1958

A Study of Professional Course Grades, College Activities, Ace Scores and High School Grades as Related to Success in First Year Teaching

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A STUDY OF PROFESSIONAL COURSE GRADES, COLLEGE ACTIVITIES, ACE SCORES AND HIGH SCHOOL GRADES AS RELATED TO SUCCESS IN FIRST YEAR TEACHING

A Thesis

Presented to

the Faculty of

The Central Washington College of Education

In Partial Fulfillment

of the Requirements for the Degree

Master of Education

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by

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June 1958

APPROVED FOR THE GRADUATE FACULTY

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ACKNOWLEDGEMENT

The writer wishes to acknowledge the valuable assistance rendered by Dr. Jacobsen, Dr. Partridge, and Dr. Stinson, without whose help this study could not have been undertaken or completed.

The writer also wishes to express his deep appreciation to his wife and family for their help and consideration.

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INTRODUCTION

Since Russia launched Sputnik I and II there has been a new cry for a better job of teaching in our public schools. People from all walks of life start, with renewed vigor, to criticize the schools and the job done by the teachers in these schools. The public schools and institutions of higher learning then take another look at their present programs, looking for areas that can be improved. No one will deny that there is room for improvement in our schools - educators have been working towards a better program since schools were established. The one thing that has shown up time and time again is that schools cannot be improved without good teachers.

The age old problem of obtaining the best teachers for the public schools has led to this study. Two important questions arise. "What factors are related to success in teaching?" "Are there indices available in the students' college record that are significantly related to rated teaching success?" These questions, then, as related to Central Washington College of Education become the focus of this study.

This college, located in Ellensburg, Washington, is predominately concerned with training teachers for the public schools. It was

established in 1891 under the name of Washington Normal School at Ellensburg. In 1937 the legislature authorized the name Central Washington College of Education. In 1933 the legislature authorized the college to grant the Bachelor of Arts degree and in 1947 to grant the Bachelor of Arts degree in the Arts and Sciences and also the Master of Education degree.

Through the years Central Washington College of Education (hereafter referred to as Central) graduates have fared very well in the teaching field. This can be shown by records kept by the Central Placement Office.[1]

As this data points out, it seems that the quality of graduates from Central, as rated by public school supervisors, is steadily improving. On Table I it will be noted that in number four, average or better, the percentage of pupils falling in this range shows a steady climb. Also on number seven, below average and unsatisfactory, the tendency is for fewer and fewer of Central graduates to fall into this classification. It appears, anyway, that the public school supervisor's conception of Central graduates is improving. It is hoped that this is an indication that teachers are being better trained.

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[1]Samuelson, E. E., A Summary of Mid-Year Ratings of 1955-56 Graduates Teaching in the Field in 1956-57. Unpublished study, Central Washington College of Education, 1957.

TABLE I

COMPARISON OF DISTRIBUTION OF MID-YEAR RATING OF FIRST FIELD TEACHING ASSIGNMENTS FOR THE YEARS 1950-1955 AND 1956-1957

Per Cent of Ratings	50-51	51-52	52-53	53-54	54-55	55-56	56-57
1. Superior	21.3	15.7	11.9	16.7	17.3	15.2	18.4
2. Above Good	27.3	18.2	17.4	25.4	27.2	20.7	24.2
3. Above Average	69.4	66.5	72.2	74.5	80.5	73.1	76.7
4. Average or Better	90.3	92.3	90.5	90.7	96.7	93.1	96.1
5. Passable but Below Average	6.4	5.5	7.1	7.5	2.2	6.2	3.3
6. Unsatisfactory	3.7	2.1	2.4	1.8	1.1	.7	.5
7. Below Average and Unsatisfactory	10.1	7.6	9.5	9.3	3.3	6.9	3.8

Naturally every person involved in hiring teachers would like to be assured of getting a teacher who will be successful. The college, too, would like to have every graduate be successful as this would add to the esteem of the college as well as to lessen many worries of administrators. Above and beyond the esteem gained is the feeling of accomplishment by educators when they know that through sustained effort, the quality of teaching is being improved.

I. PURPOSE OF THE STUDY

The purpose of this study, then, is to analyze various factors to see if any or all of them have a significant relationship to successful first year teaching. The factors considered in this study are: (1) high school grade point average; (2) American Council of Education Examination; (3) the grade received in Education 100, Introduction to Teaching; (4) the grade received in Education 105, Curriculum and Methods; (5) the grade received in Education 159, Elementary Education; (6) the grade received in Education 160, Secondary Education; (7) the grade received in Education 106, Student Teaching; and (8) the number of activities engaged in while at college. Each of these factors was correlated with the rating received from the supervisor during the teacher's first year in the field.

II. THE STUDY SAMPLE

Fall quarter, 1950, 444 Freshmen and 127 transfer students entered Central Washington College of Education. Of this group 118 of the Freshmen and forty-nine of the transfer students received degrees in Education. Every student that entered in the Fall of 1950 was followed through until he either graduated or left Central. This is the sample upon which this study is based. Therefore, this study is only truly representative of the entering class of Freshmen and transfer students of the Fall quarter, 1950. It is possible to generalize from the results of this study relative to other entering classes only to the extent that it may be assumed that the group used in this study is representative of another year's group of entering students at this college.

III. DEFINITION OF TERMS USED

Freshmen. A group of students, both male and female, who enter college, in this case Central, for the first time with no previous college credit.

Transfers. A group of students, both male and female, that enter a specified college, in this case Central, and who, at one time or another, have attended some other institution of higher learning.

Transfers in this study can be Freshmen, Sophomores, Juniors or Seniors depending upon how many quarters or semesters they attended other colleges.

