; to determine significant differences between individual pairs of means, or to determine where the interaction occurred.

### Conclusions

Both the review of the literature and the adult basic education teacher competency survey have provided data regarding the needed competencies of adult basic education teachers. These findings should provide valuable guidance in the structuring of adult basic education teacher preparation programs.

The literature indicates the demand for adequately prepared and competent adult basic education teachers will increase markedly in the next decade, and is currently a problem of serious magnitude. In fact, the demand will undoubtedly increase because the size of the disadvantaged population is expected to increase.

The data indicated that the following conclusions can be supported from the findings of this study:

1. Generally, there were no differences in the perceptions of adult basic education teachers as to their competency needs in the three states studied, as indicated by the mean scores.
2. It would seem that the competency needs would be the same, and the curriculum for competency development would be

similar, regardless of whether the trainee held elementary or secondary certification. There was only one competency that indicated certification had any effect on teachers judgments of its relative importance.

3. Generally, there were no interaction differences according to the hypotheses testing.

### Implications

Adult basic education is a relatively new field and much further research is needed before an accurate profile of the adult basic education teacher can be drawn. The following considerations, however, seem to be indicated as a result of this study. However, the limitations of the study are such that each conclusion should be subjected to further verification before it can be accepted with complete confidence.

The 42 competencies receiving a ranking of 3.5 or higher should provide the basis for concluding that in the perception of present teachers these represent essential competencies of the adult basic education teacher. These competencies should be of use in determining the relative value of specific courses or course content in developing the adult basic education teacher preparation program.

The knowledge that there seems to be little difference in the perceived competency needs of teachers regardless of certification may be evidence of consistency of teaching requirements, regardless of the level, including adult basic education. One might well conclude that there are commonalities for all teaching and specialized knowledge required for special levels. This would seem to indicate that adult

basic education teachers need general preparation as teachers and specialized training for adult education beyond the commonalities. Those 42 competencies receiving a mean score average of 3.5 or higher could provide the essentials to such program development. At the same time, the limitations of this study should be kept in perspective, and further investigation will be necessary in order to determine if some of the competencies which received a low score should be included in an adult basic education teacher training program.

There seems to be little concern about the teacher's knowledge of the content which is to be imparted in adult basic education. The emphasis or concern would appear to lie in a second area, namely, the design, understanding, and promotion of the adult basic education program. The teachers who participated in the study seem to view adult basic education as a sequential set of events through which the disadvantaged student moves with literacy training the beginning segment of a total program.

Although the process of teaching is obviously important in this sequence, the teachers must also have a high order of knowledge about the content. This factor should not be overlooked in the construction of a teacher education program.

The chances are high that programs of basic education for adults will increase significantly in the next few years. With the increased complexity of most jobs which will require a higher degree or level of education, coupled with the fact that many students are dropping out of high school each year, the demand for competent and well-trained teachers will also increase.

### Recommendations

The following recommendations seem possible as a result of this study:

1. That the findings of this study be made available to adult basic education directors in order for them to appraise existing teacher-training workshop programs.
2. The findings should be made available to universities, or other institutions, that are planning to become involved in the preparation and training of adult basic education teachers or to those responsible for the partial training of adult basic education teachers.
3. Additional effort should be made to further identify competencies needed by adult basic education teachers.
4. Although organizing and utilizing adult basic education lay advisory committees received low ranking, this area probably ought to be investigated further, including the identification, importance, and uses of available resources within the community.
5. That studies should be conducted among adult basic education students in an attempt to determine their needs. It would seem an important next step would be to ascertain if there are contradictions between what the student perceives his own educational needs to be and what the teachers perceive as the most important needs of the student.
6. That this study be extended to a larger population, possibly with the inclusion, for comparison purposes, of adult basic

education directors. Consideration should also be given to the use of a larger geographic area in further studies.

7. That studies be undertaken to determine the various kinds of learning experiences necessary to acquire the knowledge, skills, and attitudes that are necessary for the effective adult basic education teacher. In other words, an attempt needs to be made to understand how the identified competencies can be translated into a teacher training program.

It is believed that investigation in these directions will provide information that is needed in order to provide training programs in adult basic education which will closely relate to the needs of the disadvantaged population or some other target population.

## BIBLIOGRAPHY

1. Adair, J. B. Study of illiteracy in Texas as related to vocational education. Austin: Texas Education Agency, 1964.
2. Adult Basic Education in Oregon. Prepared for the Oregon Board of Education by the Division of Vocational, Adult and Community College Education, School of Education, Oregon State University. July, 1969.
3. Adult Basic Education-Meeting the Challenge of the 1970's. First Annual Report of the National Advisory Committee on Adult Basic Education to the President of the United States and the Secretary of Health, Education and Welfare. Office of Education. Washington, D. D. August 27, 1968.
4. Aker, George F. The identification of criteria for evaluating graduate programs in adult education. Ph.D. thesis. Madison, University of Wisconsin, 1962. 383 numb. leaves. (Microfilm)
5. Aker, George F. Strategies of leadership for adult basic education. Florida State University, Tallahassee. July, 1968. 46 p.
6. Allen, D. W. An experiment in education with the Laubach literacy course of study on films at the Ohio State Reformatory. Syracuse, New Readers Press, 1961.
7. Anderson, Darrell and John A. Niemi. Adult education and the disadvantaged adult. ERIC Clearinghouse on Adult Education. Syracuse, 1969. 96 p.
8. Anderson, H. (ed.) Creativity and its cultivation. New York: Harper and Brothers, 1959.
9. Anderson, H. and E. Brewer. Studies of teachers classroom personalities, I: dominative and socially integrative behavior of kindergarten teachers. Applied Psychology Monographs, 1945, no. 6.
10. Anderson, H. and E. Brewer. Studies of teacher's classroom personalities, II: Effects of teacher's dominative and integrative contacts on children's behavior. Applied Psychology Monographs, 1946, no. 8.
11. Argyris, Chris. Inter-personal competence and organizational effectiveness. Homewood, Illinois, 1962. 292 p.
12. Barnes, Robert F. and Andrew Hendrickson. A review and appraisal of adult literacy materials and programs. Columbus: Ohio State University Research Foundation. 1965.

13. Barr, A. S. et al. *Supervision*. Appleton Century-Crofts, Incorporated. New York, N. Y. 1947. 381 p.
14. Barr, A. S. issue editor. Wisconsin studies of the measurement and prediction of teacher effectiveness: A summary of investigations. *Journal of Experimental Education*. Volume 30. September, 1961. pp. 5-156.
15. Barr, A. S. *Teacher effectiveness: A summary of investigations*. Madison, Wisconsin: Dembar Publications, Inc. 1961.
16. Berg, Paul Conrad. *Illiteracy at the crossroads*. *Adult Leadership*. June, 1960. pp. 47-48.
17. Black, Mildred H. Characteristics of the culturally deprived child. *Reading Teacher*. Vol. 18, March, 1965. pp. 465-471.
18. Branch of Adult Education. *Adult Learning*. Pre-Institute Seminar, Wayne State University, May, 1967. United States Office of Education. 84 p.
19. Brazziel, W. F. Factors in workers decisions to forgo retraining. Washington, D. C. Office of Manpower, Automation and Training. U. S. Department of Labor, 1964.
20. Brice, Edward Warner. Undereducated in our American society. *Illinois Educational Journal*. May, 1963. pp. 387-389.
21. Brooks, Lyman B. et al. Re-education of unemployed and unskilled workers. Norfolk: Norfolk Division, Virginia State College, 1965.
22. Broudy, Harry S. Laboratory, clinical and internship experiences in the professional preparation of teachers. An address to the National Laboratory of School Administrators Association. Chicago, February 18, 1964.
23. Bruning, James L. and B. L. Kintz. *Computational handbook of statistics*. Scott-Foresman and Company. 1968. 269 p.
24. Bunger, M. A descriptive study of operation alphabet in Florida and an evaluation of certain procedures employed. Unpublished Ph.D. dissertation, Florida State University, 1964.
25. Burman, A. C. Aspirational fulfillment among adults on lower socio-economic levels with implications for adult education. Unpublished Ed.D. dissertation, Indiana University, 1958.
26. Burnett, Richard W. Basic literacy projects for adults. A reading specialists comments. Printed in *Basic Education for the Disadvantaged Adult*. Houghton Mifflin Company. Boston, 1966. 411 p.

