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ESTABLISHING CRITERIA FOR THE PRE-SERVICE SELECTION  
OF TEACHERS WITH SPECIAL APPLICATION TO THE  
UTAH STATE AGRICULTURAL COLLEGE

by

Howard H. Barron

A thesis submitted in partial fulfillment  
of the requirements for the degree

of

MASTER OF SCIENCE

in

Education

1950

UTAH STATE AGRICULTURAL COLLEGE  
Logan, Utah

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Howard H. Barron

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## INTRODUCTION

Our American culture and civilization depends in large measure upon the recruiting of the right kind of men and women to be teachers in our American schools and colleges. All professions depend on effective teaching for their life blood. Many educators and colleges during the past few years have become concerned with pre-service selection methods for improving the teaching personnel. This concern has become somewhat intensified at the present time, largely as a result of four factors. One factor is the large number of returning servicemen, who are turning to teaching as a career. A second factor is improved salaries and tenure laws. A third factor, suggested by Dr. Ray C. Maul (33) is that many people are turning to teaching only because schools continue to operate through good times and bad. A fourth factor common to many prospective teachers is that the idealism connected with teaching attracts them into the profession.

Many colleges permit all college students who so desire to pursue teacher education programs. Maul (33) states:

...too little thought has been given by college authorities to (1) the prospects for employment in the field or, (2) measurement of aptitudes bespeaking probable success in the field for which the student is preparing.

Colleges and educators are challenged with the immediate problem of developing a program looking toward a tremendous

increase in the quantity of available prospective teachers and the quality of their preparation. There is urgent need by teacher training colleges for a method of prediction of probable teaching success. The situation is rapidly approaching wherein the supply of teachers will exceed the demand. This is indicated by a study sponsored by the National Commission on Teacher Education and Professional Standards in 1949 which shows the nation is on the eve of an oversupply of four-year-trained candidates for high school teaching positions. They also foresee the graduation of many college students facing failure to achieve their vocational goals. Thousands of college students have been given and are receiving encouragement to pursue college programs with complete disregard for the employment opportunities after graduation. In a recent article appearing in the state newspaper entitled, "Study Predicts Utah Teachers In Over-Supply", it was stated that Utah colleges will graduate more teachers this spring than it is expected will be needed in the state during the next year or two. This lopsided picture of teacher supply and demand came into focus when state school officials announced that 1422 student teachers would become certified at the end of the current school year. A United States Department of Labor Survey shows that the teacher requirement for the state would be considerably less than 1000 new teachers per year.

It seems that some college authorities have been influenced by a desire to build up enrollments instead of

emphasizing higher qualifications of those entering the teaching profession. There has been a lack of available information in the area of teacher education, on which intelligent counseling could be based.

What should be the basis for selection is a question confronting teacher training colleges. Is there any method of determining which high school graduates or college students have the best chance and which have the poorest chance of developing into good teachers? Any method that would be better than a guess would be of value to the student and to the college faculty; it would also be of considerable benefit to society in the training of more successful teachers. It would seem there are at least three very important reasons why it would be desirable to predict probable teaching success. The first reason is to prevent wasting the students' time and money in preparing them for teaching if they would be unable to find jobs, or if they would be poor teachers if they did get jobs. Secondly, it would help prevent wasting the efforts of institutions preparing these persons for teaching, and third, the quality of teachers would be gradually improved.

Inadequate teacher selective techniques cause considerable damage to the teaching profession. This is particularly true in the case of some college graduates who have spent four years preparing for the teaching profession, only to find they are dissatisfied and unsuited for their profession. However, many of these dissatisfied individuals continue on

in the teaching profession. It is quite possible that if proper selective techniques had been employed, these individuals could have been directed into more suitable vocations.

Another aspect of teacher selection is the fact that teaching must be recognized as a field of endeavor not open to just anyone. Not all people are, by nature, equally susceptible to effective preparation for teaching, any more than all people are potential prospects for success in medicine, law, theology, or engineering. Educational leaders everywhere recognize good teaching and can identify bad teaching. The factors which "make a good teacher good" do not defy analysis. It is agreed that sound, well planned preparation is a minimum essential, just as it is in engineering. There are also many other identifiable factors that contribute to the success, or lack of success in teaching. "Techniques of selection can and must be established and applied."

Dr. William C. Bagley (6) expressed the need for selectivity of teachers when he wrote:

I do not hesitate to say that, if three fourths of the time, energy and money spent during the last fifteen years in carrying through elaborate programs of curriculum revision had been spent in a determined effort to raise the standards of selecting teachers, a far more significant contribution would have been made to the improvement of American education.

President J. T. Anderson (2) of the State Teachers College at Wayne, Nebraska, speaking on the same subject said:

There can be no effective development of a teaching staff for a state school system unless its secondary school officials and teacher training authorities

share responsibility for the recruitment and selection of those who are to seek admission to the profession.

The task of teacher selection is not an easy one and the college authorities have been slow to attack the job. Some educators feel that selection must begin in the high school and continue not only at college entrance but progressively through the first, second, and perhaps the third year. Some educators feel it should be carried a step further to include the period of practice teaching. All are agreed that over some period of time, a young man or woman must be judged as to his or her prospects for real professional achievement in teaching. This is a responsibility of the colleges, and until something is done about it, teaching cannot become a true profession. The teaching profession must improve upon the quality of much of its classroom work if it is to merit the confidence and support of the public. If the profession continues to condone the presence of the mediocre and inferior in its membership, its future is not bright. Unless selective restrictions are undertaken by colleges for the elimination of the mediocre and inferior, it is doubtful that sufficient progress can be made in the teaching profession.

There is a challenge to determine what constitutes an adequate program of pre-service selection of teachers. Because of this felt need and because of the possible subsequent use of such a study, it is hoped that the findings of this study will contribute toward some educational progress in this area.

### Objective of the Study

The objective of this study is to obtain evidence from a review of literature, opinions of educators and the pre-service selection practices used in other colleges to establish criteria that are considered to be the most desirable factors and techniques used in the pre-service selection of teachers as found by an investigation of the literature.

The criteria will be used as a basis for making an analysis of the available records of the students and practices used in the guidance program in the School of Education at Utah State Agricultural College. In this manner the limitations or success of the guidance program as indicated will be somewhat more meaningful.

### Delimitations

There have been many methods used in the studies on pre-service selection of teachers. However, there is very little, if any, agreement of opinion in regards to which is the best procedure.

The difficulty of using any one procedure is still complicated by the fact that standards in the teaching positions differ so widely. The training of teachers for teaching positions is further complicated, because the standards of appraisal lack uniformity.

One method of study used most frequently for the pre-service selection of teachers has been use of rating scales. This method, however, has been criticized quite severely because of the subjective element of the rating made by

superintendents, principals, and supervisors, when there is no uniform standard by which to judge or appraise the success of the teacher. Another method quite commonly used has been the attempt to make selection through the use of standardized tests. It is felt that this method has not at the present time been very successful, however, investigations indicate it has some merit.

Method of the Study

After careful consideration a combination of methods has been selected, which include (a) opinions of experts or competent groups; (b) review, summary or annotation of literature; and (c) student record analysis. This combined method of study has been chosen because it is more suitable to this type of study, and the analysis of the guidance program and student records will make it comparatively objective.

Upon acceptance of the methods of research to obtain information pertinent to the study, the writer made a careful review of studies that had been made in the field pertaining to the pre-service selection of teachers. A number of studies have been made by other investigators, using a variety of factors or techniques, for the purpose of determining the factors that have the greatest predictive value for measuring teacher success.

It has already been mentioned before that there is little agreement of opinion in regards to what factors and techniques make for the most successful selection program. With this thought in mind, the writer has included several



comparatively detailed accounts of some of the outstanding pre-service selective programs now in operation in some colleges.

The review of literature has a two-fold purpose: first, to give an account of present practices and their use; second, to discover criteria that can be substantiated by the opinions of authorities based upon studies that have been made in the field of pre-service selection of teachers.

The following criteria are reasonably well substantiated:

1. Personality rating
2. Intelligence score
3. High school record
4. Scholastic achievement
5. Physical fitness
6. Interest and aptitude tests
7. Results of interviews.

These seven criteria were emphasized and recommended by other studies and authorities to be of most significance in the selection and prediction of teacher success.

The criteria mentioned are used as a basis for evaluating how effectively selective techniques are being utilized in present practices in the guidance program of the School of Education at the Utah State Agricultural College.

The scores from the records of the entrance examination tests were used as a means of determining the mental ratings of the students. Student records in the Teacher Placement Bureau were analyzed to determine the high school rating.

scholastic achievement in four years of college work, and the personality rating given by the student's supervising teachers while the trainee was doing his practice teaching. The physical status of the student was obtained from the Utah State Agricultural College Student Health Service. Results of interviews are determined by the judgments of the director of student teaching and his assistant supervisors. Interest and aptitude tests are not being used in the guidance program.

It was impossible for the writer to use the same records on all students, as some of the students had not completed their training. However, it was felt for the purpose of this study, where the main emphasis is upon the evaluation of the present selection program as a whole, that it would be permissible to compare other student records from another class.

There are certain limitations and weaknesses in some of the methods used in the study. There are several methods by which personality ratings may be made. Some of the methods commonly used are results of personality tests, interviews, and rating scales. Of these different methods, the supervisory teachers' ratings on the trainees were used as a personality rating. The trainees are rated by their supervisory teachers on the basis of their performance during their practice teaching. A rating scale composed of 18 characteristics is checked by the supervisory teachers to indicate the strengths and weaknesses of the student trainee during his practice teaching.

Some authorities feel the subjective nature of the

ratings of the practice teachers reduces their validity as a personality factor. It is felt that in some cases where the director of teacher training and the supervising teacher become more acquainted with the student trainee, they have a tendency to over-rate him. The opposite condition may also exist, where the trainees and supervisors have conflicting personalities, in which instances the supervisors may have a tendency to under-rate the abilities of the trainee.

The high school record and scholastic achievement of the teacher candidates were obtained by making an analysis of the grades recorded in the Teacher Placement Bureau.

There are several limitations in the use of grades, when they are used in making comparisons between individuals and groups. It seems there is considerable lack of uniformity in the methods by which teachers assign grades to their pupils. A considerable amount of information has been written in books and other publications discussing school marks. However, until there is more agreement of opinion and greater uniformity in the factors used in assigning grades, it seems that a grade will be a rather arbitrary method indicating student achievement.

The grades as used in this study are for the purpose of indicating degrees of competence in academic achievement.

## REVIEW OF LITERATURE

Even though there is much emphasis on the pre-service selection of teachers in reports and published articles, it seems practice lags far behind the stated philosophy. Barr and Douglas (9) studied the catalogue requirements of 662 teacher training institutions and found 437 institutions stating no selective entrance requirements other than high school graduation or its equivalent; 126 institutions stated requirements for the selection of all students, and only 99 institutions were found to practice pre-training selection.

Lindley J. Stiles (46) made a survey of 77 selected colleges distributed throughout the United States. Only 41 per cent of the schools made effective use of selective techniques. Only seven made any attempts to give information to students still in the lower division, and only three made any attempt to search out promising high school seniors.

In the literature reviewed little agreement was found among studies reporting practices used in pre-service selection of teachers. However, most investigators are unable to find any single factor which correlates highly with successful teaching. It is generally agreed that a composite of abilities is necessary for prediction purposes.

A composite view of the qualities essential to teaching success was made by Barr and Emans (10). They made an

analysis of 209 rating scales being used to evaluate qualities essential to teaching success. They concluded that capability in classroom management, personality, interest, scholarship, preparation and instructional skill were of the most value.

Some educators have felt that success or failure in practice teaching is a very significant criterion for success in the teaching profession. Bossing (12) made a study on the value of practice teaching as an indication of future or later teaching success. From this study he was convinced that the ratings received in practice teaching are a good indication of probable teaching success. However, these findings are somewhat contradictory to the findings reported by Butsch (15). He reported there is no significant correlation between practice teaching ratings and scholarship, intelligence, or ratings on later teaching experience. Others would agree that the subjective element of practice teaching ratings reduces the value or validity of it as a selective factor.