High School Grade Point Average. The high school grade point average (hereafter called HSGPA) is the arithmetic average of all high school grades received. A perfect GPA is 4.00. The GPA is based upon 4.00 for an "A". 3.00 for a "B", 2.00 for a "C", 1.00 for a "D", and 0.00 for an "E" or "F". A student who enters Central with a HSGPA of 1.75 or above is considered in good standing. Students entering Central with a HSGPA of less than 1.75 are enrolled on condition. Transfers do not have their HSGPA's forwarded to this college and these grades are necessarily omitted in this study.

American Council on Education Examination Score (ACE). The American Council on Education Examination is given as part of the battery of tests given to incoming students at Central. The results of this test have no bearing upon whether a student may or may not enter the college, but are used solely for counseling and guidance purposes. The ACE score in this study is a total score, or the raw score of the Linguistic and Quantitative parts of the examination combined.

Education Courses (Ed.) The Education courses in this study are those that are required for a Bachelor of Arts degree in

Education with the exception of School Law, which is only a one hour course. The others are assigned three credits or more. In 1950 the course numbers were different from what they are today. Ed. 100 is now Ed. 307; Ed. 105 is now Ed. 312 or 313; Ed. 159 is now Ed. 472; Ed. 160 is now Ed. 473; and Ed. 106 is now Ed. 442. The Education course numbers will be referred to as they are at present with the former numbers appearing in parentheses. Catalog descriptions of the Education courses are either quoted or paraphrased from the general catalog:

> Ed. 307 (100) Introduction to Teaching. Three hours credit. The purpose of this course is to serve as a transition from the course Child Development to Directed Teaching. [2]
>
> Ed. 312 or 313 (105) Curriculum and Methods. Five hours credit. This course deals with general methods of teaching. [3]
>
> Ed. 472 (159) Elementary Education. Three hours credit. This course presents the elementary curriculum and methods not covered in Ed. 312, plus other programs related to elementary school teaching. [4]
>
> Ed. 473 (160) Secondary Education. Three hours credit. This course deals with the history of secondary education, different forms of curriculum organization, various patterns of school organization, common learnings, special interest

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[2] The Quarterly of the Central Washington College of Education. Ellensburg, Washington: Vol. 49, No. 4 (July 1957) p. 175.

[3] Ibid., p. 176.

[4] Ibid., p. 184.

offerings, vocational education, extra class activities and current problems and trends in secondary education. [5]

Ed. 442 (106) Directed Teaching. One to sixteen hours credit. The student will be required, in addition to classroom teaching, to participate with the curricular and extra-curricular activities of the schools; to participate in community activities in the nature of parent-teacher organizations, outdoor activities, recreational programs, scouting and other worthwhile activities. This experience gained in directed teaching parallels the philosophy of the General Certificate and endeavors to attain a high degree of competency in teaching. [6]

The directed teaching grade in this study will, in most cases be for the sixteen hour experience. However, in the case of some transfer students, a lesser number of hours were considered where the full sixteen hours was not necessary to obtain the degree.

The Grading System at Central. The following five point grading system was used at Central when this sample went through the college: "A" meant distinctly superior work. "B" meant positively good work, above average. "C" meant average work. "D" meant that credit was given, but the work for which it was given was below average. "E" indicated a quality of work not entitled to credit.

The five point system has been revised since the time of this study to where now there is more emphasis placed upon the "C" grade.

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[5] Ibid.

[6] Ibid., pp. 181-182.

The catalog now describes a "C" as an indication that the student has made substantial progress towards meeting the objectives of the course and has fulfilled the requirements of the course. It will be the most frequently earned grade in a class at the undergraduate level.[7]

In order that grade averages could be more easily computed, "quality points" were assigned to each letter grade as follows: Four quality points for each hour of "A". Three quality points for each hour of "B". Two quality points for each hour of "C". One quality point for each hour of "D". And zero quality points for each hour of "E".

Therefore, the total quality points earned by any student is the number of points in any course times the number of hours of credit the specified course is assigned. Thus, if a student receives an "A" in Ed. 105 which is a five credit course, he will have earned twenty quality points. To get the grade point average for any quarter, then, all that is necessary is to divide the sum of the quality points by the number of credit hours the student carried in a specified quarter. In this study all grades will be referred to in quality points; that is an "A" grade will be 4.00 and so on.

College Activities. When a student activates his file for placement, he fills out a form. One part of the form asks the student

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[7]Ibid., p. 54.

to list the activities he engaged in while at college. These activities include social functions such as dance committees, dormitory officers, student body offices, religious activities, athletics, music organizations and clubs having to do with service, such as Spurs, or academic areas such as Science Club. The number of activities engaged in while at Central was obtained by examining the files of the student in the Placement Office. Activities as a predictor of later teaching success, have several limitations: (1) no activity is considered as being more important than any other; i.e., being president of the student body might well have a higher rating than should membership in the Geography Club; (2) some students list everything they ever did at college while others list only the major activities with specific duties such as club offices held; (3) some students fill the blanks out carefully while others rush through them without much thought; and (4) there is always the problem of the married student who might belong to organizations on campus, but has to work during the times when others go to meetings.

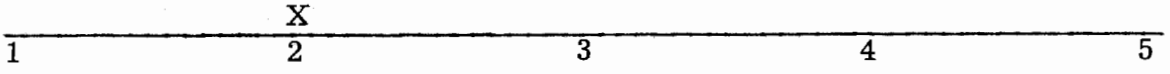
Nothing could be done while gathering the data to eliminate these weaknesses. Consequently the activities listed on their forms were used as the number of activities engaged in at college.