27. Butcher, Donald G. and Clyde Letarte. Teacher training for adult basic education. Perceptions of a state director of adult education. *Adult Leadership*, June, 1968. pp. 81-82.
28. Chamberlain, Martin. The competencies of adult educators. *Adult Education*. 11 (2): pp.78-83. 1961.
29. Chilman, Catherine and Marvin B. Sussman. Poverty in the United States in the Mid-sixties. *Journal of Marriage and the Family*. November, 1964.
30. Clark, S. D. The dynamics of vocational adjustment. N. Y. Harper and Brothers, 1942.
31. Cloward, R. A. and J. A. Jones. Social class: educational attitudes and participation. *Education in depressed areas*. A. H. Passow (ed.) New York: Columbia University, 1963. pp. 190-216.
32. Cohen, A. K. and H. M. Hodges, Jr. Characteristics of the lower blue-collar class. *Social Problems*. 10:3-3. Spring, 1963.
33. Cohen, Rosalie. The relation between socio-conceptual styles and orientation to school requirements. Paper presented at the twenty-sixth annual meeting of the society of applied anthropology. May, 1960.
34. Combs, Arthur W. The professional education of teachers. Boston, Allyn and Bacon, Inc. 1965. 400 p.
35. Courtney, Wayne E. A conceptual basis for developing curricula in teacher education programs for occupational education. *Memonomie, Wisconsin*. 1966. 47 p. (Stout State University. Graduate Studies in Education. Vol. III, No. 2.)
36. Crabtree, Arthur. War on poverty. *Adult Leadership*. 15:15-16, May, 1966.
37. Curry, Robert L. Adult literacy-progress and problems. December, 1966. 9 p. United States Office of Education publication.
38. Detroit Area Manpower Development Pilot Project. Detroit, Research Report No. 1, 1967.
39. Derbyshire, R. I. The sociology of exclusion: implications for teaching adult illiterates. *Adult Education*. 17:3 Autumn, 1966.
40. Division of Adult Education Programs. Program summary of adult basic education programs. United States Office of Education, March, 1967. 15 p.

41. Dorland, James. Excerpt from adult basic education--yesterday, today, and tomorrow. Workshop in Adult Basic Education: Workshop Report and Resource Document. Columbus: College of Education, Ohio State University, 1968. pp. 12-13.
42. Droper, Dale C. Education for work. National Association for Secondary School Principals. 1967. 115 p.
43. Edberton, Harold A. and Milton L. Blum. Illiteracy-literacy requirements of jobs. Personnel and Guidance Journal. May, 1954. pp. 524-527.
44. Education for the culturally disadvantaged. Proceedings of the National Conference on Educational Objectives for the Culturally Disadvantaged. South Central Regional Education Laboratory. 1967.
45. Fay, Jean B. Psychological characteristics affecting adult learning. Adult Leadership. December, 1964. p. 172.
46. Flanagan, John C. The critical-requirement approach to educational objectives. School and Society 71 (1849): 321-324. 1950.
47. Flanders, Ned A. Personal-Social anxiety as a factor in experimental learning situations. Journal of Educational Research. Volume 14, October, 1951. pp. 100-110.
48. Flanders, Ned A. Some relationships among teachers influence, pupil attitudes, and achievement. Contemporary Research on Teacher Effectiveness. Edited by Bruce J. Biddle and William J. Ellena (New York: Holt, Rinehart and Winston, 1964). 230 p.
49. Flanders, Ned A. Teacher and classroom influences on independent learning. Paper Delivered at the Seventh Curriculum Research Institute of the Association for Supervision and Curriculum Development, 1961.
50. Florida State University, Department of Adult Education. Adult basic education curriculum and its development. Selected papers presented at Southeastern Adult Basic Education Teachers Training Institute, Florida State University, 1967. Johns, Irwin and Henry Brody (eds.).
51. Freeman, Howard E. and Gene Kassebaum. The illiterate in American society, some general hypotheses. Social Forces. May, 1956. p. 371.
52. Frumkin, Robert M. Dogmatism, social class values, and academic achievement in sociology. Journal of Educational Sociology. Volume 34, May, 1961. pp. 398-403.

53. Getzels, J. W. and D. W. Jackson. The teacher's personality and characteristics. Handbook of Research on Teaching. American Educational Research Association. Edited by N. L. Gage. Chicago. Rand McNally, 1963.
54. Ginzberg, Eli and Douglas W. Bray. The uneducated. Columbia University Press, N. Y., 1953. 246 p.
55. Ginzberg, Eli. 10,000,000 United States illiterates. Americas. November, 1958.
56. Grattan, H. C. In Quest of Knowledge. New York: Association Press, 1955.
57. Greenleigh Associates. Field test and evaluation of selected adult basic education systems. New York. September, 1966. 133 p. Reviewed in William S. Griffith, Adult Education 18:119-125. Winter, 1968.
58. Haggstrom, Warren. Poverty and adult education. Adult Education. Spring, 1965. pp. 145-160.
59. Hansen, Kenneth. Public education in american society. Englewood cliffs, N. J. Prentice-Hall, Inc. 1956.
60. Harrington, Michael. The other America: poverty in the United States. New York, The Macmillan Company. 1963.
61. Heading, Harold W. Missouri adult vocational-literacy materials development project. August, 1967. United States Office of Education. 180 p.
62. Hillson, Maurie et al. Education and the Urgan Community. American Book Co., 1969. 506 p.
63. Hiloway, Tyrus. Handbook of educational research. Houghton-Mifflin Company, 1969. Boston. 117 p.
64. Hughes, M. Development of the means of assessment of the quality of teaching in elementary schools. Salt Lake City, University of Utah Press, 1958.
65. Jencks, Christopher. Education and the urban community. Slums and schools. American Book Company, 1969. N. Y. 506 p.
66. Johnston, John W. C. and J. Ramon Rivera. Volunteers for learning. Chicago: Aldine Publishing Company, 1965.
67. Jones, R. D. The economics of discrimination. Social Problems. A Canadian profile. Laskin, R. (ed.) New York: McGraw-Hill, 1964. pp. 91-94.