Martin (32) used entrance test scores in science, mathematics, history, English, standings in high school and high school personality ratings as predictive factors of selection. These factors were of the greatest predictive value where an average of four year marks was used as the criterion. High school percentile rank was found by Landskov to be a better criterion for the prediction of scholastic standing in college than the American Council Psychological Examination. In a survey of teacher selection practices being used in 138 colleges, Butler (14) found that 15 of the 62 liberal

arts colleges required the student to be in the upper half of the graduating class in scholarship. In the state universities four out of 45 reporting required entering students to be above the median in scholastic standing. Reports from 11 of the state teacher colleges chose candidates for entrance from the upper quartile of high school class scholastic standing.

Clifford P. Archer (4) found in his review of studies on "Personnel Procedures in Teacher Training Institutions", that many selection procedures were being used. They include the use of psychological examinations, profiles of personality traits, percentile rank in high school scholarship, measures of general achievement and of English, evidence of emotional maturity, voice and speech tests, and tests of special aptitudes for music, art and commerce. Health examinations also seem to be quite common for most schools.

Studies conducted on the relationship between intelligence and achievement have resulted with a correlation between 0.50 and 0.60, however, correlations may vary in either direction. Factors such as motive and interest have a tendency to affect individual correlations. In a study made by Hancock (24) the correlation of high school and college marks in all subjects was 0.458. He found the correlation by comparing the college records of the graduates of one high school. May V. Seagoe (44) found that scholarship during high school had some predictive value for college grades. Also in some of her studies college honor point ratios showed significant correlations with teaching success.

However, Fuller (21) was unable to find any significant relationship between rank order in student teaching and percentile rank in high school academic averages.

Cronback (16) feels the reason intelligence tests have been poor predictors of success in teaching is that nearly every teacher has completed several years of schooling with adequate grades. Every teacher has a fair to superior degree of intelligence, therefore, the difference in tested intelligence among those tested has little value determining success as teachers. He thinks that an intelligence test is still the best indication whether a person is likely to complete a teacher training course.

Many colleges are trying to improve quality of teachers by such selective means as encouraging high school teachers to recruit from and encourage their finest prospective students to enter the field of education. Recruitment is considered an important part of the pre-service selection program. A study based on this theory was reported by Herlinger (27). A committee of his best public school teachers in counseling spent a short period of time with high school seniors encouraging them to prepare for teaching. The committee reported some success. According to Archer (3) it is a common practice in Australia to select from among the most qualified and likely prospective students and give them an opportunity to serve as "junior teachers" or "probationary teachers" while in high school. By actually participating in teaching, the student will be better qualified to decide

if he would chose teaching as a career. It also gives the supervisory teacher an opportunity to observe aptitudes difficult to detect by other means. Another method of encouraging outstanding, prospective teacher candidates is the organization chapters of Future Teachers of America in high schools. This plan has been reported to have recruited some very fine candidates. The Phi Delta Kappa Fraternity has been instrumental in promoting and sponsoring a national teacher recruitment program. The production of a film on teaching made in cooperation with Frith Films Incorporation is one of its special projects. The film depicts the life and work of an elementary teacher.

#### Opinions of Educators

Teaching is one of the most significant professions, therefore, it is very essential that a high degree of selectivity be required for entrance into the profession. The importance of selection in the teaching profession, and some of the criteria for the selection of candidates for teacher preparation are expressed in the opinions of some of our leading educators.

Ralph McDonald (34) comments upon the need of selective admission and its importance in securing capable teachers. X

By far the most critical problem facing american education today is that of securing qualified teachers. There is the important problem of selective admission and continuous screening in pre-service teacher education institutions. We are convinced that only those students who give evidence of outstanding ability, effective personality, real scholarship, high character, and genuine leadership qualities can become good teachers. High standards are the one key to good teaching. They



are the one road to public esteem. They are also the sound approach to the securing of public support which will insure adequate salaries and good working conditions. Any plan for educational advancement which does not rest on high standards of admission to teaching is like a house built upon the sand.

In an effort to meet the challenges confronting education, the organized teaching profession sent its leadership from over the nation to Miami University, Oxford, Ohio, to attend a national conference for the improvement of teaching. This Oxford Conference (39) recommended that achievement and personality measures be used as criteria by teacher training institutions in working out a system of selective admission. They encouraged teacher training institutions to use an adequate testing program, including such measures as personality, reading ability, intelligence, aptitudes, interests, and physical fitness. These tests would be used to supplement the high school records of the students seeking admission. Teacher education staffs should include competent counselors and each student should be assigned an adviser or counselor. The adviser should work very closely with the student during his first two years of teacher preparation. Through frequent interviews and conferences the adviser should make every attempt to assist the student to overcome any difficulties or undesirable traits. In the event the student is unable to make satisfactory improvement, means should be proceeded to direct the student into another vocation.

The student's fitness to continue in teacher preparation should be determined by committee action, after a thorough review of the student's records, tests and interviews. Only

those students who qualify should be permitted to continue their training as prospective teachers. Counselors should take into consideration supply and demand trends in their counseling of students, so they will be directed into the proper fields of teaching.

Lindley J. Stiles (46) feels that colleges must select from among those who seek admission to teacher education programs those students who are most likely to develop into successful teachers. It may appear that democratic principles would compel colleges to admit all who desire to become candidates for teacher education. However, if it is conceded that education is a function of the state and is maintained for its own good, the state is responsible for securing the best possible teachers. The type of teacher that the college will ultimately produce is dependent upon the quality of persons who are accepted for training. Stiles found the four bases of selection used most frequently by the institutions studied are: "(1) results of interviews; (2) scholastic achievement in the lower division; (3) high school record; and (4) results of aptitude tests."

Those institutions opposed to the practice of selection feel there is a lack of reliable bases upon which to make the selection. Because of the difficulty of recognizing the most promising students when they apply, and because of the negative results of statistical studies, and the inconclusive findings of research workers, many have felt that it is practically impossible at present to decide upon valid bases for

selection. However, if wise use is made of the measures available, colleges will have a better basis for selection than if these measures are disregarded, and by a long term study each college may be able to decide what selective bases are best for its use.

Stiles further concludes that since selection programs are in use and growing in frequency that is some indication of their value. Selection programs are being planned by many colleges, which include the use of guidance techniques, aptitude tests, and orientation programs. It was also recommended by a jury of authorities on teacher education that personality traits be considered in the process of selection.

Thomas P. North (56) makes this statement:

...Selection of candidates for teacher education is essential to the adequate education of the child, to the effective social living of citizens locally, nationally, and universally; to the welfare of the teaching profession and to the efficient and effective functioning of the colleges preparing teachers.

A high degree of selectivity for entrance into the profession should be required, as teaching is one of the most significant professions. The pre-requisites for success in teaching should be used as a basis for making the selection. Quality in selection will insure more competent teachers for the children of the nation. It will also bring respect and prestige to training institutions and to the profession. It is important that members of the teaching profession encourage and attempt to create an interest in the teaching profession among their outstanding students. However, it is felt if the outstanding students in the high schools are

to be encouraged to enter the profession and the standards of selection are to be raised, then the salaries of the teachers must be on a basis comparable to those of the other professions.

Commenting upon the criteria for selection, North is of the opinion that only those students who have proved their scholastic capacity and competence should be accepted for admission into teacher training. They should have ranked at least in the upper half of the graduating class in high school. The candidate should have excellent physical and mental health. He should also have personal and social competence with a gracious and friendly understanding of people and their problems. The candidate should also be deeply interested in the teaching profession, since interests are the main movers to action.

Peik (40) likewise emphasizes the need for selection.

He states:

Society has not screened out sufficiently those who are not endowed for so high a service and so difficult a vocation as that of the teacher. Too many teachers still come from the lower half of high school senior scholastic ability. Too many still do not have those human qualities which do endear good teachers to pupils. A few care too little about ethical or cultural standards. With the oversupply of secondary teachers, but not of well-selected, completely prepared secondary teachers which is developing now, state departments and colleges must have the wisdom and courage to do something more than they have in the past about selection and oversupply.

Other educators have suggested other techniques as a basis of improving the selective measures of choosing prospective teacher candidates. David G. Ryans (43) feels that

examinations should play an important role in the selection of teachers. He particularly stresses the importance of the National Teachers Examination as a selective factor.

No one of the methods that may be employed in teacher selection taken by itself is entirely adequate for the purpose, and no one of them yields all the information desirable for the selection of teachers. Examinations measure certain important areas. Teacher examinations may yield valuable data with respect to professional information, mental abilities and basic skills, general cultural background, subject matter, knowledge, and perhaps professional interest. Experience, training, physical fitness, personal and social qualities, and classroom rapport must be considered by using other sources of information such as records, observation, and the interview.

Each method must be utilized with attention given to the procedures required in order for it to yield maximum validity. Each source must be used only for those areas in which it is best suited and most applicable or most valid. The teacher selection program in forward looking schools will employ each of the methods with maximum advantage and will culminate in an overall judgment contributed by them.

Barr (8) and his associates at Wisconsin have also been strong advocates of tests and their results as measures indicating probable teaching success.

Barr (8) presented an overview of some of the studies that have been made at Wisconsin using a multiple approach to the measurement of teaching ability. He prepared a table summarizing the tests and validity coefficients obtained from the different studies reviewed. Pupil change and achievement expressed as a composite of change scores were the major criteria used in these investigations. The change scores were found by subtracting the initial test scores from the final test scores on the several measures applied to the pupils. Then they were treated to secure statistical

comparability.

...Gotham (Table 1) found that a composite of tests of qualities commonly associated with teaching success correlated with pupil change with an  $r$  of only .13; a composite of personality ratings correlated with pupil change with an  $r$  of only .37; and a composite of teacher rating scales correlated with pupil change with an  $r$  of .40.

It would seem that the criteria measure very little of the same thing.

These low coefficients may be a result of selective factors operating in the samples studied. Intelligence tests seem to illustrate this point; for low coefficients of correlation may indicate that selective factors have been operating in the secondary schools and colleges. Therefore, it is probably safe to assume that those people graduated from college, trained to be teachers, have enough intelligence to teach. Barr (8) states:

One of the purposes of this investigation was to discover measures that correlated significantly with teaching efficiency. In looking over the data (Table 1) the following measures seem to give promise of satisfactory results: for intelligence, the American Council Psychological Examination with  $r$ 's of .57, .53, and -.10; for interest and motivation, the Yeager Scale for Measuring Attitude Toward Teachers and the Teaching Profession with  $r$ 's of +.45, .16, and .22; for a knowledge of subject matter (in this case the social studies) the American Council Test of Government and Civics (with  $r$ 's of .38 and -.01) and the Wrightstone Abilities Test with an  $r$  of .58; for social attitudes and information, the Hartman Test of Social Attitudes with  $r$ 's of .52 and .38; for professional knowledge and judgment, the Harnly Statements about Education (Educational Methods) with an  $r$  of -.32; for emotional stability, the Washburne Social Adjustment Inventory with  $r$ 's of .40 and .47 with supervisory ratings and .06 and .13 with pupil change and the Bernreuter Personality Inventory (Bn) with  $r$ 's of -.14 and -.31; for skill in teacher-pupil relations, the Torgerson Teacher-Pupil Relations Test with  $r$ 's of .22 and .35 and .45; and for personality any one of the several teacher rating scales employed in this investigation with  $r$ 's of .23 to .43.