Mid-Year Ratings. These ratings are based upon the mid-year ratings of beginning teachers by the supervisor with whom the

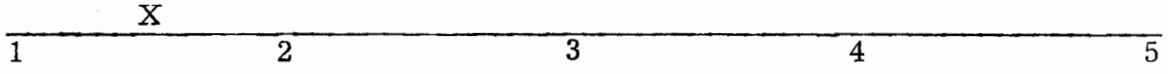
teacher works. The rating scale is based on a five point scale: (1) superior, (2) good, (3) average, (4) passable, and (5) unsatisfactory. These ratings by the supervisor are based upon his or her judgment as to how well the new teacher compares with other beginning teachers past and present. Admittedly this method of evaluation is largely subjective, but at the present time it is the method employed. As such, it remains the only criterion used for judging a teacher's competence during his first year of teaching.

These rating forms are sent out by the Placement Office at Central at about mid-year. The usual response to these forms runs between ninety and ninety-five per cent returns for each year. A copy of the rating scale is found in the Appendix I.

As an example, Teacher A, who enters the teaching field is judged on a five point scale as to his effectiveness as compared to other beginning teachers. His supervisor judges him somewhere between superior (1) and unsatisfactory (5). Thus his rating form, if he were judged a good beginning teacher, would be checked like this:



Actually this rating scale contains more than five ratings because, if Teacher A had been judged to be better than good but not superior, he would have been rated half way between points one and two on the scale; like this:



or 1.5 on a quantitative scale. So, it is now apparent that the scale has nine points: 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, and 5 instead of the five points actually on the scale.

The purpose of this study then, is to endeavor to find factors in a student's college life that are significantly related to his being a successful first year teacher. The factors considered were high school grade point average, American Council on Education Examination score, the professional course grades required for a Bachelor of Arts degree and the number of activities participated in while at college. All of these criteria were correlated with the mid-year rating of the beginning teacher as rated by his supervisor for all the Freshmen and transfer students that entered Central Washington College of Education during the fall quarter of 1950. The results of these correlations are found in Chapter III.

CHAPTER II

REVIEW OF RELATED RESEARCH

In The Education of Henry Adams is found the statement, 'A teacher affects eternity; he can never tell where his influence stops.' For many teachers this is earnestly to be hoped; for others it is a despairing thought. Good teachers, those who are intelligent, skillful, sincere, and understanding, are a prime requisite for an enlightened, productive, and congenial society. Poor teaching contributes to a vicious circle of ignorance, misunderstanding and prejudice.

The identification of qualified and able teaching personnel, therefore, is one of the most important of educational concerns. To obtain the best possible teachers is an intrinsic interest and obligation of education. If really good teachers are obtained - teachers who are skillful at guiding the learning process, who are sympathetic and understanding in their relationships with children, who know how to motivate children, who recognize the importance of desirable social attitudes and personal behavior, who are intelligent, who have a broad background of understanding with respect to the subject matter they teach and general cultural materials - the desirable outcomes of education are almost certain to be attained. On the other hand, although schools may have excellent material resources in the form of equipment, buildings and textbooks, and although the curriculum may be appropriate, if the teachers are inadequate the whole program will be ineffective and wasted. An educational program is only as good as its teachers. It is of primary significance, therefore, that the characteristics of successful teachers be as thoroughly understood as possible.[8]

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[8]David G. Ryans. "The Investigation of Teacher Characteristics," The Educational Record, Vol. 34 (1953), p. 371.

Much research has been done in the field of predicting teaching success. Generally speaking, the results have been mostly to the effect that, as yet, no method has been devised that will predict teaching success to any significant degree. These studies have used many bases for their correlation studies with no apparent avail. In fact, it seems that studies dealing with teaching success have lost some of their former gusto. In the early 1930's, practically every educational publication presented some recent study dealing with prediction of teaching success. In later years the emphasis has been somewhat lessened in this area. Eliassen and Martin relate a possible reason for this.

> Time and again some investigator has spent months or years in devising correlation techniques that he hoped to predict teacher success in a significant manner, only to have the results prove inadequate. More research in this area is desired, but many persons are agreed that it is discouraging to attempt to predict teacher success unless the criteria for success is agreed upon.[9]

Despite this, superintendents are still using some of these criteria for determining who will be hired. They continue to seek candidates who measure up to the criteria that they think are important whether or not these qualities are valid as far as successful teaching

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[9]R. H. Eliassen and Robert Martin, "Pretraining Selection of Teachers During 1940-43." Journal of Educational Research, Vol. 38 (1945) p. 666.

is concerned. It remains, then, for local studies to endeavor to find areas that will predict teaching success.

The authors also list some of the factors that were used to make these studies and the number of times each factor was used during the periods 1937-39 and 1940-43.[10]

As Table II points out, the various factors used in studies dealing with predicting teaching success changed very little during this span of six years. However, it must be added that researchers are continually looking for new factors that might help in the predictions.

Barr,[11] in a more recent study, agrees in his conclusions, with the earlier studies of Durflinger,[12] Ryans,[13, 14] and Eliassen

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[10] Ibid., p. 667.

[11] A. S. Barr, "The Measurement of Teacher Characteristics and Prediction of Teaching Efficiency", Review of Educational Research, Vol. 22 (1952), pp. 169-174.

[12] Glenn W. Durflinger, "A Study of Recent Findings on the Prediction of Teaching Success", Educational Administration and Supervision, Vol. 34 (1948), pp. 321-336.

[13] "The National Teacher Examinations: Their Use in the Selection of Teachers", Redirecting Education, University of Pennsylvania Bulletin, Vol. 43 (1948), pp. 271-281, as cited by Simeon Domas and David V. Tiedeman, "Teacher Competence: An Annotated Bibliography, Journal of Experimental Education, Vol. 19 (1950), pp. 101-218, Article No. 771.