68. Knowles, Malcolm S. Adult education movement in the United States. Boston University. Holt-Rinehart and Winston. New York. 1962.
69. Knowles, Malcolm S (ed.) Handbook of Adult Education in the United States. Chicago. Adult Education of the U.S.A. 1960. 624 p.
70. Knowles, Malcolm S. Program planning for adults as learners. Adult Leadership 15:8. pp. 102-108. February, 1967.
71. Knox, Alan B. Adult basic education. Columbia University. New York Teachers College. November, 1967.
72. Krathwohl, David R., Benjamin S. Bloom and Bertram B. Masis. Taxonomy of educational objectives, the classification of educational goals. Handbook II: Affective Domain. New York, David McKay. 1956. 196 p.
73. Lanning, Frank W. and Wesley A. Many. Basic education for the disadvantaged adult. Houghton-Mifflin Company. Boston, 1966. 411 p.
74. Lewin, K. Time perspective and morale. Resolving Social Conflicts. New York: Harper and Brothers, 1948. pp. 103-124.
75. Lippitt, R. and R. K. White. The social climate of children's groups. Child Behavior and Development. Edited by R. G. Barker, and others. New York: McGraw-Hill Book Company, 1943. pp. 458-508.
76. Mager, Robert F. and Kenneth Beach, Jr. Developing vocational instruction. Fearon Publishing Co., 1967. 83 p.
77. Management Technology, Inc. Abstract of a conceptual model of an adult basic education evaluation system. Adult Education Branch, Division of Adult Education Programs. June, 1967.
78. Manpower Research Programs. Washington, D. C. United States Government Printing Office, 1966.
79. Marshall, Jon C. and Patrick O. Copley. Problems of adult basic education teachers. Adult Leadership, Vol. 16, pp. 55-61. June, 1967.
80. McGraw-Hill, Inc. Educationally deficient adults. Information and training services and the United States Office of Education Division of Vocational and Technical Education under Contract OE 4-99-027. Washington, D. C. U. S. Government Printing Office, 1964. 60 p.
81. Miller, Frederick E. There is a need for militancy in adult basic education. Adult Leadership, June, 1968. pp. 68-70.

82. Miller, Harry L. Teaching and learning in adult education. The Macmillan Company. New York, 1967. 374 p.
83. Munroe, W. S. Encyclopedia of Educational Research. New York: The Macmillan Company, 1950. pp. 22-31.
84. National Association for Public School Adult Education. Adult basic education. A guide for teachers and teacher trainers. Washington, D. C., July, 1969.
85. National Association for Public School Adult Education. A Department of the National Education Association. In-service training for teachers of adults. Washington, D. C., 1961.
86. National Center for Educational Statistics. Basic education program statistics-students and staff data. July, 1967 to June, 1968.
87. Newman, Marjorie. A study of the relationship of teacher and student values, attitudes, and perceptions of students problems to achievement among adult basic education students. M.S. thesis, Tallahassee, Florida State University, June, 1969. 102 numb. leaves.
88. Niemi, John A. and Catherine V. Davison. The adult basic education teacher: A model for the analysis of training. Adult Leadership, Volume 18, number 8, February, 1971. pp. 246-249.
89. Nichols, Charles Wesley. An analysis of the tasks of selected Ohio vocational trade and industrial education instructors. Ed.D. thesis. Cincinnati, University of Cincinnati, 1964. 224 numb. leaves.
90. Nordlie, David A. The competent trainer. Training and Development Journal, 1967. 21(5):51-54.
91. Ober, Richard. The effect of training in interaction analysis on the verbal teaching behavior of pre-service teachers. Paper presented to American Research Association. Ohio State University. February, 1966. 36 p.
92. Ohliger, William. Workshop in adult basic education-workshop report and resource document. Ohio University, Columbus, 1967.
93. Openshaw, Karl M. The development of a taxonomy for the classification of teacher classroom behavior. Columbus, Ohio State University, 1966. 223 p.
94. Orata, Pedro T. The paradox of ignorance. School and Society. June 10. pp. 356-358.
95. Patterson, Rose Mary. Guidelines for a Taxonomical appraisal of an adult basic education program. Adult Leadership. Volume 16, number 10. April, 1968. pp. 320-325.

96. Pearce, Frank C. Basic education teachers--seven needed qualities. *Adult Leadership*. June, 1967. 16:20-26.
97. Perkins, H. V. Climate influences group learning. *Journal of Educational Research*. October, 1951. Volume 45, pp. 115-119.
98. Popham, James V. and Eva L. Baker. A performance test of teaching effectiveness. Paper presented to American Education Research Association. Chicago, Illinois. February 19, 1966.
99. Porter, W. F. et al. Food buying knowledge--concerns, practices: An evaluation of the marketing information for consumers program in the Wheeling Steubenville area. Morgantown, Agricultural Experiment Station, West Virginia University, Bulletin 456, May, 1961.
100. Ramsey, Ralph J. Forms and scope of poverty in Kentucky. Lexington: Cooperative Extensive Service Research Dept. Series no. 10. 1967.
101. Riesman, Frank. Lessons of poverty. *American Education*. U. S. Office of Education. Volume 1. February, 1965. pp. 21-23.
102. Rosenfeld, Howard and Alvin Zander. Dimensions of teacher attitudes. *The Journal of Educational Psychology*, Vol. 52. February, 1961. p. 6.
103. Rummel, Francis J. An introduction to research procedures in education. New York, Harper and Row, 1964. 379 p.
104. Ryan, Timothy F. ESOL and the adult basic education teacher. *Adult Leadership*. June, 1969. 18:57-58.
105. Ryans, David G. Assessment of teacher behavior and instruction. *Review of Educational Research*. October, 1963. Vol. 33, number 4. pp. 415-441.
106. Ryans, David G. Characteristics of teachers. Washington, D. C. The American Council on Education, 1960. p. 16.
107. Schneiderman, L. Value-Orientations: Preferences of Chronic Relief recipients. *Social Work*. Volume 9. July, 1964.
108. Sears, Pauline S. and Vivian S. Sherman. In pursuit of self-esteem. Belmont, California: Wadsworth Publishing Company. 1964.
109. Sedgwick, Lorry K. and E. Wayne Courtney. Elements of research foundations. University Book Store, Menomonie, Wisconsin. Stout State University. 1969.
110. Skene, Dora L. The culturally deprived in school and society, selected approaches. Toronto Research Dept. Board of Education of the City of Toronto. April, 1966.

111. Slocum, Walter L. Occupational careers. Aldine Publishing Company, Chicago. 1966. 272 p.
112. Smith, B. Othanel and Saul B. Cohen and Arthur Pearl. Teachers for the real world. The American Association of Colleges for Teacher Education. 1969. Washington, D. C. 185 p.
113. South Central Regional Educational Laboratory. Education for the culturally disadvantaged-proceedings of the national conference on educational objectives for the culturally disadvantaged. United States Office of Education. 1967. 116 p.
114. Summers, Edwards. Job opportunities through better skills. Adult Leadership. Volume 15. May, 1966. pp. 3-4.
115. Super, D. E. The dynamics of vocational adjustment. New York, Harper and Brothers, 1942.
116. Taylor, Ronald G. Personality traits and discrepant achievement. Journal of Counseling Psychology. Volume 11. January, 1964. p. 76.
117. Turner, Richard L. and Nicholas A. Fattu. Skill in teaching a reappraisal of the concepts and strategies in teacher effectiveness research. Bulletin of the School of Education. Bloomington, Indiana University. Vol. 36, number 3. May, 1960.
118. U. S. Congress. Senate. Committee on Labor and Public Welfare. Notes and working papers concerning the administration of programs authorized under vocational education act of 1963, Public Law 88-220. Prepared for the Subcommittee on Education. Washington, D. C., 1968.
119. Ulmer, Curtis. Teaching the disadvantaged adult. National Association for Public School Adult Education. 1969. 98 p.
120. Valentine, Charles A. Culture and poverty. Chicago, The University of Chicago Press, 1968. 216 p.
121. Venn, Grant et al. A comprehensive plan for solution of the functionally illiterate problem, a report on the present, a plan for the future. Management Technology, Inc. Washington, D. C. March, 1968. 46 p.
122. Venn, Grant. Man, education and work. Washington, D. C. American Council on Education. 1964. 184 p.
123. Verner, Coolie. Adult illiteracy 1921-1961. The Journal of Education of the Faculty of Education.