Table 1. Summary of validity coefficients\*

	Rostker (Composite) Pupil Change	La Duke (Composite) Pupil Change	Rolfe (Composite) Pupil Change	La Duke (Composite) Supt. Rating	La Duke (Composite) Super. Rating	Gotham (Composite) Pupil Change	Gotham (Composite) Teacher Tests	Gotham (Composite) Teacher Ratings	Gotham (Composite) Three Personality Scales
Wrightstone Abilities	.58								
American Council Psychological	.57	.53	-.10	-.12	-.18				
Hartman Social	.52		.38						
Yeager Attitudes	.45	.16	.22	-.15	-.10				
Torgerson Mental-Hygiene	.45	.24		.17	.18				
Teacher College Psychological	.40		.05						
Community Planning	.39								
Health Test	.37								
American Council Gov't. Civics	.36		-.01						
Bernreuter (B-n)	-.31		-.14			-.14	.15	.16	.06
Bernreuter (F-c)	-.27								
Bernreuter (B-d)	.25		.04			.04	.13	.19	.09
Bernreuter (F-s)	-.13								
Bernreuter (B-s)	.20		-.11			.11	.19	.01	-.01
Orientation	.30		-.08						
Almy-Sorenson (Composite)	.26		.36			.36			
Michigan Rating (Composite)	.23		.39			.39			
Morris Trait Index "I"	.20		-.17						
Washburne Social Adjust. Inv.	.13		.06			.06	.47	.40	.47
Teacher Problems	.11								

\* A. Barr, "Impressions, Trends, and Further Research."

Table 1. (Continued)

	Rostker (Composite) Pupil Change	La Duke (Composite) Pupil Change	Rolle (Composite) Pupil Change	La Duke (Composite) Supt. Rating	La Duke (Composite) Super. Rating	Gotham (Composite) Pupil Change	Gotham (Composite) Teacher Tests	Gotham (Composite) Teacher Ratings	Gotham (Composite) Three Personality Scales
Stanford (T-A)	.10		.08						
Stanford (A-R)	.04		.15						
Stanford (T-R)	.02		.15						
Harnly Purposes		.13							
Harnly Policies		.02							
Harnly Objectives		.05							
Harnly Methods		.32							
Harnly Total (Liberalism)		.02		.39	.52				
Jackson Social Proficiency		.37		.01	.13				
Torgerson (Composite) Personality	.34		.43			.43			
Wrightstone Civic Beliefs			.30			.30	.15	.89	
Teacher Pupil Relationship			.29						
Teacher Pupil Relationship			.22						
Sims Socio-Economic Status			.15						
Rudisill Scale						.03	.11	.16	-.10
Personal Fitness			.35			.35	.14	.87	
School Size			.31						
Salary			.22						
Experience			.10						
Pupil Change				.02	-.25		.13	.40	.37



It could probably be concluded from this study that tests and measures may play a part in predicting teacher success. However, it would seem that until more convincing evidence has been obtained they cannot be relied upon to be entirely valid.

Archer (4) stresses the point that quality of teaching has never been good enough. His suggestion for the improvement of teaching personnel is through the recruitment of outstanding high school students. This selective effort should be encouraged by the cooperative efforts of the secondary school supervisors, counselors, state department of education, and the teacher training institutions.

The responsibility of the teacher and the importance of selecting the highest type of individual for the teaching profession is expressed in the words of Morgan (35):

Let those of us who now teach--however hard the going may have been in our lives--keep the faith and pass on the torch to those who will take our places. Let us tell college men and women and earlier still high school boys and girls the simple truth that teachers make civilization. It is theirs to lift up and look forward. Under their formative touch come the young people who--grown to manhood and womanhood--will keep our homes, maintain our churches, write the books, paint the pictures, supply the skilled labor, manage industry, run our government, and build the peace of the world.

#### Pre-service Selection Practices in Colleges

A review of the pre-service selection programs now being practiced in some of the prominent colleges in the United States indicates the methods used in their programs have been successful. According to Henry P. Smith (45) and M. E. Troyer (49) Syracuse University has one of the most successful

programs of selection of any collegiate institution. This institution has conducted an intensive program for the selection of students who wish to enter teacher preparation since 1932. During the fall of 1945 a group interview plan was tried experimentally with 20 candidates as an extension of the selection program. It was felt the group interview technique was so successful that it was adopted as a regular procedure and was employed with all the 154 candidates. Final application for admission to the school of education is made during a selection period in the second half of the sophomore year and, if accepted, enter the courses in teacher preparation when they are juniors.

A rather extensive folder of information including data pertaining to scholastic standing, conduct and personality as exhibited in living centers; interest, intelligence, personality, and general background test scores; physical fitness; photograph; and reports from staff members is collected and compiled during the selection period. In the past, students have been required to be present for individual interviews with each of four members of the staff during the selection period. These staff members included the professor of speech education, the student's major professor, the chairman of the committee on selection, and one other member of the committee. Usually in the freshmen year or prior to the final selection period, the student has had an interview with the chairman and has supplied a portion of the data called for in a permanent record folder.

Under the above procedure it was felt that students were placed under considerable tension and were forced to spend a large amount of time in arranging and attending interviews scattered over the campus. Members of the committee did not feel they were becoming well acquainted with each student. They were particularly concerned with the apparent formality of the situation and their own tendency to ask a series of somewhat stereotyped questions. A group interview technique was thought to eliminate many of the problems.

The student continues to meet with his chosen major professor in an individual interview. However, the final individual interview with the professor of speech education, the chairman, and one other member of the selection committee is now eliminated. Instead, the students are scheduled for one-hour meetings in groups of ten. These meetings are held in an atmosphere of informality and are attended by the professor of speech education, a member of the committee on selection, and the chairman. Other members of the staff are invited to attend such meetings as they choose.

Middlebury College has a selection program similar to the one at Syracuse University. It is done on a continuous basis. The procedure involves representatives of the professional and academic fields. This group comprises a committee, who administers the education, guidance and the selection program. The selection committee feels that a high school teacher should be well adjusted, competent in subject matter, and have a wholesome philosophy of life. During the period

of selection the professors are asked to give personal ratings of the students. These ratings indicate how they expect the student to succeed as a school teacher.

The University of Pittsburgh uses selective measures in admitting students to the School of Education. During the early part of the 1930's specific standards of admission were established. The admission requirements for entrance into the professional program require the applicant to earn a general quality point average of at least 1.00 in the courses taken during the first two years. The student is required to receive a satisfactory rating on a health and physical examination. He must also secure approval based upon a personal interview with three faculty members. The interview is required in order to give the faculty staff an opportunity to estimate the professional promise of the applicant.

After the above program had been in effect for several years, members of the staff recognized the need for more information on the quality of the students applying for admission. The program was thus expanded in 1942 to include, in addition to the original measures, a test of contemporary affairs, a psychological examination, three personality inventories, and a test in written English.

The School of Education of the University of Pittsburgh has a follow-up service for its graduates which includes a rating by the teacher's principal at the end of his first year of teaching. The principal rates the teacher on a modified form of a five-point rating scale, including such

items as the teacher's adjustment during his first year and extent of satisfactory progress in all aspects of teaching.

Using the judgment of the principals as criterion of the teacher's in-service success, Gould (23) obtained ratings from the principals of 113 graduates of the School of Education who had completed one year of teaching. His purpose was to report on the value of eight measures for predicting the in-service success of the prospective teacher. These measures were:

- ... (1) Rating in personal interview with faculty members; (2) grade in student-teaching; (3) score on the American Council on Education Psychological examination; (4) general quality point average in courses completed during the first three semesters; (5) score on the Cooperative Contemporary Affairs Test for College Students; (6) rating on the Washburne Social Adjustment Inventory; (7) rating on the Bell Adjustment Inventory; and (8) rating on the Willoughby (Clark-Thurstone) Personality Schedule.

Since the personal interview ratings and student-teaching grade were really only estimates, and the teacher's in-service success was not measured in an absolute sense, the contingency method rather than the product method of correlation was used in determining the relationship between the teacher's success and the selective instruments. The results are shown in the following table quoted from Gould's (23) study:

Table 2. Relationship between certain measures and teaching success in the field

Measures	No. of Cases	Coefficient of Contingency
Student-teaching grade . . . . .	113	.66
Rating in personal interview . . . . .	113	.64
A C E Psychological Examination . . . . .	98	.53
Quality point average . . . . .	113	.44
Cooperative Contemporary Affairs Test . . . . .	113	.38
Bell Adjustment Inventory . . . . .	92	.37
Washburne Social Adjustment Inventory . . . . .	113	.35
Willoughby (Clark-Thurstone) Personality Schedule . . . . .	113	.25

As can be observed, there is substantial relationship between in-service success and the first four measures listed on the table. It is interesting to note that the professional promise of the student, as judged by the faculty members, is almost as good an indication of his future success as his grade in student-teaching. In-service teaching success and ratings on the Contemporary Affairs Test, Bell Inventory and Washburne Inventory seem to bear about the same degree of relationship.

The correlations in the foregoing table are higher than those found in similar investigations. However, based upon the teacher's performance in student-teaching and the selective instruments, these coefficients have low "forecasting efficiency" as far as accurately predicting the teacher's success. The real relationship is not revealed in the size of the derived coefficients because of limitations inherent in the study. Selective factors have operated to reduce the range of some of the traits possessed by the teachers, and this naturally reduces the size of the coefficient of correlation, and also its predictive value. In many instances, however, the student's performance on several of the admission criteria and student-teaching is more predictive of his in-service success than seems to be indicated by the coefficients of correlation.

Selective programs should make it possible to identify those applicants who do not possess potentialities of achieving at least an average degree of in-service success. Any

measure that will assist in doing this must be recognized as possessing predictive value, even though the rating the student receives on the measure is not exactly or precisely indicative of the degree of success he will achieve in his field. It is naturally supposed that selective admission will enable teacher educating institutions to predict with greater precision the future success of prospective teachers. However, inadequacies of measuring methods of success or the real relationship between two variables, when one has a restricted range, would seem to indicate that less precision in prediction must be presently acceptable.

The teacher selection plan in operation at the Brigham Young University is described by Dean Law. This plan of selection requires all prospective teachers to make written application to the selection committee at least three months before the date they plan to register for student teaching. Law (31) states that it is the responsibility of the selection committee to see that pertinent information, such as test data and other valuable information from various sources be assembled for the committee to make a decision. The decision of the committee is reported and the student is either admitted, conditionally admitted, or denied admission. This is a valuable plan and would be of greater value if the prospective teacher were rated at an earlier period of his college career. Law is convinced of the importance of teacher selection and is trying to find means and to improve the plan.

It was expressed as the opinions of some educators that

pre-service selection should begin by permitting only the outstanding high school students to enroll in the School of Education. Jones (29) reports on selective admission procedures submitted by Brownell and in operation in the State Teachers College, New Haven, Connecticut. Their plan of admission based largely upon high school records utilizes five criteria:

1. Application to be filled out by the student giving information regarding his family, working experience, extra-curricular activities, hobbies, and interests, and an autobiography, listing what he considers his most significant experiences.
2. A high school transcript for three and a half years of work, filled out by the high school principal.
3. A recommendation by the high school principal and a personality rating by the guidance worker. (See "Statement of High School Principal" Table 3.)
4. Entrance tests including intelligence, high school content, and silent reading tests.
5. A personal interview conducted by a member of the faculty.

The student is also required to present evidence that he is free from any speech defects and that he is in good health.

The information is assembled by the Registrar and the Scholarship and Admission Committee. This committee is composed of the President, the Director of Admissions, Registrar, Dean of Women, and the Director of the Evening College and Extension Program.

It is the responsibility of this committee to review and analyze each application upon the basis of the five criteria. If the applicant receives five favorable votes,



Table 3. A form used to secure data from the high school principal and guidance worker

STATEMENT OF HIGH SCHOOL PRINCIPAL \*

Note: The high school principal should mail this application to the designated institution not later than May 15th. He should also send to the college not later than June 30th, a copy of the applicant's high school record on Sec. Ed. Form 12. This scholastic record and the statements made below will constitute an important factor in determining admission.

1. Mr./Miss . . . . . will be or has been graduated from the . . . . . High School before September of this year. He/She has or will complete the . . . . . Curriculum.
2. So far as we can now ascertain, the applicant's relative senior class standing is number . . . . in a class of . . . . ., or he/she is in the . . . . quarter of the class.
3. I.Q., if recorded . . . . . Test . . . . .  
Date . . . . .  
Scores on achievement tests and names of tests . . . .  
. . . . .
4. The following general rating upon personal qualifications may be given to some teacher who knows the student well:

	Below	
	Superior	Average
	Average	Remarks
Cooperation . . . . .		
Command of Language . . . . .		
Energy . . . . .		