[14] David G. Ryans, "The Criteria of Teaching Effectiveness", Journal of Educational Research, Vol. 42 (1948-49), pp. 690-699.

TABLE II

Factors Mentioned 1937-1939		Factors Mentioned 1940-1943	
Scholarship	10	Personality	29
Health	6	Health	25
Personality	6	Scholarship	21
Intelligence	5	Intelligence	21
Speech	4	Speech	13
Character	4	Character	12
English Usage	2	Interests	10
Achievement	2	Emotional Stability	8
Culture	2	General Culture	8
Skill and Interest in Teaching	2	Ability to Work with Others	7
Emotional Stability	2	English	7
Professional Information	1	Attitudes	7
Beliefs	1	Love of Youngsters	6
Aptitude	1	Art of Teaching	5

and Martin[15] when he concludes in his summary of three years of investigations the following unsolved problems:

> 1. No one appears to have developed a satisfactory working plan or system that can be used by personnel officers who must make judgments about teacher effectiveness.
>
> 2. Little has been done in evaluating the nonclassroom responsibilities of the teacher - his activities as a member of a school community, and his activities as a member of the profession.
>
> 3. Very little has been done in differential measurement and prediction. Concern seems to have been chiefly with the general merit of teachers. Administrators often need teachers with special abilities.
>
> 4. Teaching effectiveness generally has been treated something apart from the situations giving rise to it. More needs to be known about the situational determiners of effective teaching.
>
> 5. Much of the research on teacher effectiveness seems to proceed as if the qualities in question resided entirely in the teacher. This may or may not be true. 'Teacher effectiveness' may be essentially a relationship between teachers, pupils, and the other persons concerned with the educational undertaking, all affected by limiting and facilitating aspects of the immediate situation.

Steven Corey is more vociferous in his analysis of the problem of predicting teaching success. He states:

> Actually, we know next to nothing about what factors in the teacher's equipment make for rapid and permanent pupil learning. The outlook is discouraging in the extreme. . . . It is conceivable that we are doing almost nothing in our teacher training which will actually contribute to efficient instruction. At least we have

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[15]Eliassen and Martin, loc. cit.

> little, if any, valid, objective evidence as to the value of our practices. It should be at present impossible for any conscientious individual to advise students whether or not they should continue training for teaching. Despite our predjudices and deeply rooted convictions, the critical thinker will realize that, beyond some obvious physical handicaps such as blindness, deafness, or an extreme speech defect, we have no sound evidence to justify our recommendations.[16]

Hundreds of studies have been undertaken since Corey issued his statement. Some progress has been made, but still no factor or factors has consistently predicted teaching success to a significant degree. To illustrate the lack of consistency in the studies, a brief summary is presented of several studies made in predicting teaching success.

Broom[17] found in a study of 243 graduates between 1925 and 1930 that teaching success correlated with practice teaching .29 and with the grades in education .19. The study concluded that the results were negative as far as finding a criterion to predict teacher success.

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[16]Steven M. Corey, "The Present State of Ignorance About Factors Effecting Teacher Success", Educational Administration and Supervision, Vol. 18 (1932), pp. 481-490.

[17]M. E. Broom, "A Note on Predicting Teaching Success", Educational Administration and Supervision, Vol. 18 (1932), pp. 64-67.

Ullman[18] found a correlation of .36 between teaching success and practice teaching and an r of .30 with professional marks when he studied 116 first year teachers.

However, in England, Tudhope[19] found an r of .81 when final college teaching marks were correlated with successful teaching. This high correlation can likely be explained by the fact that all 96 teachers in his study were rated by royal inspectors, who, it may be assumed, are looking for the same thing and are trained for the job. Correct prognostications of success were obtained in two-thirds of the cases.

Another study resulting in high correlations was done by Gould[20] at the University of Pittsburg. He found, in a study of 113 first year teachers, an r of .66 for success in teaching correlated with directed teaching. When he correlated 98 first year teacher ratings with their ACE scores, he got an r of .53. Before students can enter

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[18]Roy R. Ullman, "The Predicting Teaching Success", Educational Administration and Supervision, Vol. 16 (1930), pp. 598-608.

[19]"A Study of the Training College Final Teaching Mark As a Criterion of Future Success In the Teaching Profession. Part I", British Journal of Educational Psychology, Vol. 12 (1942), pp. 167-171. as cited by Domas and Tiedeman, Op. Cit., Article No.

[20]George Gould, "The Predictive Value of Certain Selective Measures", Educational Administration and Supervision, Vol. 33 (1947), pp. 208-212.

the teachers college at the University they must have a GPA of 1.00 (C) for the first two years at the University; must score at least three on a five point scale when interviewed by three faculty members; take a psychological examination, a test of contemporary affairs, a test in written English and three personality inventories. Naturally the selectivity of the college of education will weed out a number of poor risks.