124. Walker, Robert A. Rehabilitation of the hard-core unemployed. Minneapolis Rehabilitation Center, Inc. April, 1965.
125. Weaver, Frank B. New approaches to teaching adult basic education. State Board. Raleigh, N. C. 1969.
126. Wenrich, Ralph C. Development of local leadership. American Vocational Journal. Volume 41. December, 1966. pp. 26-28.
127. Wenrich, Ralph C. and Earl W. Shaffer. High school principals perceptions of the roles and responsibilities of persons who would be charged with the responsibility for leadership in the development of occupationally oriented programs in high schools. University of Michigan. September, 1965. 30 p.
128. Whipple, James B. Especially for adults. Center for the Study of Liberal Education for Adults. Chicago, Illinois. October, 1967. 70 p.
129. Witty, Paul A. Guiding principles in Reading Instruction. Education. April, 1965. pp. 474-80.
130. Young Workers: Their Special Training Needs. Washington, D. C. Manpower Research Bulletin, Number 3. 1963.
131. Zintz, M. V. (ed.) Trainers of teachers of undereducated adults. Albuquerque: University of New Mexico, 1965.

APPENDIX A  
THE COMPETENCY QUESTIONNAIRE

## APPENDIX A

Dear Education Colleague:

This is one part of a study being made to assess the dimensions of the adult basic education teaching occupation. From this study we hope to identify the needed competencies of the adult basic education teacher and to translate these competencies into an undergraduate teacher preparation program.

Would you please complete each item with a response which reflects your own situation and your own experience in adult basic education teaching. This questionnaire will take you about 20 minutes to complete. I am attaching a self-addressed, stamped envelope for your convenience in mailing. In the event that you do not wish to participate in this study, please return the incomplete instrument in the self-addressed envelope. All responses will be confidential. Thank you for your cooperation.

Richard L. Smith

Keith Goldhammer, Dean  
School of Education

ADULT BASIC EDUCATION  
NEEDS STUDY INSTRUMENT

DIRECTIONS: Following is a list of proficiency items related to training needs and requirements for teachers of adult basic education. For each statement (item) please circle the rating (1 2 3 4 5) which best indicates YOUR FEELINGS about the necessity for the knowledge or skill with regard to your job. The following key should be used for the assignment of the ratings:

1. My job requires no proficiency with this activity.
2. My job requires slight proficiency with this activity.
3. My job requires a moderate proficiency with this activity.
4. My job requires considerable proficiency with this activity.
5. My job requires complete proficiency with this activity.

Do not take too much time in thinking about any particular item. Please do not leave out any item--there are no right or wrong answers. The primary concern is how you feel about the training requirements for adult basic education teachers.

Here is an example:

1. Develop objective tests to measure achievement      1   2   3   4   (5)

This person, in marking the '5' rating, felt that his job required complete proficiency with this activity. If some item does not apply to your particular job, circle number '1'.

Put a circle around the answer which comes closest to representing your feeling. Even if your exact feeling is not found in one of the choices, pick the one which comes closest to your true feeling. Sometimes it will be difficult to make up your mind, but do the best you can and do not leave out any items.

## TEACHER EDUCATION INSTRUMENT

What proficiency must you have in your work as a teacher - ability to:	NO	slight	moderate	considerable	complete
1. participate in the civic community activities not related to the school	1	2	3	4	5
2. make a classroom demonstration meaningful to the individual student	1	2	3	4	5
3. use questions during the classroom presentations to aid student learning	1	2	3	4	5
4. use formalized criteria in the selection of textbooks	1	2	3	4	5
5. make use of the innovative provisions of the vocational act of 1963	1	2	3	4	5
6. use questions during demonstrations to aid student learning	1	2	3	4	5
7. utilize your background in general or liberal studies to advantage while participating in community activities	1	2	3	4	5
8. purchase appropriate equipment and supplies for instructional purposes	1	2	3	4	5
9. arrange for and conduct field trips	1	2	3	4	5
10. understand the goals of general education	1	2	3	4	5
11. provide appropriate practice for classroom learning experience	1	2	3	4	5
12. use sociograms	1	2	3	4	5
13. aid the student in obtaining work placement during adult basic education classes	1	2	3	4	5
14. relate technological advances to classroom instruction	1	2	3	4	5
15. make use of budget-keeping procedures	1	2	3	4	5
16. locate available standardized tests	1	2	3	4	5

What proficiency must you have in your work as a teacher -  
ability to:

- |   |           |
|---|-----------|
| 17. secure appropriate on-the-job training positions for students                               | 1 2 3 4 5 |
| 18. develop visual materials for instructional purposes   | 1 2 3 4 5 |
| 19. obtain the cooperation of available communications media personnel                          | 1 2 3 4 5 |
| 20. maintain discipline in the classroom  | 1 2 3 4 5 |
| 21. select appropriate visual materials for instructional purposes                              | 1 2 3 4 5 |
| 22. interpret the results of vocational interest inventories                                    | 1 2 3 4 5 |
| 23. conduct periodic up-dating of the course of study in regard with recent educational trends  | 1 2 3 4 5 |
| 24. make use of student record-keeping procedures   | 1 2 3 4 5 |
| 25. select instructional materials for the classroom  | 1 2 3 4 5 |
| 26. develop objective tests to measure achievement  | 1 2 3 4 5 |
| 27. motivate the student in the classroom   | 1 2 3 4 5 |
| 28. understand the legal provisions of teacher liability  | 1 2 3 4 5 |
| 29. understand the student informal social groups   | 1 2 3 4 5 |
| 30. relate the daily lesson plan to the course of study   | 1 2 3 4 5 |
| 31. refer to the state's plan for adult basic education   | 1 2 3 4 5 |
| 32. take the initiative when dealing with administrator   | 1 2 3 4 5 |
| 33. organize local basic education advisory committees  | 1 2 3 4 5 |
| 34. understand the history of education   | 1 2 3 4 5 |
| 35. use non-directive counseling techniques to help students solve personal and social problems | 1 2 3 4 5 |
| 36. build a display   | 1 2 3 4 5 |
| 37. interpret your own educational philosophy   | 1 2 3 4 5 |
| 38. draw from personal avocational interests to enrich instruction                              | 1 2 3 4 5 |

What proficiency must you have in your work as a teacher -  
ability to:

- |  |           |
|--|-----------|
| 39. understand the similarities and differences between general and vocational education     | 1 2 3 4 5 |
| 40. use the results of standardized tests for instructional purposes                         | 1 2 3 4 5 |
| 41. make a classroom lesson meaningful to the individual student                             | 1 2 3 4 5 |
| 42. maintain anecdotal records as a part of the student's cumulative folder                  | 1 2 3 4 5 |
| 43. provide appropriate practice for skill learning experiences                              | 1 2 3 4 5 |
| 44. select standardized tests to measure achievement   | 1 2 3 4 5 |
| 45. interpret the adult basic program to other teachers                                      | 1 2 3 4 5 |
| 46. develop appropriate course objectives  | 1 2 3 4 5 |
| 47. conduct community surveys for purposes of improving instruction                          | 1 2 3 4 5 |
| 48. use the information contained in professional journals for personal improvement purposes | 1 2 3 4 5 |
| 49. develop related instruction sheets   | 1 2 3 4 5 |
| 50. assess the validity of teacher made tests  | 1 2 3 4 5 |
| 51. maintain a clean, orderly classroom  | 1 2 3 4 5 |
| 52. select appropriate audio-visual materials for instructional purposes                     | 1 2 3 4 5 |
| 53. produce and use resource units   | 1 2 3 4 5 |
| 54. control your desire to work at a faster pace when dealing with students                  | 1 2 3 4 5 |
| 55. utilize prescribed classroom organizational plans  | 1 2 3 4 5 |
| 56. maintain attention during the presentation of demonstrations                             | 1 2 3 4 5 |
| 57. provide special education training for the physically handicapped                        | 1 2 3 4 5 |