\* L. Jones, "Admission and Pre-registration Orientation of Beginning Students."

Table 3. (Continued)

	Below	Average	Average	Remarks
	Superior	Average	Average	Remarks
Health . . . . .				
Leadership . . . . .				
Ability to meet public . . . . .				
Willingness to learn . . . . .				
Punctuality . . . . .				
Reliability . . . . .				
Habits of work . . . . .				
5. Special qualifications which in your judgment make the candidate qualified for college work . . . . .				
6. Special considerations which in your judgment may handicap the candidate in doing college work . . . . .				
7. Special qualifications which make student a potentially satisfactory candidate for the teaching profession . . . . .				
8. To the best of my knowledge and belief this applicant is a person of good moral character.				
				. . . . . (Principal or Dean)
I <input type="checkbox"/> recommend				
I <input type="checkbox"/> do not recommend				
for teaching				
for general education .				
Dated . . . . .				Principal . . . . .
				Supt. of Schools . . . . .

he is accepted. If he should receive five negative votes, he is temporarily rejected. The committee reviews all rejected applications to eliminate as many errors as possible. In some cases the committee asks for additional information from the guidance worker in the high school and may also give retests, or request additional interviews.

The testing department of the college designates six Saturdays in the months of February and March at which times students from specified high schools on a particular Saturday are invited to be at the college to take the entrance examinations. In the case of large groups in any one high school wishing to take the examinations, the Director of Testing will administer the tests at the high school.

In the Fall of each year the Scholarship and Admissions Committee anticipate a plan of inviting the high school administrators and guidance workers to the college for a discussion on admission procedures. This plan has a three-fold purpose:

1. To inform the high schools regarding our policies.
2. To gain helpful suggestions from high school staff.
3. To foster closer and better relationships between the high schools and the college.

The progress and growth of selection in colleges is expressed in the following quotation from Jewett (28):

An encouraging feature of the situation during the decade is the increasingly general acceptance of the principle of selective admission....A number of these systems have now been in operation for a sufficient length of time to produce measurable results. In every instance, the increased care in admission has resulted in a student body which ranked well scholastically when compared with students preparing for other vocations. In some instances (Michigan and New York, for example) the system has been made state-wide.

These accounts are just a review of a few of the schools utilizing selective measures and is merely an indication of the present situation. They by no means include all the schools that are practicing pre-service selection of teachers. To review all the colleges using selective techniques would make the study too voluminous. There are articles published describing the requirements and results of practices in other colleges such as Cornell, Buffalo, California, Milwaukee, San Diego, Rhode Island and Wayne University.

#### CRITERIA FOR THE PRE-SERVICE SELECTION OF TEACHERS

On the basis of the studies reviewed seven criteria were selected. The educational authorities and studies cited are in general agreement that each candidate for admission to teacher training should be appraised in terms of these criteria:

1. Personality rating
2. Intelligence score
3. High school record
4. Scholastic achievement
5. Physical fitness
6. Interest and aptitude tests
7. Results of interviews.

It is desirable that the prospective teacher candidate possess a pleasing personality and high mental ability. Evidences of his scholastic achievement should be indicated

from his high school record. He should be in good health and free from any physical defects. The student should have a keen interest and desire to become a teacher.

Each of the criteria for pre-service selection will be appraised in terms of the opinions of educators or results from studies in which the criteria have been used to determine teaching success.

### Personality Traits in Teacher Selection

As indicated in the survey made by Eliassen and Martin (19) they found personality traits to be the most frequently used factor in the selection of prospective teachers. The importance of personality as a selective factor is recognized in a study made by Odenweller (38). He concluded that teaching effectiveness is influenced more by personality than any other single factor.

Percival M. Symonds (47) made a summary of studies on teacher adjustment over a period of six years. From this study he concluded that quality of personality must be considered in the selection of prospective teachers. As a result of his study he proposed six personality factors essential for a person to succeed in the teaching profession.

The personality factors proposed by Symonds are:

1. Every teacher should like teaching, and through her work should attain personal goals and satisfaction. A good teacher does not take up teaching for superficial reasons under economic pressure, or in order to escape from some less desirable form of work.

2. A good teacher should be personally secure and should have self respect, dignity, and courage, as opposed to feelings of inferiority and inadequacy. The

personally insecure teacher has difficulty with discipline and either becomes inept and ineffective or must maintain her status by bluff and swagger.

3. A good teacher must be able to identify herself with children. She must have social awareness, the capacity to enter into the feeling and interests of others, and to understand the motives and conflicts of others.

4. The competent teacher is emotionally stable. She is able to accept the aggression of boys and girls and their laziness, carelessness, slowness, and stupidity as well as their brightness, industry and efficiency. She should be able to accept competition with her colleagues and the demands and restrictions imposed by the community.

5. The effective teacher should be free from anxiety. She should be free to experiment and to try out innovations in her teaching in the classroom. She should feel free to permit a certain amount of disorder in her classroom without fearing censoring from her superiors.

6. A good teacher is not too self-centered, or selfish, but is able to give herself freely and without reserve to the needs and interests of her pupils.

Symonds concludes that evaluating personality must be done by those who have been trained to observe and evaluate.

Two studies of personality were made by Witty and by Hart. In the study made by Paul Witty (52) permission was granted by the officials of a popular radio broadcasting program to award a scholarship to the teacher most effectively described in a pupil's composition. The topic suggested was "The Teacher Who Has Helped Me Most". Approximately 12,000 letters were received and analyzed from pupils between the grades two to 12. The order in which the 12 traits were mentioned most frequently is listed below:

1. Cooperative, democratic attitude.
2. Kindliness and consideration for the individual.
3. Patience.

4. Wide Interests.
5. Personal appearance and pleasing manner.
6. Fairness and impartiality.
7. Sense of humor.
8. Good disposition and consistent behavior.
9. Interest in pupils' problems.
10. Flexibility.
11. Use of recognition and praise.
12. Unusual proficiency in teaching a particular subject.

Hart (25) states that the personality of the teacher has a definite bearing on the adjustment and personality of the pupils. There seems to be lack of evidence, however, that pupil achievement is appreciably effected by the personality of the teacher. From what is known about personality it seems reasonable to assume that persons who are well adjusted and more successful as individuals will probably be more successful as teachers. There is every reason to believe that good teachers may exhibit many different kinds of personality traits. It seems there is no one pattern of personality that will make the best teacher.

Hellfritsch (26) in his factor analysis study of teacher abilities used 25 measures of teaching ability. He felt there was considerable overlapping in the tests and reduced the measures to four pertinent factors. The four measures are a personality factor, a supervisory rating factor, mental factor and an attitude factor. These four factors are uncorrelated with each other.

McDonald (34) emphasized the importance of selecting only those students with outstanding personalities for prospective teachers.

Dodge (17) made a study of the personality traits of the

teachers in an Air Corp Technical School. He asked the supervisors to select ten per cent of the best teachers and ten per cent of the poorest teachers. A group of 123 teachers were selected in the more successful group and 116 were in the less successful group. Both groups were asked to check a personality inventory. The responses of the two groups were analyzed item by item to determine those items which differentiated the two groups. The items were then classified and the ones which seemed to indicate a similar attitude or habit of action were grouped together.

The more successful teachers reported themselves as possessing the following traits more frequently than did the less successful instructors:

1. Social, or at ease in social contacts.
2. Willing to take initiative and assume responsibility.
3. Free from fears and worries.
4. Sensitive to and valuing the opinions of others.
5. Slow in making decisions.

Rostker (42) used personality as one of the criteria in his study on the measurement of teaching ability. The study included 28 schools located in southern Wisconsin. Each school had one eighth grade, and a population of 375 pupils. Twenty-eight teachers and 375 pupils participated in the study. The Bernreuter inventory was used. This scale consists of 125 items, which can be scored yes, no, or indicated by the use of a question mark. The traits that are scored are neurotic tendency, self-sufficiency, introversion-extroversion, and dominance submission. The inventory was administered to the 28 participating teachers. Rostker found there was no statistically significant correlations between personality



as measured by the Bernrouter Personality Inventory and the criteria of teaching ability.

Baker (7) states:

...speech is one personality trait that can be scientifically tested, and students possessing incurable speech defects that seriously interfere with teaching success should be refused admission to teacher educating institutions.

Speech is a vitally important personality element to every teacher. This fact has become recognized more fully within the last two or three decades. The majority of rating scales in use list voice as one of the important elements.

An editorial stressing the need of speech requirements for the successful teacher appeared in the Quarterly Journal of Speech. Therein it was stated that several colleges and university faculties require that candidates for teacher certificates either pass attainment tests in speech or earn satisfactory grades in elementary speech courses. In the classroom speech is the principal tool of the instructor. A harsh, raspy, unpleasant voice, or bad speech habits frequently account for inefficient working tension in the classroom, inability to hold attention, difficulty in presenting material, and lack of interest on the part of the student. Baker (7) quotes from the Quarterly Journal of Speech,

We believe that we are nearing the day when every school or college granting teaching credentials to its graduates will withhold them from those whose inferior speech unfits them for the task of classroom instruction.

Every teacher educating institution should eliminate those candidates whose teaching effectiveness is destroyed by serious speech defects. There is little available

information as to the extent to which speech is being used as a factor in the selection of students. The School of Education at the University of Wisconsin requires the passing of a speech test for admission to the senior college.

Baker (7) suggests the following speech program for a four-year teacher educating institution:

1. Every entering freshman should be required to take a speech test, including the making of a record on some suitable recording apparatus.
2. The elimination at this time of those possessing incurable speech defects of a nature that will seriously interfere with teaching success.
3. The assignment of those possessing remediable defects to an expert in speech correction.
4. A required course in speech fundamentals in the freshman year aiming at voice development, voice control and the proper correlation between vocal expression and the mental and emotional processes.
5. The transmission of the record of the speech test of each freshman to his counselor.
6. A further speech test at the end of the junior college period, at the time of application for admission to the senior college to determine--
  - (a) Whether serious speech defects have been remedied.
  - (b) Whether satisfactory progress has been made in developing voice qualities essential to success in teaching.

Personality tests or ratings were also recommended as one of the factors to be used in the selection of teachers <sup>x</sup> by the Oxford Conference (39).

It appears from the studies and comments that have been made, that most educators would agree to the importance of personality to the successful teacher. It is easy for some people to teach school successfully while others achieve <sup>x</sup>

only moderate success and with difficulty. Good order and discipline comes as a matter of course as some teachers step in the classroom. There are other teachers who, try as hard as they will, have very little order and discipline. Some teachers the pupils and students love, while others they hate.

There are those teachers that presidents and superintendents are anxious to employ after a short interview. On the other hand there are those teachers who are probably equally qualified from the standpoint of training, experience, and scholarship, yet they are found to wander from one job to another or from one vacancy to another always seeking a new position. The one teacher is successful, popular and his services are always in demand, while the other teacher is unhappy, dissatisfied, a dismal failure and wanted in no other teaching position. The difference between the two can be attributed in considerable measure to personality qualities.

Most authorities agree that at the present time there is not a test or device, which can positively identify all the desirable personality traits. This may in part be due to the fact that the various qualities of personality are so intangible and so few authorities agree on the meaning of personality.

The solution to the personality problem may come through a plan similar to that being employed at Syracuse University, New College of Columbia University, and the normal schools

and teachers colleges of New Jersey. The personal interview plan is employed in which the first two years of college, constituting the period of general education, are also devoted to a program of guidance and personality study. It is felt that by the junior year of college sufficient observation and evidence has been collected to eliminate those students who have not developed sufficiently to give reasonable evidence of success as teachers.