Perhaps Rulon has the right idea in his article "Fuzz", when he says:

> Many educators cannot accept the proposition that a clear concept of the 'good' teacher is essential to any evaluative activity, unless such definition were constantly kept from becoming rigid or test-restricted and unless certain latitude in application were safeguarded... . The fact of the matter is that our inability to tell ahead of time who is going to be a good teacher (and who is not) is aggravated by any unwillingness on our part to clarify the definition of what is and what is not a good teacher... . Of course objectives must be subject to revision, and therefore must not become eternally fixed. But they certainly must become fixed long enough for us to aim at them while we are using them as objectives. Or if they are not to become fixed, then we must learn to shoot at a moving target.[21]

One must not be too quick to say that all these studies are a waste of time. That is not so. Each study adds something to the understanding of teaching. Some of the studies mentioned have found

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[21] "Fuzz". Harvard Educational Review, Vol. 13 (1943), pp. 95-97, as cited by Domas and Tiedeman, Op. Cit., Article No. 765.

significant results. These results must be studied further to see if they will give significant results again and again. Also it must be determined whether these results can be obtained under different conditions as well as in different parts of the country. It is still necessary, whether the results are positive or not, for administrators and instructors at the local level to keep abreast of the new studies and the results of these studies. In this way they will be able to look at the teacher education program at their level to determine whether or not emphasis is being placed in the right area. In other words, the teacher education program, like any other program, should be constantly evaluated. Educators should not throw up their hands and give up. Some way or another a method may be found that will effectively predict successful teaching. We owe it to the coming generations to keep looking for means of predicting teaching success. Ryans summarizes this point of view in this manner:

> At the present time, the question, 'What is an effective teacher like?' or 'What are the distinguishing characteristics of the really competent teacher?' has not been answered. But researches, such as the Teacher Characteristics Study and others, are assisting in the isolation and description of patterns of teacher behavior - a necessary first step before an answer can be obtained. In the meantime teacher education is provided with some basically important information useful in the development of courses and curricula, and educators, concerned with in-service problems are being provided with insights that should contribute to their understanding of teacher behavior.[22]

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[22]Ryans, "The Investigation of Teacher Characteristics", p. 394.

CHAPTER III

RESULTS AND IMPLICATIONS

In this investigation of the possible relationship of various factors and first year teaching success, all the Freshmen and transfer students that entered Central in the fall of 1950 were included. To establish a frame of reference, the steps taken for securing predictor and criterion variables are briefly reviewed. The list of students was obtained from the records of test scores in the Office of the Dean of Students. The scores on the ACE examinations were also obtained from this office. The scores used were the total raw scores of the linguistic and quantitative parts of the examination combined.

The high school grade point averages and the college grades received in the education courses were secured by getting the official transcript of every student from the Office of the Registrar. The HSGPA is entered on the Freshman transcripts, but not on those of transfer students.

The activities engaged in while at college was procured from the students' placement files located in the Office of the Director of Placement. Also in the Office of Placement were secured the mid-year ratings of the students during their first year of teaching. These ratings were based on a scale of from superior (1) to unsatisfactory

(5). To facilitate a correlation procedure, these rating numbers were reversed. This enabled all factors considered in this study to have the same base numerically. In other words, the number equivalents for the ratings became like this:

Superior	Good	Average	Passable	Unsatisfactory
5	4	3	2	1

rather than:

Superior	Good	Average	Passable	Unsatisfactory
1	2	3	4	5

After all the data were tabulated, the Pearson Product-Moment Correlation Coefficient was computed to ascertain the relationship, if any, that exists between the various factors and successful first year teaching. Table III shows the results of these correlations for Freshmen, and Table IV shows the results for transfer students. The formula for these correlations is:

$$r = \frac{\Sigma XY - \frac{(\Sigma X)(\Sigma Y)}{N}}{\sqrt{\left[\Sigma X^2 - \frac{(\Sigma X)^2}{N}\right]\left[\Sigma y^2 - \frac{(\Sigma Y)^2}{N}\right]}}$$

An example of the computation of r is found in Appendix II.

TABLE III

COEFFICIENTS OF CORRELATION BETWEEN FACTORS STUDIED FOR THE FRESHMAN GROUP AND SUCCESSFUL FIRST YEAR TEACHING AS DETERMINED BY SUPERVISORS' RATING

Factor	Number	r	r Corrected for Coarse Grouping
HSGPA	89	+ .097	
ACE Total Score	95	- .005	
Education 307 (100)	92	+ .251 *	.290 **
Education 312-313 (105)	92	+ .205 *	.237 *
Education 472 (159)	87	+ .149	.183
Education 473 (160)	88	+ .017	.020
Education 442 (106)	94	+ .125	.140
Number of Activities	95	+ .058	

* Significant at 5% level of confidence

** Significant at 1% level of confidence

TABLE IV

COEFFICIENTS OF CORRELATION BETWEEN TRANSFER STUDENT FACTORS AND SUCCESSFUL FIRST YEAR TEACHING AS DETERMINED BY SUPERVISORS' RATING

Factor	Number	r	r Corrected for Coarse Grouping
ACE Total Score	38	.281	
Education 307 (100)	12	.200	.225
Education 312-313 (105)	36	.456 **	.514 **
Education 472 (159)	36	.354 *	.398 *
Education 473 (160)	31	.222	.266
Education 442 (106)	37	.354 *	.387 *
Number of Activities	38	.237	

* Significant at 5% level of confidence

** Significant at 1% level of confidence

High School Grade Point Average. The correlation between HSGPA and supervisors' ratings was found to be + .097. This is not statistically significant. This is in keeping with most other studies using the HSGPA as a predictor. Anderson[23] found, in a study of 590 graduates of Northern State Teachers College in Michigan, an r of + .12, and Corey[24] found an r of + .27 in his study concerning high school teaching success. Many other studies could be cited that show the same results; namely that the HSGPA does not predict teaching success to any significant degree. However, it can be stated that, generally, HSGPA's will predict success in college to a greater degree than they will predict successful teaching. Correcting for course grouping suggests that more diversified rating categories are of some value in aiding prediction.

There are several reasons for this lack of predictive capacity of high school grades. One reason presented concerns different sized high schools. A pupil attending a small high school is more apt to earn better grades for doing the same work than will a pupil in a

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[23]H. J. Anderson, "Correlation Between Academic Achievement and Teaching Success", The Elementary School Journal, Vol. 32 (1931), pp. 22-29.