What proficiency must you have in your work as a teacher -  
ability to:

- |   |           |
|---|-----------|
| 58. make a daily lesson plan  | 1 2 3 4 5 |
| 59. assess the reliability of teacher-made tests  | 1 2 3 4 5 |
| 60. understand similarities and differences between two or more educational philosophies                | 1 2 3 4 5 |
| 61. assess the difficulty of teacher-made tests   | 1 2 3 4 5 |
| 62. maintain the necessary report forms required by state agencies                                      | 1 2 3 4 5 |
| 63. interpret the norming data associated with standardized tests                                       | 1 2 3 4 5 |
| 64. use anecdotal records for informational purposes  | 1 2 3 4 5 |
| 65. change your teaching style (i.e., teacher-centered to student-centered) during the classroom lesson | 1 2 3 4 5 |
| 66. use progress charts   | 1 2 3 4 5 |
| 67. conform to local standards of dress for teachers  | 1 2 3 4 5 |
| 68. interpret the adult basic education program to the community  | 1 2 3 4 5 |
| 69. review a demonstration  | 1 2 3 4 5 |
| 70. use the results of standardized tests for job placement   | 1 2 3 4 5 |
| 71. utilize the services of state and local agencies responsible for adult basic education              | 1 2 3 4 5 |
| 72. use the services of local adult basic education advisory committees                                 | 1 2 3 4 5 |
| 73. use directive counseling techniques to help students solve personal and social problems             | 1 2 3 4 5 |
| 74. take responsibilities for leadership in civic community activities                                  | 1 2 3 4 5 |
| 75. summarize the classroom lesson  | 1 2 3 4 5 |
| 76. develop performance tests to measure achievement  | 1 2 3 4 5 |

What proficiency must you have in your work as a teacher -  
ability to:

- |  |           |
|--|-----------|
| 77. maintain attention during the presentation of classroom lessons  | 1 2 3 4 5 |
| 78. maintain discipline in the classroom   | 1 2 3 4 5 |
| 79. lead a conference  | 1 2 3 4 5 |
| 80. motivate the student in the classroom  | 1 2 3 4 5 |
| 81. develop audio-visual materials for instructional purposes  | 1 2 3 4 5 |
| 82. take the initiative when dealing with other teachers   | 1 2 3 4 5 |
| 83. develop subjective tests to measure achievement  | 1 2 3 4 5 |
| 84. select instructional materials for the classroom   | 1 2 3 4 5 |
| 85. evaluate your subject matter teaching performance compared to college grades obtained in that subject                            | 1 2 3 4 5 |
| 86. relate current events to classroom instruction   | 1 2 3 4 5 |
| 87. provide specific information to individual students concerning the nature and requirements of occupations                        | 1 2 3 4 5 |
| 88. understand the social class structure of the local community as it relates to students enrolled in adult basic education classes | 1 2 3 4 5 |
| 89. conform to acceptable community social behaviors for teachers  | 1 2 3 4 5 |
| 90. control your desire to work at a faster pace when dealing with people in the community   | 1 2 3 4 5 |
| 91. use the information contained in professional journals for the improvement of instruction  | 1 2 3 4 5 |
| 92. change your teaching style (i.e., teacher-centered to student-centered) during demonstration                                     | 1 2 3 4 5 |
| 93. provide specific information to groups of students concerning the nature and requirements of occupations                         | 1 2 3 4 5 |
| 94. operate duplicating equipment  | 1 2 3 4 5 |

What proficiency must you have in your work as a teacher -  
ability to:

- |  |           |
|--|-----------|
| 95. make use of the guidance and counseling services which are available to you            | 1 2 3 4 5 |
| 96. make use of programmed learning materials  | 1 2 3 4 5 |
| 97. develop articles for news release  | 1 2 3 4 5 |
| 98. be stimulating in your work as a teacher   | 1 2 3 4 5 |
| 99. conduct follow-up studies for purposes of determining the effectiveness of instruction | 1 2 3 4 5 |
| 100. evaluate teaching effectiveness through student achievement                           | 1 2 3 4 5 |

**APPENDIX B**  
**QUESTIONNAIRE RESPONSE**

## APPENDIX B

## Questionnaire Response

The questionnaires, 120 of them, were mailed between November 12 and November 22, 1970. A total of 10 questionnaires were needed for each of the two levels being examined in each of the three states, or a total of 60. In order to be certain of achieving 10 for each cell in the matrix, 20 were sampled for each cell during the original randomization.

In the state of Washington seven were received from the first ten sampled for the elementary level, necessitating the use of the alternate three from the second group. The Washington secondary group returned nine of the first ten sampled and one was inserted from the alternate group.

Those with elementary certification in the state of Idaho returned seven of the original ten causing the insertion of three of the alternates from the second group. The secondary group returned six of the ten from the first sampling and four were used from the second group.

In Oregon, the elementary group returned six of the first group of ten samples and four of the second group were inserted. The original secondary group returned five and five were inserted. Of the 120 questionnaires sent in the total sample 81 were returned for a 67 percent return. Out of the 81 questionnaires returned 60 of them were used in the order to which they were originally sampled, and to allow the use of the matrix for the analysis of variance design. The questionnaire response is shown in the following table.

## Number and Percent Questionnaire Returns

States	Elementary			Secondary		
	M/N	R/N	%	M/N	R/N	%
Washington						
first group	10	7	70	10	9	90
second group	10	5	50	10	7	70
Oregon						
first group	10	6	60	10	5	50
second group	10	9	90	10	6	60
Idaho						
first group	10	7	70	10	6	60
second group	10	7	70	10	7	70
TOTAL	60	41	68	60	40	66

It is interesting to note that approximately the same percent of returns were received from the first group sampled when compared with the second group.

APPENDIX C  
LEAST SIGNIFICANT DIFFERENCE TESTS

## APPENDIX C

## LEAST SIGNIFICANT DIFFERENCE TESTS

There were eight competencies that showed a significant difference according to the F statistic. Each of those have been further tested by use of the following formula:

$$\text{L.S.D.} = t_{.05} \sqrt{2s^2/N}$$

Competency 26. Develop objective tests to measure achievement.

$$\text{L.S.D.} = t_{.05} \sqrt{2s^2/N}$$

$$\text{L.S.D.} = 2.000 \sqrt{2(1.25)/20}$$

$$= .706$$

States	Means	Differences	
Washington	4.10	.55	No significant dif.
Oregon	3.55		
Idaho	3.00	.55	No significant dif.

Competency 32. Take the initiative when dealing with administrator.

$$\text{L.S.D.} = t_{.05} \sqrt{2s^2/N}$$

$$= 2.000 \sqrt{2(9.61/20)}$$

$$= 1.38$$

States	Means	Differences	
Oregon	3.0	.60	No significant dif.
Washington	3.4		
Idaho	3.15	.25	No significant dif.

Competency 44. Select standardized tests to measure achievement.

$$\begin{aligned} \text{L.S.D.} &= t_{.05} \sqrt{2s^2/N} \\ &= 2.000 \sqrt{2(1.096)/20} \\ &= .662 \end{aligned}$$

States	Means	Differences	
Washington	3.55	.00	No significant dif.
Oregon	3.55		
Idaho	2.70	.85	Significant dif.