#### Intelligence as a Factor in Teacher Selection

Considerable study has been done at the University of Wisconsin where Barr (8) and graduate students have made careful studies of predictive factors in teacher selection. Three studies on intelligence were conducted to determine how effectively it predicted later teaching success. The criterion used in determining success was pupil change. The studies were very closely supervised and were carried out under similar situations. The results were not very conclusive for two of the studies found intelligence to favorably predict later success, while the other study found intelligence to be of minor significance. Other factors studied in relation to teacher success were personality, attitudes, social factors, high school rank, observable teaching procedures and college grade points.

In a study made by LaDuke (30) under the direction of Barr at Wisconsin, intelligence was used as a factor in determining later teacher success. The study included the records of 375 pupils and 28 teachers in southern Wisconsin. Pupil change

and achievement expressed as a composite of change scores were the criterion used in the study. The American Council Psychological and Torgerson Mental-Hygiene tests were used to obtain an intelligence rating. He found a significant coefficient of correlation with the criterion of pupil change.

Rostker (42) made a study in which 27 measures of teaching ability were applied. His study was also made at Wisconsin under the direction of Barr. Intelligence tests were used in the study. He also used the criterion of pupil change and a composite of change scores as indicated by the pupil's achievement. Intelligence was identified and described as being one of the most important factors contributing to the success of teaching.

A similar study to the ones reported by LaDuke and Rostker was made by Rolfe (41). He likewise employed intelligence tests as one of his measures in determining factors influencing teaching success. His study was also made at Wisconsin, and used pupil change and achievement expressed as a composite of change scores as the criterion. Intelligence was also found as being one of the essential factors important in determining teacher success.

Hellfritsch (26) made a significant study in which he included 25 measures of teaching ability. He concluded there was much overlapping in the factors and tests of teaching ability. He felt it should be possible to simplify these measures so that all pertinent factors could be included in a few factors. Among the factors chosen was a mental factor.

It was found to be uncorrelated with the other factors, therefore, it measured a separate aspect of teacher success.

A study by Armentrout (5) somewhat similar to the study made by Hellfritsch, pointed out four criteria should be used. Intelligence was one of the four criteria recommended X to be used in teacher selection.

Yaukey (53) comments in his study that intelligence is important in teaching success. It affects teaching success X by influencing scholarship and practice teaching.

Factors of success have been and still are being studied over a long-range program of research to try to find methods and techniques to improve selection, selective elimination, guidance, and placement. Intelligence test scores are one of the factors mentioned most frequently when describing the abilities of the students selected. X *Refer to Reason*

Studies have also been made to determine the reasons students withdraw from college. In most cases the withdrawal is a result of poor scholarship. Therefore, it would seem there is somewhat of a continuous selective process among college students.

Intelligence test scores are an important factor in the selection of teachers. Studies indicate that those teacher candidates possessing high intelligence scores are more X likely to be placed in teaching positions. Martin (32) states:

A comparison of the percentile scores on the Cooperative General Culture Test for the seniors in 1940, who were and were not placed in teaching, shows that students with the highest scores were more likely to be placed in teaching.

Table 4. Cooperative general culture test scores of seniors in 1939-40 who were and were not placed in teaching \*

	Graduates Not Placed In Teaching Positions	Graduates Placed In Teaching Positions
90-99	4	10
80-89	3	22
70-79	2	16
60-69	1	14
50-59	1	9
40-49	3	11
30-39	2	13
20-29	5	7
10-19	3	10
0-9	2	9
N	26	121
No Scores	1	3
<hr/>		
Trenton Mdn. Perc. on General Culture Test	43.33	61.07

\*L. Martin, "Teachers Colleges Can Select Students With Superior Ability."

Most teachers colleges which have adopted selective admission have included an intelligence test. Colorado State Teachers College uses the American Council Psychological Examination, excluding the lowest decile. Selective tests, consisting of standard reading tests, psychological tests and performance tests, are used at the Frick Training School for Teachers, Pittsburgh, Pennsylvania. According to an article by Ward and Kirk (50) intelligence is one of the factors used in the selection of Freshmen at the Milwaukee State Teachers College. The intelligence score is obtained from the Hannon-Nelson Intelligence Test.

There are conflicting evidences and opinions on the correlations between teaching success and intelligence.

Baker (7) quotes from a study made by Pyle of graduates of the Detroit Teachers College:

Pyle found almost no correlation between intelligence and teaching success. Between intelligence and first year teaching success  $r$  equals .034, with a probable error of .066; between intelligence and second year teaching success  $r$  equals .025, with a probable error of .066.

The conflicting opinions in regards to intelligence and teaching success are illustrated by the study which Baker quotes from an investigation by Somers:

Intelligence as measured by mental tests reveals a relation to achievement in school and success in teaching as signified by a correlation of approximately .54 and .43, respectively.

In summarizing the variance between intelligence and teaching success, Baker states:

While there is no scientific proof that intelligence is a fundamental faculty in teaching success, there is no conclusive evidence that it is not. On the other hand, tradition, experience and common sense all tell us that high mental ability is a contributing factor to success in teaching.

The California Test of Mental Maturity, Advanced Short Form was used by Bobbitt (11) to obtain an intelligence score as one of the factors in the procedure she applied to select prospective teachers for the Los Angeles City Schools. It was an important factor and contributed materially to the success of her selection program.

Eliassen and Martin (19) advocate a more selective process of prospective teacher selection. From their investigation it was concluded that intelligence is the most important single factor associated with ability to teach. Intelligence test scores and school subject marks provide the most reliable



basis for predicting success in teaching. It was also felt that success in teaching is primarily dependent upon personal qualities and that teaching success cannot be predicted by any one single factor.

Intelligence was mentioned as one of the essential factors in the pre-service selection of teachers at the Oxford Conference (39).

It would seem that most educators and studies would indicate that success in teaching is dependent upon a fairly high degree of mental ability. Among the colleges using plans of selective admission, the majority of them have made provisions in their plan for the administration of some type of intelligence tests.

#### High School Achievement as a Factor in Teacher Selection

Scholastic success in high school is a good indication of success in college. If it is assumed that candidates in teacher educating institutions must have a capacity to do a high grade of work, then only those who have demonstrated such ability in high school should be admitted. Colleges using selective methods have adopted the high school record as the best method of selecting candidates on the basis of scholarship.

In a survey made by Stiles (46) of 77 selected colleges distributed throughout the United States, he found that only 41 per cent of the schools used teacher selection techniques. One of the factors frequently used in the selection of teachers was the high school record.

Hancock (24) found the correlation of high school record and college marks in all subjects to be .456. The correlation obtained in this study was found by comparing the grades the students received in high school with their grades received in college.

Seago (44) made a similar study to the one made by Hancock. She found that high school scholarship had some predictive value for college grades. Those students achieving scholastic success in high school tended to make comparable scholastic achievement in college. Fuller (21) was unable to find any significant relationship between percentile rank in high school and rank order in student teaching.

Martin (32) used standings in high school, high school personality ratings, entrance test scores in science, mathematics, history, and English as predictive factors of teacher selection. These factors were of the greatest predictive value where an average of four year marks was used as the criterion. In a similar study by Martin, high school percentile rank was found to be a better criterion for the prediction of scholastic standing in college than the American Council Psychological Examination.

White (51) feels the selection of prospective teacher candidates at State Teachers College, Paterson, New Jersey, is rightly done when the initial selection is made before or during the pre-service education of the prospective candidate. It is felt this time of selection is much more desirable rather than at the time of certification. The

students are admitted to the college on the basis of their ability to do college work as determined by their high school record and entrance examinations. It is felt this system of selecting freshmen students provides well qualified graduates eligible for certification.

According to a study by Lonzo Jones (29), one of the criteria used as a basis for admission to the New Haven State Teachers College is the applicant's high school record. He states the high school record is also used as one of the criteria for determining admission to the State Teachers College at Geneseo, New York, and suggests that the high school record should always be available for judging the applicant's academic possibilities in college.

Percentile rank in high school scholarship was one of the factors commonly found by Archer (4) in his review of studies on "Personnel Procedures in Teacher Training Institutions."

Rank in high school graduating class and grade point average of high school work were two of the factors used by Bobbitt (11) in her outstanding study on teacher selection. X

Armentrout (5) is also convinced that rank in high school class should be used as one of the criteria for selection. X

Northway (37) feels there is no one single factor which offers sufficient evidence of success in teaching that it could be used alone. Therefore, it is recommended that several factors should be included in a program of selective

admission. One of the factors recommended by Northway is the high school records as shown by percentile ranking.

From an article in the National Society of College Teachers of Education it was stressed that high school scholastic record was one of the factors that should be used in selecting teachers.

Baker (7) states "There is ample evidence that scholastic achievement in high school is the best criterion for predicting the success of candidates in college."

The studies and recommendations of most educators would indicate that only those students who have demonstrated in high school their ability to achieve high scholastic records should be admitted to teacher educating institutions. For if only those are admitted that have achieved outstanding high school records, it would probably be safe to assume they have the capacity to achieve well in college.

#### Scholastic Achievement as a Factor in Teacher Selection

Stiles (46) made a survey of 77 selected colleges throughout the United States to determine the number of colleges using selective measures in the selection of prospective teachers. He found that only 41 per cent of the schools used selective techniques. It was indicated that scholastic achievement was one of four basis of selection most frequently used.

Seago (44) found that high school scholarship had some predictive value for college grades. In some of her studies, college honor point ratios showed significant correlations with teaching success.

Butler (14) made a survey of teacher selection practices being used in 138 colleges. It was found that 15 of the liberal arts colleges required the student to be in the upper half of the graduating class in scholarship. In the state universities four out of 45 reporting required entering students to be above the median in scholastic standing. Reports from 11 of the state teacher colleges used in the survey indicated that candidates for entrance were chosen from the upper quartile of high school class scholastic standing.

Barr and Emans (10) made a study of the qualities essential to teaching success. They made an analysis of 209 rating scales being used to evaluate qualities essential to teaching success. Scholarship was listed as one of the most important of these measures.

Grade point average for college work was one of the factors used by Bobbitt (11) in her study to determine techniques for the selection of prospective teachers at the end of the sophomore year of college.

Baker (7) recommends that only candidates of proved scholastic ability should be admitted to teacher educating institutions. He states:

...unfortunately, the weight of scientific evidence seems to indicate that there is little correlation between scholarship and teaching success. Nevertheless, common sense, experience and tradition all tell us that high school scholarship is a necessary qualification in the teaching profession.

The importance of scholarship is stressed by a number of colleges who require a high degree of achievement to gain entrance into the school or department of education. Among

these colleges is the Colorado State Teachers College which requires the student to be above the twenty-fifth percentile of his graduating class. The College of Education of Wayne University admits only those students whose previous college work has been reasonably high. Wisconsin admits only those students with an average of 1.3 or higher. The School of Education of the University of California requires that all students must maintain an average of 1.5 in all work taken during the junior and senior year.

Scholastic achievement is used as one of the measures in the selection procedure of Syracuse University. Scholarship was mentioned and stressed by McDonald (34) as one of the pre-requisites to good teaching.

Concerning criteria for the selection of candidates for teacher preparation, the Bowling Green Conference (13), referring particularly to scholastic capacity, reported:

If teaching is to be of high quality, it must be done by the intelligent. Quality in the profession will be secured when the profession breaks with mediocrity by requiring all candidates for admission to teacher education to have graduated from an accredited secondary school and to have ranked at least in the upper half of the class at graduation.

W. E. Peik (40) agrees that lower ability levels of high school scholarship do not have a place in a profession where scholarship is of the essence. He believes teaching candidates should be selected progressively from the upper one-half, one-third, or even one-fourth of high school scholarship range.

Among some of the recommendations made by the National Education Association for improving the status of teaching

was that only those students who rank among the highest one-fourth in scholarship, character and personality should be encouraged to become teachers.

The possession of high scholastic ability is desired by all those concerned with preparing prospective teachers for the profession. Everyone would probably agree that "knowledge is the foremost and indispensable qualification of one who would help others learn."

#### Physical Fitness as a Factor in Teacher Selection

Health examinations were found to be one of the selective factors commonly used by most schools in a review of studies on personnel procedures in teacher training institutions by Archer (4). Physical fitness was recommended as one of the important factors that should be included on the selective admission program discussed at the Oxford Conference (39). Syracuse University also uses physical fitness as one of its important factors in the pre-service selection of teachers.