[24]Steven Corey, "What Are the Factors Involved in the Success of High School Teachers?", North Central Association Quarterly, Vol. 10 (1935) pp. 224-231, As cited by Domas and Tiedeman.

large high school; the competition being keener in the large school. Also the personality factor would have more bearing in the small classes in the small high school. Another reason for this low predictive capacity could be related to the class curve, which is usually used as the "yardstick" for grading. A student who is superior in one school might only be average in another. Therefore, depending on the caliber and size of the group, a student's work could be worth an "A" in one situation whereas it would only be "C" work in another. A third reason frequently mentioned is that of standards of grading. Teachers, like pupils, have individual differences; "A" work for one teacher may be only "C" work for another. This factor seems to operate in many school situations.

Another reason given has to do with purposes of the students. Many students are characterized by their apparent lack of specific purpose or indecisiveness. This might be shown by their loafing through high school, deciding to work for a while or entering the service rather than beginning college. Somewhere in the intervening period they may realize their purposes or goals and proceed to work at attaining these goals through a college education. This may explain why student number 275 (see Appendix III) could graduate from high school with a GPA of 1.36, go to college, get an "A" in directed

teaching, be named the outstanding R. O. T. C. cadet, make flying status in the Air Force, and rate a "good" as far as teaching is concerned.

We can see, then, that there are several factors operating where high school grades are concerned. It is no wonder that they do not predict future attainment in some areas very well, if at all. These findings give impetus to the move for reorganization of many of our high school districts. Through reorganization comes the chance for a better program of guidance to be instigated as well.

American Council on Education Examination Score. When the ACE test scores were correlated with the supervisors' ratings, an r of - .005 was secured for Freshmen. For transfer students the correlation was + .281. The ACE score has been, through the years, an inconsistant predictor. Generally the results obtained are somewhat similar to those found here. But, there are also studies that have results similar to those of Gould's, stated previously, where the correlation reaches an r of + .53. Studies with correlations reaching this magnitude are rather rare. Nevertheless, the ACE correlations tend to vary a good deal. Correlations using other mental tests show somewhat the same phenomenon.

Boyer and Koken[25] in their prediction of college success used the Detroit Intelligence Test, The Hennon-Nelson Test of Mental Ability, and the Ohio State University Psychological Examination to correlate success in directed teaching. They obtained r's of + .28, + .23 and + .12 respectively. Durflinger states:

> It appears that some measure of intelligence should be included in the group of variables whose purpose is the prognosis of teaching success. It is not clear, however, that any intelligence test is more satisfactory than the difficulty of the regular college curriculum in screening out the intellectually incompetent. If the criterion of success is field success, then an intelligence test should definitely be used.[26]

The ACE examination is not an intelligence test in its truest form, but more of an academic aptitude test.

> This test provides for the following two-part scores: The L Score (linguistic) measures ability to succeed in verbal areas such as English, social studies, and foreign languages. The Q score (quantitative) measures ability to succeed in nonverbal areas such as mathematics, science, and technical curricula. 'Part scores are provided to improve educational and vocational counseling.'[27]

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[25]L. E. Boyer and J. E. Koken, "Admissions Tests As Criteria for Success in College", Journal of Educational Research, Dec. 1956, pp. 313-315.

[26]Durflinger, op. cit., p. 329.

[27]Emory Stoops and Gunnar Wahlquist, Principles and Practices in Guidance, (New York: McGraw-Hill Book Company, Inc., 1948) p. 32.

Ohlsen adds more information:

> The L score seems to be more promising of the two part-scores in predicting academic success. When a pupil earns a Q score considerably higher than his L score, it may be worthwhile for members of the staff to study his reading proficiency: sometimes remedial instruction in reading and word analysis will improve his L score.
>
> Much research has been done on this test... . Most reliability coefficients reported on the various forms are at or very near .90. Usually the results show a correlation of approximately .50 with school grades.[28]

If what Stoops and Wahlquist have said is true, that the ACE is a test of mental abilities; why is it that student number one and student number fifteen in Appendix III do work so similar when the ACE on number one is 17 and on number fifteen is 92 when they both chose the same area of preparation. To the extent that these are reliable estimates, we must conclude that there is much beyond mental abilities, as measured by the ACE examination, that goes into the makeup of a successful teacher.

Herbert Sorenson in "Why Teaching Success Does Not Correlate Highly with Measured Intelligence", expresses an explanation for the low correlations secured in studies similar to this one.

> Assuming that we can speak with validity concerning adult IQ's, one would be surprised if five per cent of those teachers have IQ's below 110. If this be true and it is entirely sound

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[28]Merle Ohlsen, Guidance: An Introduction (New York: Harcourt, Brace and Company, 1955), p. 141.

> in view of the selective nature of higher education, intelligence is hardly a limiting factor as all these teachers are well equipped in that regard... . It is a well known psychological fact that a restricted range or homogeneity cuts down the correlation of factors which exist in definite relationship when the complete ranges of those abilities are involved in correlation.[29]

This may be true, but if it is, it becomes more obvious that the ACE examination does not indicate intelligence as shown by the range of this study. Students with percentile scores of from 3 to 96 received teaching degrees. At least it does not appear to determine ability to succeed in the teacher education program. It would be desirable to administer individual intelligence tests to those entering teacher education who have very low ACE scores or at least a group intelligence or academic aptitude with the ACE test as a reliability check.

Another possible drawback to the ACE examination is that, especially at Central because the examination does not affect entrance, some of the people taking the examination may not work to capacity. How to obtain better motivation for a true performance level by the student seems worthy of consideration.

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[29]Herbert Sorenson, "Why Teaching Success Does Not Correlate Highly with Measured Intelligence", Educational Administion and Supervision, Vol. 15 (1929) p. 603.