Competency 46. Develop appropriate course objectives.

$$\begin{aligned} \text{L.S.D.} &= t_{.05} \sqrt{2s^2/N} \\ &= 2.000 \sqrt{2(7.55)/20} \\ &= 1.73 \end{aligned}$$

States	Means	Differences	
Washington	4.45	.20	No significant dif.
Oregon	4.25		
Idaho	3.60	.65	No significant dif.

Competency 47. Conduct community surveys for purposes of improving instruction.

$$\begin{aligned} \text{L.S.D.} &= t_{.05} \sqrt{2s^2/N} \\ &= 2.000 \sqrt{2(1.116)/20} \\ &= .668 \end{aligned}$$

States	Means	Differences	
Washington	2.95	.75	Significant dif.
Oregon	2.20		
Idaho	2.10	.10	No significant dif.

Competency 50. Assess the validity of teacher made tests.

$$\begin{aligned}
 \text{L.S.D.} &= t_{.05} \sqrt{2s^2/N} \\
 &= 2.000 \sqrt{2(1.451)/20} \\
 &= .7628
 \end{aligned}$$

States	Means	Differences	
Washington	3.85	.80	No significant dif.
Oregon	3.05		
Idaho	2.80	.25	No significant dif.

Competency 59. Assess the reliability of teacher made tests.

$$\begin{aligned}
 \text{L.S.D.} &= t_{.05} \sqrt{2s^2/N} \\
 &= 2.000 \sqrt{2(1.288)/20} \\
 &= .7176
 \end{aligned}$$

States	Means	Differences	
Washington	3.60	.45	No significant dif.
Oregon	3.15		
Idaho	2.65	.50	No significant dif.

Competency 76. Develop performance tests to measure achievement.

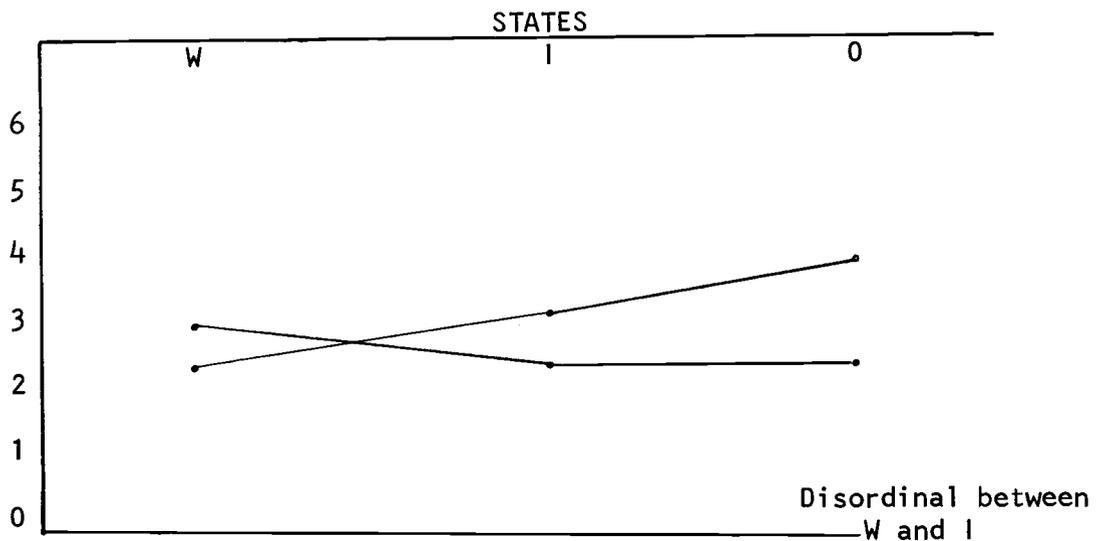
$$\begin{aligned} \text{L.S.D.} &= t_{.05} \sqrt{2s^2/N} \\ &= 2.000 \sqrt{2(1.381)20} \\ &= .7432 \end{aligned}$$

States	Means	Differences	
Washington	3.80	.85	Significant dif.
Idaho	2.95		
Oregon	2.95	.00	No significant dif.