It is likely that most colleges training teachers will require a medical examination for admission. It is generally agreed that physical fitness should be required as one of the factors for admission. In the future teacher training institutions must use more care and emphasize health and physical fitness more in the selection program. It is recommended by Baker (7) that all freshmen be given a thorough physical examination during the freshman period of his schooling. If the examination is given at this time results

can be secured in time to make necessary adjustments before the end of the freshman period.

A problem occasionally encountered is the situation presented by the physically handicapped individual, who may have lost an arm or a leg or have some other malformation of the body and seeks admission to the teacher training program. It has been debated whether they should be admitted from the democratic sentiment point of view, offering every individual an opportunity, or whether the teacher educating institution has a definite obligation to society in selecting only those most physically qualified. It seems there is lack of evidence to determine what emotional effect such physically handicapped individuals may have upon young children if any.

In an article written by Todd (48) in which he describes the selection program employed at Springfield College, health and physical qualifications are two of the factors used for selective admission.

Baker (7) commenting on mental health feels that our present knowledge of mental health is still quite indefinite. It seems there is no definite scheme or plan for determining how the prospective teacher may adjust himself emotionally. Some teacher candidates may be emotionally unadjusted as a result of environmental conditions, while others may be unable to adjust themselves emotionally as a result of the highly nervous work required of the teacher. It is suggested that in carrying out a program of emotional adjustment one of the



standard personality scales may be given to all entering freshmen. The results of the test should be reviewed by a competent psychologist and supplied to members of the selection committee. During the selective period this information may be incorporated along with other data to be used as a source of information for the admission or rejection of the candidate into advanced teacher training.

The problem of health is indeed important for any and all students. Recognizing this fact, California, Missouri, Montana and New York require a health certificate to obtain a teaching license. In a survey concerning health as an entrance requirement of 228 liberal arts colleges and universities, Butler (14) found that 36 required "good health" certificates from the family doctor at the time of application. A physical examination was an entrance procedure of 57 colleges. Twenty-nine colleges required both the entrance certificate and an examination. Annual examinations were conducted by 13, and five mentioned x-ray or TB examinations. The fact was revealed that 106 institutions required neither a certificate nor examination. Butler received replies from 166 teachers colleges concerning health indicating that only two neglected the matter entirely. Fifty-three required a certificate from the family doctor and a school examination, while only three accepted the certificate as the only requirement. Physical examinations by doctors or nurses were given at 107 of the schools.

Northway (37) is of the opinion that a variety of factors

should be used in the selection of teacher candidates. One of the factors she recommends is evidence of good health and freedom from serious physical defects. The applicant should have a careful medical examination by the staff of the institution he is going to attend.

North (36) feels that physical and mental health are extremely important to the teacher candidate. Teaching requires much face-to-face relationships with the students. The personalized nature of teaching requires a great deal of patience and emotional stability. It is claimed that healthy individuals are more likely to be jovial, happy and cheerful. Therefore, it would seem the healthy individuals would probably be more successful in their relationships with children and adults.

Therefore, the most desirable recommendation would be to admit as teacher candidates only those individuals possessing healthy bodies, free from emotional anxieties and major physical defects.

#### Interest and Aptitude Tests as Factors in Teacher Selection

A survey of 77 selected colleges distributed throughout the United States was made by Stiles (46). The purpose of the survey was to find out the number of colleges using selective measures in the selection of prospective teachers. He found that only 41 per cent of the schools used selective techniques. Results of aptitude tests were one of the four basis of selection used most frequently.

An analysis of qualities essential to teaching success

was made by Barr and Emans (10). They reviewed 209 rating scales and concluded that interest in teaching was one of the most essential measures of teaching success. Interest and general background scores are factors used in contributing to the success of the teacher selection program at Syracuse University. A review of studies on personnel procedures in teacher training institutions was made by Archer (4). Test of special aptitudes for music, art and commerce were commonly used.

The Oxford Conference (39) recommended a carefully worked out program of selective admission for students attending teacher education institutions. Interest and aptitude tests were among the factors recommended for use. Bobbitt (11) also used results of college aptitude tests in her study to determine those measures most important in the selection of prospective teachers. Teachers should be unprejudiced and open-minded and maintain a balanced attitude toward instructional content and classroom situations.

A study by Goodfellow (22) was made at the Pennsylvania State College on interests of prospective teachers. The data were obtained from 172 students in the school of education. The Strong Vocational Interest Blank was used as a criterion of interest in teaching. The study indicated that "...interest is not correlated with achievement, as measured by academic standing." A high coefficient of correlation is difficult to obtain in a selected college group. The interest test is not sufficiently discriminating to

measure the degree of interest among the more or less successful. An individual's happiness will grow out of his interests and, if they are not satisfied, he will be unhappy and cannot do his best work. The inference to educators and vocational counselors is to secure an adjustment according to abilities and personality traits of the individual. He should be directed or advised to choose a field where he has sufficient ability and interest to supply the necessary drives for satisfaction in the chosen occupation.

Hellfritsch (26) made a factor analysis of 25 measures of teaching ability, for he felt there was much overlapping in the tests. His study was to simplify these measures to a few factors and yet include all the pertinent information. He concluded there was an aptitude factor among the four measures of teaching ability.

The teacher selection program employed at Springfield College includes interest as one of its selective factors in admitting students to the college. It is stressed that the student should have a deep interest in a profession being offered by the college.

North (36) recommends that each prospective teacher candidate should be deeply interested in teaching as a profession, because interests seem to motivate a person into action. He feels that considerable emphasis should be placed on interest by admission officers. If this is done, it will probably result in fewer failures and more enthusiastic teachers during teacher preparation.

In Butler's (14) study, liberal arts colleges, universities, and teachers colleges were asked what, if any, tests were used for entrance. Liberal arts colleges use more tests with a wider variety than either type of university. Practically all teachers colleges in this survey used tests as part of the admission procedure. Although a great variety of tests were mentioned, the four used most frequently were the American Council Psychological Tests, the College Entrance Board's Scholastic Aptitude Test, the Cooperative Test Bureau's English test, and the Iowa Silent Reading test.

Vocations or fields of study may be chosen because of some chance influence, prestige, or maybe because of a desire of a parent or friend. In most cases it seems vocations have not been given enough careful thought and study. If a person is deeply interested in a vocation or particular occupation, the chances for his success and pleasure in the chosen field are considerably greater, provided he also has the necessary ability. Psychologists have long realized the importance of interest and attitude toward the person's vocational choice. With this view in mind tests such as the Kuder Preference Record and the Strong Vocational Interest Blank and others have been prepared to point out numerous vocations. The student taking the test may or may not be acquainted with all of the occupations in which event he is given a chance to check those activities which offer preferences and interests similar to his own. Results

of such tests are fairly good indications of the occupations in which the person may be most successful assuming he has the necessary ability.

#### Results of Interviews as a Factor in Teacher Selection

Use of interviews was found to be one of the four basis of selection used most frequently in a survey made by Stiles (46). The study included 77 selected colleges throughout the United States. It was found that only 41 per cent of the schools in the survey used selective measures.

Smith (45) and Troyer (49) feel that Syracuse University has one of the most successful selection programs. It is felt that the group interview method is largely responsible for the success of their program.

Middlebury College also has a successful program of teacher selection. It is very similar to the one at Syracuse University. After interviewing the prospective teacher applicant, the professors are asked to give personal ratings, indicating how they expect he would succeed as a school teacher.

One of the measures used by Bobbitt (11) in her study of techniques to determine success of teacher selection was the personal interview. A committee of three elementary school principals was chosen to interview the applicants. The function of the three man committee was to determine as nearly as possible the personal qualifications, training, and their experience relating to teaching or other experience with children. In making the evaluation the committee asks as many questions as they feel necessary in

order to obtain adequate information. The applicants approved by the evaluation committee were recommended for teaching certificates.

Personal interview is one of the factors recommended by Northway (37) to be used in the pre-service selection program of teachers. According to a report by Jones (29), the personal interview is one of the criteria used as a basis for admission to the New Haven State Teachers College. He also reported on admission procedures submitted by President Richard T. Parsons of Pennsylvania State Teachers College. The use of the personal interview was emphasized, indicating that it provided an excellent opportunity to focus attention to the applicant's expressed interests, speech habits and social presence.

North (36) feels the personal interview has definite advantages over other factors of selection. However, the personal interview technique requires the interviewer be very competent and skilled in its use. By using the personal interview certain details can be added more completely in respect to the candidate's oral expression, attitudes, interests, emotional stability and enthusiasm. It also has a definite advantage of appraising certain personal factors as good grooming, cleanliness, and general appearance.

In a survey of 138 liberal arts colleges and universities by Butler (14), the question was asked if a personal interview were required of the prospective teacher candidates, and if so, who conducted such interview. Every college in Maine, New Hampshire, Vermont, Massachusetts, Rhode Island

and Connecticut required personal interviews. This was also true of the teachers colleges in those states. In the teacher colleges of New York, New Jersey, Pennsylvania, Delaware, Maryland and West Virginia the personal interview is quite common. As to who held the interview, a committee of faculty members and the school dean were mentioned most frequently.

The interview method is used in the Brigham Young University plan of teacher selection. A selection committee interviews all prospective teachers at least three months prior to the date they plan to register for practice teaching. Law (31) states it is the responsibility of the selection committee to assemble pertinent information for a decision. If the applicant is approved by the committee, he is permitted to do his practice teaching. Some feel that the decision of the selection committee should not be left to such a late period in the preparation of the prospective teacher. If he is unable to qualify as a prospective teacher, he should have been steered into some other course of study at an earlier period in his training.

The Oxford Conference (39) recommended that at the end of the first two years of preparation, a complete re-evaluation of the student's fitness to continue in teacher education should be determined by additional tests, review of his record and thorough interviews. For those students who have been unable to make satisfactory adjustments and development the committee should consider directing them



into another vocation. Students that the committee pass should be permitted to enter concentrated programs of teacher education.

From the review of studies made thus far it is found that practically all colleges professing the use of teacher selection programs use objective and subjective data. The objective data are obtained from tests and are supplemented by subjective evaluations through conferences and interviews. The interviews are personal in some cases. At Syracuse University the group interview method is used.

#### DESCRIPTION OF THE STUDY

In order to form a basis for evaluating the effectiveness of the guidance program in the School of Education at Utah State Agricultural College, seven factors were used as criteria upon which to base the investigation. Because of extent of use and indications of merit these factors were chosen after a careful review of studies and opinions of educators practicing pre-service selection. Suggestions in conducting the study were sought from and given by members of the writer's committee.

It was decided to analyze the records of the upper-division students, whenever possible, to get adequate information. In some cases it was necessary to use the records of seniors of the year previous to the investigation or the graduating class of 1949. It was felt that this

procedure of analysis would be permissible, as the main purpose of the study was not concerned so much with the same individuals, as it was to determine the extent to which the present method of guidance is having selective effect upon the students in the School of Education.

The study is pertinent and timely. As has been previously indicated by supply and demand reports, the state and nation are on the verge of an over-supply of teachers. At the present time one of the major problems confronting the teaching profession is to improve through selection the quality and preparation of the candidates entering into the teaching profession.

#### Personality Traits

The personality traits of the teacher trainees were obtained from the ratings given to them by their supervisory teacher (Table 5). It is the policy of the Director of Teacher Training at the Utah State Agricultural College to request the supervisory teacher, under whom the trainee does his practice teaching, to rate the trainee. The supervisory teacher's rating is an estimate of the trainee's qualifications based upon his training record.