The Educational Testing Service has developed a new test in this area called the Cooperative School and College Ability Tests (SCAT). The test has been designed to help teachers, counselors and administrators to estimate the capacity of the testee to do the academic work required at the next level of schooling. The tests are measures of developed ability. The time element, two hours, may be a handicap, but it appears that the test deserves consideration.

Introduction to Education (Ed. 307). The Freshmen[30] correlation between Ed. 307 and the supervisor's rating was one of the two (along with Ed. 312 or 313) that reached an r that is significant at the five per cent level of confidence. The r obtained was + .251. It is interesting to note that only thirteen people dropped out of the teacher education program after taking Introduction to Teaching. It seems that the vast majority of students had made up their minds by their junior year (the time the course is usually taken) and that they definitely wanted to be teachers. Also at this time, as Sorenson has stated, the regular curriculum has weeded out many who are not suited to college in general or more specifically to teaching, a factor which might lower the correlation.

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[30]The group entering as Freshmen and subsequently completing the requirements for a Bachelor of Arts Degree in Education will be referred to hereafter as Freshmen.

The correlation for transfer students was +.200. This factor had a higher significance for Freshmen than for transfer students.

Curriculum and Methods - Elementary or Secondary (Ed. 312 or 313). This was the only other Freshmen factor that reached the five per cent level of confidence. A correlation coefficient of +.205 was secured for this factor. The r obtained for transfer students was +.456. This correlation is significant at the one per cent level of confidence. This factor was the only one in this study that was significant for both Freshmen and transfer students.

Elementary Education (Ed. 472). An r of +.149 and +.354 was procured for this factor for Freshmen and transfer students respectively. The transfer correlation was significant at the five per cent level of confidence.

Secondary Education (Ed. 473). When correlated with supervisors' ratings, Ed. 473 presented a positive correlation of .017 and .222 for Freshmen and transfer students respectively.

These correlations for the professional courses are somewhat similar to those that other studies have found. Corey,[31] in one

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[31]Corey, "What are the Factors Involved in the Success of High School Teachers?"

study found that professional courses were very slightly related to teaching success except for practice teaching, which was + .40. Ullman[32] found an r of + .30 between professional courses and teaching success. Broom[33] found a correlation of + .19 when he followed up 243 graduates, and Corey[34] in "The Present State of Ignorance About Factors Effecting Teacher Success," cited previous studies in which he found a mean of + .27 for all the studies. It seems then that the grades in the professional courses at Central show about the same relationship to success in teaching as they do at other campuses in this country.

Directed Teaching (Ed. 442). The Freshmen correlation was the surprise of this study. The r obtained was only + .145. Generally, other studies show higher correlations when studying this factor. The transfer student correlation reached a significant level of five per cent when an r of .354 was secured. This correlation comes closer to the results of other studies than does that of the Freshmen. Corey,

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[32]Ullman, op. cit.

[33]Broom, op. cit.

[34]Corey, "The Present State of Ignorance About Factors Effecting Teacher Success."

Ullman, and Broom[35] found correlations of .40, .36 and .26 respectively when the factor of directed teaching was correlated with supervisors' ratings. Gould,[36] in his University of Pittsburg study found a correlation of + .66 and Wagenhorst[37] found an r of + .23 when he followed up 243 graduates at Slippery Rock Teachers College in Pennsylvania.

Durflinger sums up the situation when he expresses:

> Recent studies have tended to avoid piling up additional evidence of the correlations between grades in college courses and success in teaching. These correlations as against practically any measure of success in teaching, according to Seagoe and Hult, are near .50. Correlations with specific course grades are uninformative with the possible exception of directed teaching. When not used as the criterion of success it can be used as a prognostic variable with correlations of .17 to .47.[38]

Activities Engaged In While at College. The Freshmen and transfer student correlations secured for this factor were + .058 and + .237 respectively. This is insignificant especially when we consider the high value placed upon outside activities by some

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[35] Vide., Footnotes 31, 32 and 33.

[36] Gould, op. cit.

[37] L. H. Wagenhorst, "The Relation Between Ratings of Student Teachers in College and Success in First Year of Teaching." Educational Administration and Supervision, Vol. 16 (1930) pp. 81-91.

[38] Durflinger, op. cit., pp. 329-330.

superintendents when selecting teacher candidates. Seagoe[39] found in a small sampling of 25 graduates an r of - .14 when she correlated this factor with teaching success. It seems possible that too much emphasis is placed upon participation in activities at college. This is especially true when so many men and women are working their way through college. Since the G. I. Bill there are several students with families and some cases where the man and wife both attend school. Another factor to be considered is the proximity of home towns to Central. This element facilitates trips home on weekends for many students. Therefore their participation in activities will be limited and especially their willingness to undertake the planning of various functions. Part of the difficulty may be the unreliability of the records concerning activities actually engaged in.

The Criterion of Teaching Success. As was explained in Chapter I, the criterion of teaching success is based on a five point rating scale that is sent to the hiring school district and filled out by the first year teacher's supervisor. Also, it was pointed out in Chapter I, this rating is of a subjective nature but it necessarily remains the method employed to judge a beginning teacher's effectiveness.

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[39]May V. Seagoe, "Prognostic Tests and Teacher Success," Journal of Educational Research, Vol. 38 (1945) pp. 685-690.

Tables V and VI show the results of supervisors' ratings as to the effectiveness of these teachers.

Table V shows that every teacher rated was judged to be average or better by his supervisor. It should also be noted that 81.9 per cent of these teachers were rated good or better. When we compare the high school grade point averages and the ACE scores of these individuals, one wonders how to account for these changes in degree of success. Are grades, test scores and supervisors' ratings reliable, or are different factors being measured by grades and test scores than are important in teaching success?