APPENDIX D  
INTERACTION PLOTTING

APPENDIX D  
Interaction Plotting

Item Number 13 -

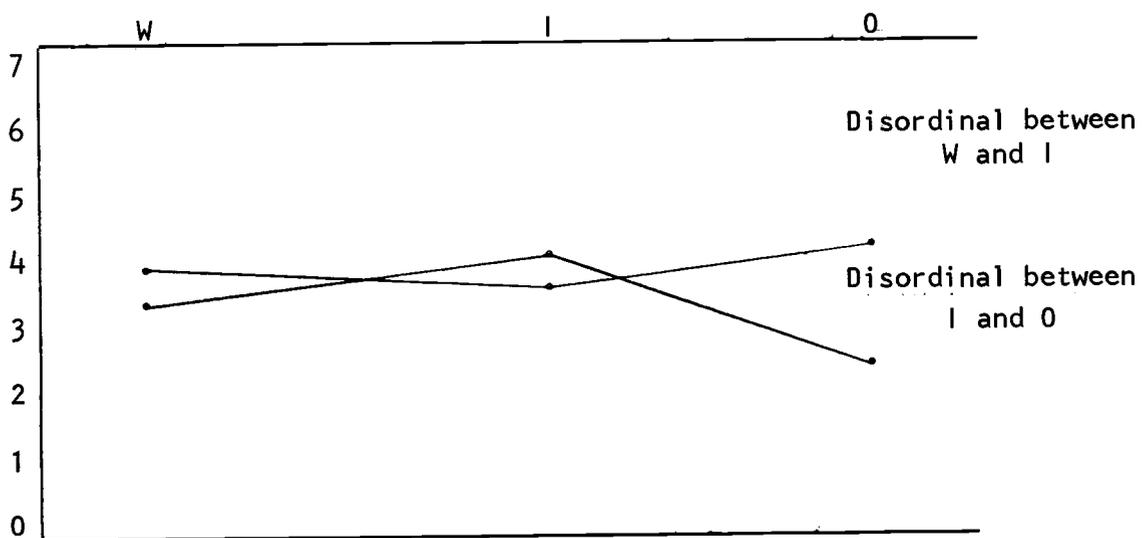


Ordinal between I and 0

	W	I	0
E	2.3	3.1	3.6
S	3.0	2.4	2.3

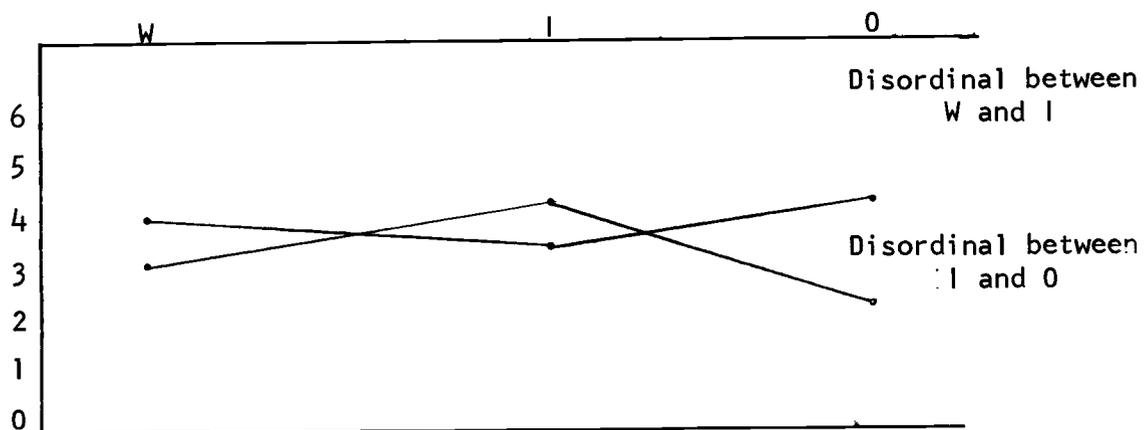
Item Number 18 -

	W	I	O
E	3.9	3.6	4.1
S	3.4	4.1	2.7



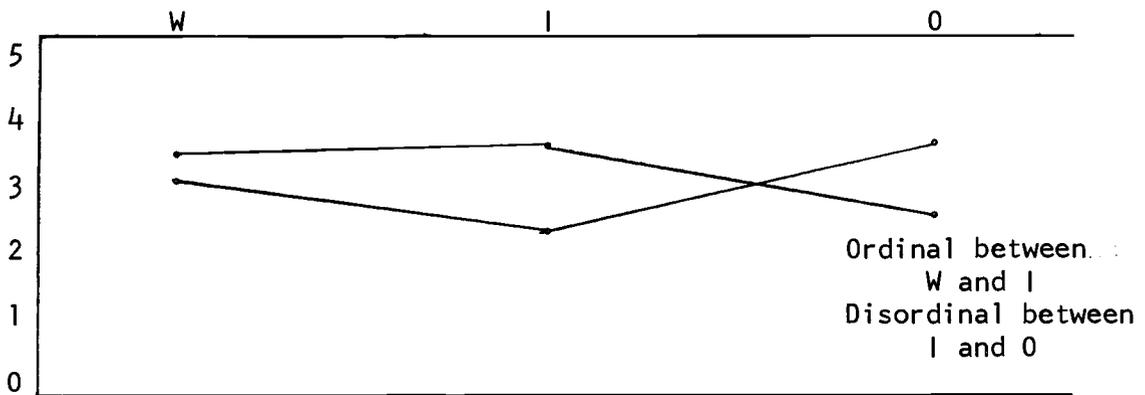
Item Number 22 -

	W	I	O
E	2.9	2.8	3.2
S	4.2	2.9	2.6



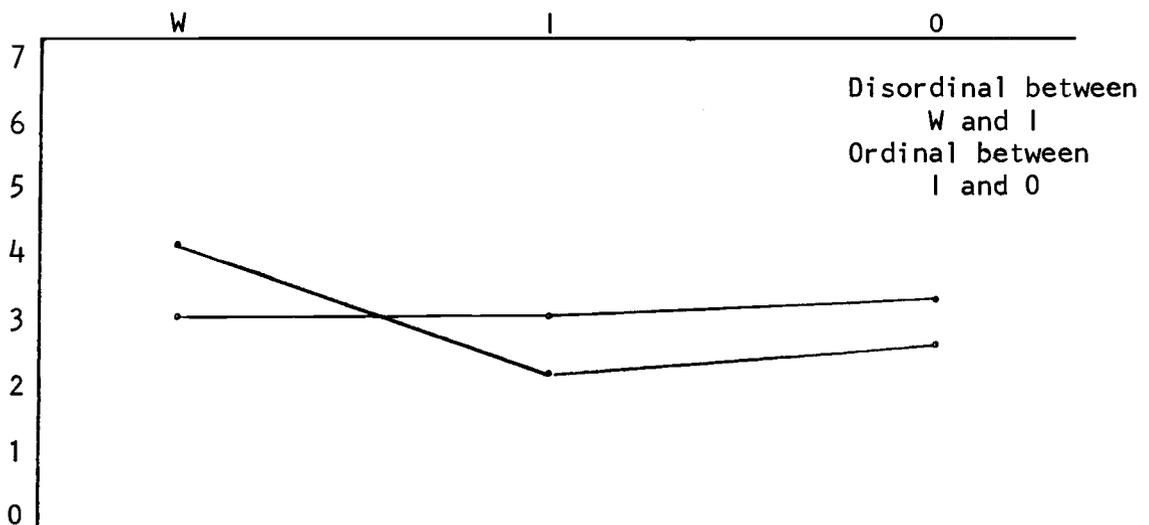
Item Number 48 -

	W	I	O
E	3.5	3.7	2.9
S	3.1	2.6	3.7



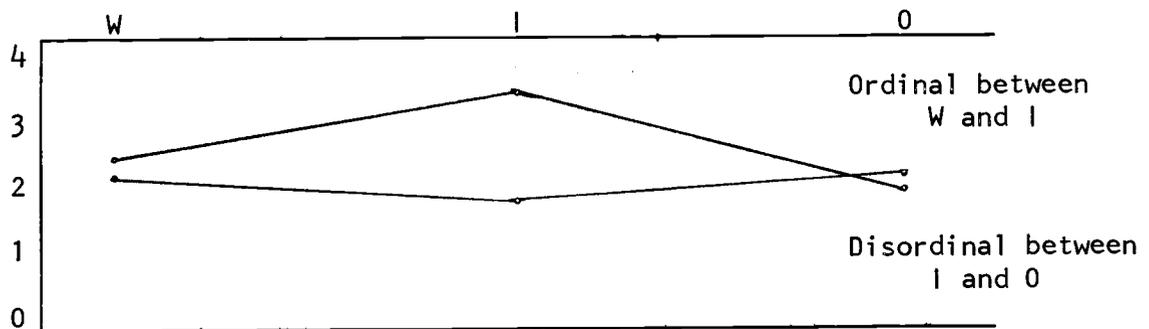
Item Number 59 -

	W	I	O
E	3.1	3.1	3.4
S	4.1	2.2	2.9



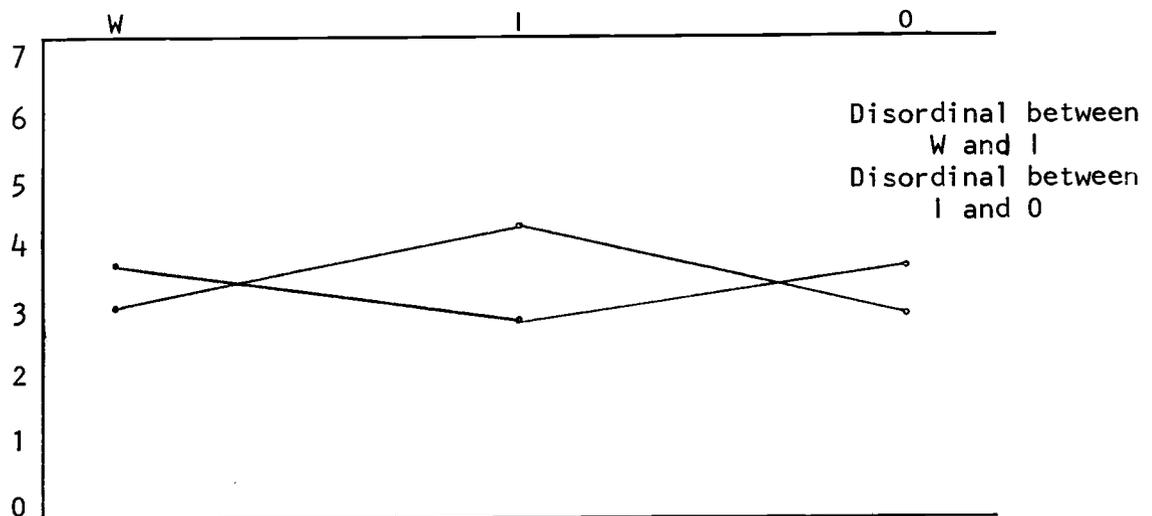
Item Number 74 -

	W	I	0
E	2.6	3.6	2.3
S	2.5	2.0	2.4



Item Number 91 -

	W	I	0
E	3.1	4.1	2.8
S	3.5	3.1	3.6



APPENDIX E  
MEAN SCORES OF COMPETENCIES

## APPENDIX E

## Mean Scores of Each Competency by States

Competency	Mean Score Average	Washington	Idaho	Oregon
1	2.70	2.55	2.90	2.65
2	4.46	4.35	4.35	4.70
3	4.20	3.95	4.25	4.40
4	3.03	3.15	3.05	2.90
5	2.65	2.85	2.50	2.60
6	4.06	3.90	3.90	4.40
7	3.33	3.35	3.45	3.20
8	3.81	3.75	3.95	3.75
9	2.61	2.75	2.75	2.35
10	4.05	3.95	3.95	4.25
11	4.36	4.25	4.45	4.40
12	1.85	1.95	1.65	1.95
13	2.78	2.65	2.75	2.95
14	3.40	3.65	3.35	3.20
15	2.76	2.85	2.55	2.90
16	3.06	3.20	2.80	3.20
17	2.66	2.65	2.55	2.80
18	3.63	3.65	3.85	3.40
19	3.15	3.15	3.00	3.30
20	2.65	2.95	2.45	2.55
21	3.93	3.85	4.05	3.90
22	3.10	3.55	2.85	2.90
23	3.63	3.65	3.50	3.75
24	3.45	3.25	3.35	3.75
25	4.35	4.40	4.30	4.35
26	5.55	4.10	3.00	3.55
27	4.46	4.40	4.45	4.55
28	2.64	2.75	2.55	2.65
29	3.68	3.45	3.85	3.75
30	3.58	3.90	3.25	3.60
31	3.13	2.95	2.95	3.50
32	3.51	3.40	3.15	4.00
33	2.33	2.50	2.10	2.40
34	2.46	2.75	2.30	2.35
35	3.73	3.95	3.75	3.50
36	2.05	2.15	1.85	2.01
37	3.55	3.80	3.35	3.56
38	3.90	3.80	3.70	3.80
39	3.60	4.05	3.55	3.73
40	3.40	3.10	3.45	3.31

Competency	Mean Score Average	Washington	Idaho	Oregon
41	4.70	4.50	4.70	4.63
42	2.85	2.45	3.10	2.80
43	4.45	3.90	4.30	4.21
44	3.55	2.70	3.55	3.26
45	3.65	3.45	3.70	3.60
46	4.45	3.60	4.25	4.10
47	2.95	2.10	2.20	2.41
48	3.30	3.15	3.30	3.25
49	3.45	3.10	3.55	3.36
50	3.85	2.80	3.05	3.23
51	3.15	2.80	3.20	3.05
52	3.70	3.85	3.60	3.71
53	3.55	3.25	3.45	3.41
54	4.10	3.85	4.10	4.01
55	2.35	2.20	3.00	2.51
56	3.80	3.15	3.50	3.48
57	2.85	3.00	3.30	3.05
58	3.05	2.85	2.95	2.95
59	3.60	3.65	3.15	3.13
60	3.10	2.80	3.05	2.98