It has not been the policy in the guidance program at the Utah State Agricultural College to administer a personality test with the entrance test series. Therefore, it was decided to use the teacher supervisor's rating on the student teachers. It is felt that a personality rating of this nature was of considerable value. The supervisory

Table 5. Supervisory teachers' ratings of personality traits on 184 teacher trainees of the graduating class of 1949

Ratings	TRAITS											
	Personality		Personal Appearance		Sense of Humor		Voice		Dependability		Vigor and Vitality	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
Superior . . . . .	22	12	37	20	28	15	16	9	69	38	30	16
Above Average . . . . .	109	59	113	61	94	51	86	47	95	52	109	59
Average . . . . .	55	29	33	18	62	34	80	43	20	10	42	24
Below Average . . . . .			1	1			2	1			2	1
<b>TOTALS . . . . .</b>	<b>184</b>	<b>100</b>	<b>184</b>	<b>100</b>	<b>184</b>	<b>100</b>	<b>184</b>	<b>100</b>	<b>184</b>	<b>100</b>	<b>184</b>	<b>100</b>

teacher had an excellent opportunity to observe the trainee in a number of situations, some of which were under pleasant circumstances and others in which he was confronted with a multiple of problems. A true rating of the individual's personality and character can be made when he is actually doing the thing he is preparing to do or actually on the job.

The rating records analyzed are from the practice teaching group of the 1949 graduating class. It was necessary to use these records as the 1950 class records had not been accumulated at the time of this study.

The records of 184 students were reviewed and the ratings on 6 traits were recorded. The supervisory teachers rated the students on the basis of superior, above average, average, and below average. On the basis of these ratings the majority of the student trainees were classed above average by the supervisory teachers.

There seems to be little agreement among authorities as to just what trait or combination of traits constitutes a good personality. Therefore, it was felt a more complete rating of the trainee would be given if the following traits were included in addition to the personality trait: personal appearance, sense of humor, voice, dependability and vigor and vitality. It was interesting to note that 12 per cent of the students were rated superior, 59 per cent above average, and 29 per cent were rated average on personality trait.

## Intelligence

In lieu of a formal intelligence rating the percentile scores on three entrance examinations were averaged, and the student's average score was recorded in the quartile into which it fell. Entrance test scores were recorded from the records of 122 juniors and 97 seniors in the School of Education. The entrance tests given at the Utah State Agricultural College for the school year 1946-47 were (1) the Utah State Agricultural College Mathematics test, compiled by Dr. Frandsen (20), who describes it as follows:

The mathematics test is comprised of 56 problems sampling the basic and most frequently used phases of arithmetic and elementary algebra. The selection of problems was guided by the hypothesis that performance on the common mathematical problems within the experience of every person who has completed high school would measure mathematical abilities independent to some degree of training. To free further the functions measured from specific memory, rules for many of the processes were supplied. The problems included addition, subtraction, multiplication, and division of integers, fractions, decimals, and denominate numbers; the variations on percentage problems; ratio and proportion; solving for one unknown in simple literal linear equations; substitutions in formulae; computing areas of simple geometric figures; determining position of decimal place; conversions of fractions to percentages; and dealing with signed numbers.

(2) The United States Armed Forces Institute Test in Interpretation of Reading Materials in the Natural Sciences was the second test, and is described by the Examiner's Manual (1) as follows:

The type of test used in the social studies, the natural sciences, and the humanities is that in which the student is required to interpret and evaluate a number of reading selections representative of those he will have to read and study in subsequent school work. This type of test is particularly appropriate

in these areas in light of the considerations discussed in the preceding paragraphs. In the first place, through this type of test the student can be held both directly and indirectly responsible for a wide background of fundamental knowledge. One's ability to interpret a printed discussion of any special subject obviously depends primarily upon how much he already knows and has thought about the subject involved and about the broad field from which it is taken. This is particularly true if the discussion was written for readers who are presumably already well informed in the general area involved, which is the type of selection used in the general tests. One cannot possibly fully comprehend an advanced discussion about social insurance, for example, without knowing the meaning of the many basic terms and phrases unique to the social studies which are used in the discussion, or without knowing the essential features and interrelationships of the social, political, and economic institutions and practices mentioned, or without being able to supply some specific examples of the general references made and to amplify the analogies used, etc. The more of this background the student possesses the greater is the likelihood that he will answer correctly the questions calling for a direct interpretation of the passage read. This type of test can thus require that an integrated body of knowledge be brought to bear on particular problems, without placing any undue premium upon the peculiar form or organization in which the student's ideas have been acquired, or without penalizing him unduly for inability to supply any particular fact or set of facts where another will serve the same general purpose.

While thus well suited to the task of determining the extent of the student's background of substantial knowledge in the field tested, this type of test has been selected for use in this battery primarily because of its effectiveness in measuring certain generalized intellectual skills and abilities needed by the student for success in his later school work. These include such abilities as those needed to detect errors and inconsistencies in logic, to develop and apply generalizations, to determine the adequacy of evidence, to draw inferences from data, to note implicit assumptions and to 'dig out' meanings not explicitly stated, to form value judgements, to recognize as such an appeal to the emotions rather than to the intellect, to recognize and resist the tricks of the propagandist, to detect bias, and many other abilities involved in critical thinking in general.

(3) The final test was U. S. A. F. I. Test of General Educational Development (High School Level) Correctness and Effectiveness of Expression, which is also explained by the Examiner's Manual (1) as follows:

This test consists principally of a series of passages of connected prose which were originally well written but which for test purposes have been systematically corrupted by including many of the most common and serious faults and infelicities found in the writing of high school and college students. Each passage is printed in a narrow column on the left-hand side of the test page, with certain words, phrases and sentences, and marks of punctuation underlined and numbered. On the right-hand side of the page several ways of writing each numbered portion are presented. For each numbered portion the student must decide which of the suggested ways of writing it is best, thus restoring the passage to something like its original form.

This larger context permits the inclusion of errors in choice of words, order of sentences, connecting links between sentences, irrelevant and unnecessary details, parallel structure, sequences of tenses, inconsistency, style, good taste, and literary tact which could not be based on isolated sentences, and permits also the inclusion of any type of error which might otherwise be tested in independent sentences, such as errors in punctuation, capitalization, agreement of pronoun and of antecedent, use of adverb for adjective, and agreement of noun and subject.

A study was made by Egbert (18) on the evaluation of these three guidance tests given at the Utah State Agricultural College for the year 1946-47. He concluded they were probably as good predictors of achievement as any other tests.

It was felt that by averaging the percentile scores on the three entrance tests described, that a fairly accurate rating of the students' mental capacity was obtained. The percentile scores were ranked into quartiles

for comparison. Table 6 shows that the guidance program has not been too effective in selecting students from the higher quartiles. There were 46 per cent of the juniors as compared to 54 per cent of the seniors in the two lower quartiles, indicating that eight per cent more of the seniors are in the lower quartiles according to local college norms. Fifty-four per cent of the juniors, as compared to 46 per cent of the seniors were in the third and fourth quartiles. This would probably suggest that the junior class of this particular year as a whole is superior to the senior class in scholastic traits measured on these tests. It could probably be concluded that the majority of the students entering the teaching profession at the Utah State Agricultural College tend toward the average of college students as a whole in mental abilities judged from the scores on the entrance examinations.

Table 6. Ratings on college entrance tests of 219 students preparing for teaching

Rank	Juniors		Seniors		Juniors & Seniors Combined	
	No.	Per cent	No.	Per cent	No.	Per cent
Lowest quartile . .	19	16	8	8	27	12
Second quartile . .	57	30	45	46	62	37
Third quartile . .	46	38	30	31	76	35
Fourth quartile . .	20	16	14	15	34	16
TOTAL . . . . .	122	100	97	100	219	100



### High School Record of College Students

An analysis of the high school scholastic records was obtained by using the records in the Teacher Placement Bureau. The records of 229 students of the 1949 graduating class were used. The records of these students were used for the purpose of comparing their high school record with their college record. Table 7 would seem to indicate that this group of high school students attained a comparatively high degree of scholarship in their high school training. It was of special interest to note that 68 per cent of the class were B students in high school. There were also two per cent more A students than C students, indicating the group was considerably above average on their high school achievement. Baker (7) is of the opinion that the most valid measure of a high school student's probable success in college is the achievement he made during his high school training. Table 8 is a comparison of the high school record and the college record for the same group of students. This table would seem to substantiate the opinions of some educators and authorities, who have indicated that the most valid method of predicting probable success in college is the student's high school record. As would probably be expected in comparing the high school and college records of each of these students, the number of A's received by the students in high school as compared to the number of A's received in college was reduced by 12 per cent. A point of interest is that 13 per cent more college students

**Table 7. High school scholastic record of 229 Utah State Agricultural College graduates of 1949**

Grade	No. of Students	Grade Point Average Per High School Student		
		Points Per Grade	Total Grade Points	Per cent
A . . . . .	40	3	120	17
B . . . . .	155	2	310	68
C . . . . .	34	1	34	15
D . . . . .	0	0	0	0
<b>TOTAL . . . . .</b>	<b>229</b>	<b>2.03*</b>	<b>464</b>	<b>100</b>

\* The grade point average for the high school group was determined on the basis of 3 points for A, 2 points for B and 1 point for C. The total grade points were divided by the number of students to obtain the average grade point.

**Table 8. Comparison of high school and college scholastic achievement of 229 Utah State Agricultural College seniors of the graduating class of 1949**

Grade	Number of High School Students	Per cent	Number of College Students	Per cent
A . . . . .	40	17	12	5
B . . . . .	155	68	186	81
C . . . . .	34	15	31	14
D . . . . .	0	0	0	0
<b>TOTAL . . . . .</b>	<b>229</b>	<b>100</b>	<b>229</b>	<b>100</b>

received B's in college than they received in high school. This is probably explained by the fact that 12 per cent fewer high school students received A's in college and, therefore, it is likely to assume they fell from A students in high school to B students in college. It also seems that C students in high school probably tend toward C students in college. The results from this study of high school record and scholarship achievement in college would tend to agree that the high school record is a reasonably valid indication of scholastic success in college.

#### Scholastic Achievement

For the purposes of this study scholastic achievement was obtained from the Teacher Placement Bureau records. Under the present system of grading, grades are the principal basis of estimating the student's scholastic achievement. The average grade for the student's four years of college training was obtained on 229 of the seniors who graduated in 1949, and who registered in the Placement Bureau. The scholastic achievement of the 229 prospective teachers is indicated in Table 9. The general scholastic achievement of the group is indicated by the fact that 81 per cent were B students and only 14 per cent were rated as C students. The total grade point average for the group, figured on the basis of 3 points for an A, 2 points for a B and 1 point for a C, was 1.92 or almost B. This grade point average would seem to substantiate the ratings of the supervising teacher trainers, when they rated the student trainees on

**Table 9. College scholastic record of 229 Utah State Agricultural College students of the graduating class of 1949**

Grade	No. of Students	Grade Point Average Per College Student		
		Points Per Grade	Total Grade Points	Per cent
A . . . . .	12	3	36	5
B . . . . .	186	2	372	81
C . . . . .	31	1	31	14
D . . . . .	0	0	0	0
<b>TOTAL . . . . .</b>	<b>229</b>	<b>1.92*</b>	<b>439</b>	<b>100</b>

\* The grade point average for the college group was determined on the basis of 3 points for A, 2 points for B and 1 point for C. The total grade points were divided by the number of students to obtain the average grade point.

knowledge of subjects as follows: 16 per cent were rated superior, 57 per cent above average and 27 per cent average. From the point of view of subject matter preparation, it would appear that the Utah State Agricultural College is doing a satisfactory job in training the prospective teacher for his profession.

#### Physical Fitness

The physical fitness and health of the college student has long been a subject of concern to the Utah State Agricultural College. A student health service is offered in conjunction with the other facilities of the college. The health and physical fitness of the prospective teacher is

of utmost importance in the selection of teacher candidates.

All freshmen and new students are required to have a physical examination when they register at the Utah State Agricultural College for the first time. The examination includes a written personal medical history to be answered by each student. At an appointed time shortly after registration the student is given a physical examination by the college physician. Upon completion of the physical examination and a review of the student's personal medical history, the physician gives each student a physical rating on his health record. The rating is given on the basis of the student's fitness to participate in the intramural program and other physical activities in the physical education department.