61	3.60	2.80	3.10	3.16
62	3.50	3.15	3.75	3.46
63	3.20	2.75	3.30	3.08
64	2.85	2.50	2.95	2.76
65	4.00	4.05	4.15	4.06
66	3.25	2.90	3.25	3.13
67	2.60	2.80	2.40	2.60
68	3.95	3.45	3.35	3.58
69	3.35	3.15	2.75	3.08
70	2.65	2.15	2.35	2.38
71	3.60	3.85	3.90	3.78
72	2.90	3.25	3.20	3.11
73	2.95	3.50	3.15	3.20
74	2.55	2.80	2.35	2.56
75	3.75	3.55	3.45	3.58
76	3.80	2.95	2.95	3.23
77	3.65	3.40	3.25	3.43
78	3.00	2.55	2.60	2.71
79	3.00	2.35	2.80	2.71
80	4.35	4.10	4.25	4.23
81	3.60	3.60	3.50	3.56
82	3.25	3.40	3.20	3.28
83	3.30	2.75	3.00	3.01
84	4.15	4.10	4.30	4.18
85	2.30	2.05	2.40	2.25

Competency	Mean Score Average	Washington	Idaho	Oregon
86	3.65	4.10	3.75	3.83
87	3.45	4.10	3.50	3.68
88	3.65	4.15	3.95	3.91
89	3.05	2.90	3.10	3.03
90	3.40	3.45	3.50	3.45
91	3.30	3.60	3.20	3.36
92	3.65	3.80	4.00	3.81
93	3.65	3.80	3.35	3.60
94	3.10	2.90	2.90	2.96
95	3.85	3.70	3.95	3.83
96	4.20	3.55	3.75	3.83
97	2.70	2.50	2.40	2.41
98	4.70	4.75	4.80	4.75
99	3.50	3.50	3.95	3.65
100	4.10	4.35	3.95	4.13

APPENDIX F  
HIGHEST AND LOWEST COMPETENCIES

APPENDIX F  
Twenty-five Highest - Twenty-five Lowest Competencies  
Mean Score Averages

## Twenty-five Lowest

12 - 1.85  
36 - 2.01  
85 - 2.25  
33 - 2.33  
70 - 2.38  
47 - 2.41  
97 - 2.41  
34 - 2.46  
74 - 2.56  
67 - 2.60  
9 - 2.61  
5 - 2.65  
20 - 2.65  
28 - 2.65  
17 - 2.66  
1 - 2.70  
78 - 2.71  
79 - 2.71  
15 - 2.76  
64 - 2.76  
13 - 2.78  
42 - 2.80  
58 - 2.95  
94 - 2.96  
60 - 2.98

## Twenty-five Highest

98 - 4.75  
41 - 4.63  
2 - 4.46  
27 - 4.46  
11 - 4.36  
25 - 4.35  
80 - 4.23  
43 - 4.21  
3 - 4.20  
84 - 4.18  
100 - 4.13  
46 - 4.10  
6 - 4.06  
65 - 4.06  
10 - 4.05  
54 - 4.01  
21 - 3.93  
88 - 3.91  
86 - 3.83  
95 - 3.83  
96 - 3.83  
8 - 3.81  
92 - 3.81  
38 - 3.80  
71 - 3.78

APPENDIX G  
COMPETENCIES WITH MEAN AVERAGES  
ABOVE 3.5

## APPENDIX G

Competencies Receiving Composite  
Mean Averages Above 3.5

98 - 4.75	8 - 3.81
41 - 4.63	92 - 3.81
2 - 4.46	38 - 3.80
27 - 4.46	71 - 3.78
11 - 4.36	35 - 3.73
25 - 4.35	39 - 3.73
80 - 4.23	52 - 3.71
43 - 4.21	29 - 3.68
3 - 4.20	87 - 3.68
84 - 4.18	99 - 3.65
100 - 4.13	18 - 3.63
46 - 4.10	23 - 3.63
6 - 4.06	45 - 3.60
65 - 4.06	93 - 3.60
10 - 4.05	30 - 3.58
54 - 4.01	68 - 3.58
21 - 3.93	75 - 3.58
88 - 3.91	37 - 3.56
86 - 3.83	81 - 3.56
95 - 3.83	26 - 3.55
96 - 3.83	32 - 3.51