The student is given one of four possible ratings: A, B, C and D. Each rating has the following significance:

- A. All sports; unlimited activity
- B. Vigorous activity
- C. Moderate activity only
- D. Restricted activity only.

The writer checked the health records of 200 men and women students in their junior and senior year in the School of Education. The results are recorded in Table 10. The findings indicate the physical status of the prospective teacher candidates is satisfactory. The slightly higher physical rating received by the women students is probably attributed to the fact that the majority of the men students were ex-servicemen, some of whom had received minor injuries in the service.

Table 10. Physical rating of 200 men and women students in the junior and senior year in the school of education at the Utah State Agricultural College

Rating	A*		B*		C*		D*		Total
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	
Women	97	97	0	0	2	2	1	1	100
Men	86	86	3	3	8	8	3	3	100

- \* A. All sports, unlimited activity
- B. Vigorous activity
- C. Moderate activity
- D. Restricted activity only.

It is recognized that due to lack of sufficient assistance, the college physical examination may not be as thorough as it otherwise might have been. However, it is the only physical rating available for comparison. It is of particular interest to find such a high rating of physical fitness among the student teacher candidates. Physical fitness and good health are two valuable possessions that every teacher should possess. Much of his work requires close relationships with the students, which in turn calls for considerable patience and emotional stability. Healthy people are more likely to be happy, cheerful, jovial and have less difficulty in their association with children and adults.

#### Interest and Aptitude Tests

The School of Education is not using interest and aptitude tests in the pre-service selection of teachers. The supervisory teachers rated 184 student trainees during their practice teaching on the following 12 traits: use of

English, knowledge of subjects, planning and preparation, classroom management, power to motivate, pupil response, understanding of pupils, ability to take criticisms, ability to evaluate, loyalty and cooperation, initiative and resourcefulness, and interest in community. These ratings are presented in Table 11 to give an indication of some of the aptitudes and professional preparation of the students for teaching. A point of interest on the rating sheet is that 16 per cent of the trainees were rated superior, 57 per cent above average and 27 per cent average on "knowledge of subject." This would seem to indicate that the training the students receive is preparing them satisfactorily for their chosen fields of teaching. In connection with the trait "interest in community", it should be noted that the total is 173 instead of the usual 184 for total ratings. This difference is because some of the supervisory teachers felt they were not sufficiently informed about the trainees to rate them on this trait.

#### Results of Interviews

All students in the School of Education are required to fill out an application for teacher training before they are permitted to do their student teaching. The process of completing the application requires the student to get recommendations from the teaching major professor, teaching minor professor, the approval of the director of teacher training, sponsor teacher and the approval of the principal of the school at which the student is going to teach. By

Table 11. Supervisory teachers' ratings on professional preparation of 184 teacher trainees of the graduating class of 1949

<u>TRAITS</u>												
	Use of English		Knowledge of Subjects		Planning and Preparation		Classroom Management		Power to Motivate		Pupil Response	
<u>Ratings</u>	<u>No.</u>	<u>Per cent</u>	<u>No.</u>	<u>Per cent</u>	<u>No.</u>	<u>Per cent</u>	<u>No.</u>	<u>Per cent</u>	<u>No.</u>	<u>Per cent</u>	<u>No.</u>	<u>Per cent</u>
Superior . . . . .	19	10	30	16	32	17	17	9	16	9	27	15
Above Average . . . . .	104	57	105	57	103	56	89	48	92	50	85	46
Average . . . . .	60	32	49	27	47	26	77	42	74	40	70	38
Below Average . . . . .	1	1			2	1	1	1	2	1	2	1
<b>TOTALS . . . . .</b>	<b>184</b>	<b>100</b>	<b>184</b>	<b>100</b>	<b>184</b>	<b>100</b>	<b>184</b>	<b>100</b>	<b>184</b>	<b>100</b>	<b>184</b>	<b>100</b>



Table 11. (Continued)

<u>TRAITS</u>																				
<u>Understanding of Pupils</u>																				
<u>Ability to Take Criticisms</u>																				
<u>Ability to Evaluate</u>																				
<u>Loyalty and Cooperation</u>																				
<u>Initiative and Resourcefulness</u>																				
<u>Interest in Community</u>																				
<u>Ratings</u>	<u>No.</u>		<u>Per cent</u>		<u>No.</u>		<u>Per cent</u>		<u>No.</u>		<u>Per cent</u>		<u>No.</u>		<u>Per cent</u>		<u>No.</u>		<u>Per cent</u>	
Superior . . . . .	25	14	41	22	28	15	55	30	26	14	22	13								
Above Average . . . . .	83	45	102	55	91	49	101	55	109	59	74	43								
Average . . . . .	75	40	38	21	64	35	28	15	45	26	77	44								
Below Average . . . . .	1	1	3	2	1	1			2	1										
<b>TOTALS . . . . .</b>	<b>184</b>	<b>100</b>	<b>184</b>	<b>100</b>	<b>184</b>	<b>100</b>	<b>184</b>	<b>100</b>	<b>184</b>	<b>100</b>	<b>173</b>	<b>100</b>								

the time the prospective teacher trainees have completed filling in their applications, they have had several personal interviews. The final decision in regards to the students' approval to register for teacher training is made by the director of teacher training. In addition to the above procedure, every person in the School of Education is assigned to an adviser who directs his program of work. It is the responsibility of the adviser to keep the advisee informed in regards to the demands and requirements for success in the teaching profession. He is also to keep the student informed of his progress and probable success as a teacher.

#### SUMMARY AND CONCLUSIONS

Teacher training institutions and educators are concerned with the recruiting of the right kind of men and women to be teachers in our American schools and colleges. Many colleges during the past few years have become more concerned with pre-service selection methods for improving the teaching personnel. Teacher selection is a difficult task and there is little agreement among educators as to what is the best plan or program for the selection of teachers. Therefore, a combination of methods is used in this study to establish criteria for the pre-service selection of teachers. They are (a) opinions of experts or competent groups; (b) review, summary or annotation of

literature; and (c) student record analysis. A review was also made of some selection programs employed in other colleges.

The results of the methods of study revealed that the teaching profession should be appraised in terms of the following seven criteria:

1. Personality rating
2. Intelligence score
3. High school record
4. Scholastic achievement
5. Physical fitness
6. Interest and aptitude tests
7. Results of interviews.

Further acceptance of the criteria chosen for establishing a program of pre-service selection of teachers was obtained from the opinions of educators and other studies using these and other criteria in their programs of pre-service selection.

The seven criteria were used as a basis for evaluating the effectiveness of the guidance program in the School of Education at the Utah State Agricultural College. The data for the study were obtained from the students' records in the test files in the Psychology Department, Teacher Placement Bureau and the Student Health Service.

The following conclusions have been derived from the evidence presented:

1. Personality traits. At the present time it seems

there is not a test or device which can positively identify all the desirable personality traits. This may in part be due to the fact that the various qualities of personality are so intangible and so few authorities agree on the meaning of personality. Most authorities are agreed, however, that personality is one of the main pre-requisites to successful teaching. The correlations between personality tests and success in teaching are low, but seem to have some promise as the instruments of measurement are improved.

On the basis of the personality ratings the student trainees received from their supervisory teachers, 12 per cent were rated superior, 59 per cent above average, and 29 per cent average. According to this method of appraising personality, it can be concluded the majority of trainees have satisfactory personalities.

2. Mental ability. The literature reveals conflicting opinions and evidences between the correlations of teaching success and intelligence. As in the case of personality, the validity coefficients on tests of intelligence and teaching success are low. It is thought that this may likewise be in part due to faulty methods of measuring devices. Many colleges are using intelligence tests and require prospective teacher candidates to submit to some type of intelligence test. Educational authorities are generally agreed that intelligence is one of the prime factors in predicting teaching success.

The average scores of the three entrance examination

tests for the students in education would imply they are of about average mental ability as compared with the other students in the college as a whole.

3. High school record. A good indication of college success can generally be predicted by the student's record in high school. It was observed that one of the factors used most frequently in the selection of teacher candidates was the high school record.

According to the high school records analyzed in the Teacher Placement Bureau of the students in education, 17 per cent received A, 68 per cent B and 15 per cent C. The average grades for four years of college work for the same students were five per cent A, 81 per cent B and 14 per cent C. These grades would indicate that a high school student tends to maintain about the same scholastic rank in college as he did in high school.

4. Scholastic achievement. The importance of scholarship is stressed by a number of colleges that require the candidates to be above the twenty-fifth percentile of his graduating class. The requirements for admission to many colleges require that the student rank in the upper half of his graduating class. Knowledge is surely an important qualification of anyone who attempts to teach others.

The scholastic records of 229 students of the graduating class of 1949 were analyzed to determine their scholastic standing for four years of college work. Five per cent received A, 81 per cent B and 14 per cent C, which indicates

they maintained about the same scholastic standing in college as they did in high school.

5. Physical fitness. It is highly recommended that all students be given a thorough physical examination. Some colleges require a health certificate before the prospective teacher can teach. The personalized nature of teaching requires a great deal of patience and emotional stability. Healthy individuals are more likely to be jovial, happy and cheerful.

An indication of the general health of the students in the School of Education was obtained by analyzing the records in the Student Health Service of 200 men and women students. The health rating is an indication of the student's fitness to participate in the intramural sports program. Ninety-seven per cent of the women and 86 per cent of the men students received a physical fitness rating of A. This would indicate that the general health of the students is adequate.

6. Interest and aptitude tests. In a survey made by Stiles (46) to find out the number of colleges using selective measures, results of aptitude tests were among the factors of selection used most frequently. Psychologists have emphasized the importance of interest and aptitude tests. Interest tests such as the Kuder Preference Record and the Strong Vocational Interest Blank and others have been prepared to help students select vocations, which might be of interest. Interests are no assurance of success in a particular vocation unless accompanied with the necessary

drives and the necessary ability to succeed.

Interest and aptitude tests are not being used in the pre-service selection of teachers in the School of Education at the Utah State Agricultural College.

7. Results of interviews. The results of interviews are employed in many institutions practicing pre-service selection of teachers. The use of the interview has certain definite advantages in appraising the candidate for such traits as speech habits, social presence, applicant's expressed interests, emotional stability and enthusiasm. Another advantage of the personal interview is for appraising certain personal factors such as cleanliness, good grooming and general appearance.

The final decision as to whether the prospective teacher will be permitted to register for practice teaching at the Utah State Agricultural College is decided after he has been interviewed by the director of teacher training.

The findings of the study indicate educators are agreed upon the importance and value of selecting the best available candidates for teacher training. The pre-service selection of teachers is a very difficult task, because there is no one single factor that has consistently been found to be closely related to teaching success. Most investigators are agreed that a composite of criteria is necessary for the successful selection of prospective teacher candidates. The emphasis upon pre-service selection of teachers has been to select those students with superior intellectual

and personal qualifications, with increased emphasis on personality as a criterion of selection.

#### RECOMMENDATIONS

It is felt that as a result of this study the following suggested recommendations may be of some value in the selection of candidates for the teaching profession:

1. The candidates should possess certain personality traits that would indicate the probable assurance of success in teaching ability. Those desirable as well as the undesirable personality traits may be recognized by administering some personality scale, supplemented by a personal interview and the recommendations of those who are closely acquainted with the candidate.
2. The candidate should provide evidence of high mental ability, as indicated from the scores on intelligence tests administered by the guidance department.
3. The prospective teacher should be in the upper half of his graduating class as indicated by his academic achievement in the high school from which he graduated.
4. A thorough medical examination by a member of the medical staff of the college should provide evidence of the candidate's physical fitness. He should be in good physical and mental health and



free from any serious physical defects.

5. The candidate should possess a keen interest and desire to participate in the teaching profession. Evidences of his interest and aptitude should be indicated by the results of scores made on such devices as the Strong Vocational Interest Blank and the Kuder Preference Record.
6. It is felt that personal appearance, emotional stability, speaking voice and speech of the candidate can best be rated by a personal interview with the student by those individuals who have been trained in the field of guidance.

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