Table VI points out that 91.9 per cent of these students were judged to be average or better first year teachers. In neither table will one find more than one person in any less-than-average group. These tables show that Central graduates apparently do exceptionally well in the field.

Another possibility is the extreme reluctance of some administrators to give unsatisfactory ratings to any teacher. The writer has encountered a superintendent who stated that he would refuse to give a rating rather than give one that would indicate failure.

It appears that research on rating scales is necessary which would endeavor to eliminate such possibilities as using only half of the scale for rating teachers.

TABLE V

BREAKDOWN OF SUPERVISORS' RATINGS FOR 118 PEOPLE RECEIVING DEGREES IN EDUCATION FROM THE 444 ENTERING FRESHMEN IN THE FALL OF 1950*

Rating		Number	Per cent of Ratings
5	Superior	18	18.9
4.5	Between Superior and Good	7	7.3
4	Good	53	55.7
3.5	Between Good and Average	3	3.1
3	Average	14	14.7
2.5	Between Average and Passable	0	0
2	Passable	0	0
1.5	Between Passable and Unsatisfactory	0	0
1	Unsatisfactory	0	0
	No Ratings	23	

* NOTE: The number equivalents are reversed from the way they appeared on the rating form.

TABLE VI

BREAKDOWN OF SUPERVISORS' RATINGS FROM FIFTY-ONE TRANSFER STUDENTS RECEIVING EDUCATION DEGREES FROM THE 127 TRANSFER STUDENTS THAT ENTERED CENTRAL IN THE FALL OF 1950

Rating		Number	Per cent of Ratings
5	Superior	8	21.0
4.5	Between Superior and Good	0	0
4	Good	14	36.8
3.5	Between Good and Average	4	10.5
3	Average	9	23.6
2.5	Between Average and Passable	1	2.6
2	Passable	1	2.6
1.5	Between Passable and Unsatisfactory	0	0
1	Unsatisfactory	1	2.6
	No Rating	11	

Ryans expresses doubts as to the reliability of supervisors' ratings:

> Obviously, however, there are many dangers and difficulties to be encountered in employing teacher ratings as a criterion. All of us are aware of the subjectivity and unreliability of personal judgments. We know they are likely to vary because of the varying definitions or conceptions of teaching effectiveness in the minds of different observers. We know they often reflect uncertainties on the part of the observer and that they are likely to be limited by extent of the observation and by the range of conditions under which the teacher was observed. We know they are influenced by conscious and unconscious prejudices and also by lack of sufficient background on the part of the observer.[40]

Supervisors, like pupils and teachers, rate differently according to their philosophies and experiences. To illustrate: One supervisor may feel that a strict, quiet, regimented classroom is ideal and rate a teacher with this type of classroom superior, whereas another teacher, who had many experiences, ongoing activities, pupil planning and democratic room government in the classroom, might be rated lower because the classroom was noisier. Of course, the situation could be reversed, but either way there is some inequality as far as the rating is concerned.

> Teaching is complex. It is many sided and therefore demands a variety of human traits and abilities. In general these traits and abilities may be grouped into two categories: (1) those having to do with the teacher's mental abilities and skills, his

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[40]Ryans, "The Criteria of Teaching Effectiveness," p. 693.

> understanding of psychological and educational principles, and his knowledge of general and special subject matter to be taught, and (2) those qualities having to do with the organization of the teacher's personality, his personal adjustments, his effectiveness in maintaining good working relationships with pupils and other individuals, and the patterns of his interest.[41]

There are certain shortcomings involved in evaluating either of the categories mentioned above. Many people feel that pupil growth is the best method of measuring teacher effectiveness. Durflinger expresses concern over this point of view.

> The contention that pupil gain in achievement is the most valid criterion for judging the worth of teachers centers around the point that schools are institutions established for the purpose of perpetuating the culture of humanity and the nation. Gain in measurable pupil achievement indicates the degree to which this objective is realized. The extent of attainment of the other objectives of education is ignored when this criterion is used alone and that fact is the common criticism of the use of this criterion. All American schools have other measurable objectives justifying their existance. The attainment of some of these other objectives ought also to be included in the criteria of teaching success.[42]

Even then we still have the problem of other things in the teacher's makeup. That is, personality effects, in a large measure, the effectiveness as judged by others even if the pupil gain is present. No matter how much children achieve, if the teacher does not get along well with other teachers, supervisors, administrators, and parents,

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[41]Ryans, "The Investigation of Teacher Characteristics," p. 372.

[42]Durflinger, op. cit., p. 324.

his job is still in jeopardy and his chances of a good rating are lessened to the degree that he does not fit into each of the many required facets of his position.

It is extremely difficult to tell where the teacher's influence on a youngster begins or ends. Many times it is a number of years before a given teacher's contribution is fully realized. How to measure the long term affects, as a criterion of success, is a difficult problem. However, it is the fervent hope of college instructors, administrators, and public school superintendents that the teachers coming into the field will be of the type that will bring out lasting growth in the pupils with whom they come in contact.

Can we relate teacher behavior to pupil behavior? Ryans points out some difficulties in this area:

> Research, then, attempting to relate teacher behaviors to pupil behaviors has been very limited. Few, if any statistically reliable findings have been reported that will help to answer the question, 'What are effective teachers like?' A number of factors have contributed to the failure to arrive at significant conclusions, chief among which are: (a) the complexity of experimental designs involved and the difficulty encountered in controlling relevant variables; (b) the relative unavailability of measures of teacher behavior and pupil behavior; (c) the probable multi-dimensionality of the problem; and (d) the practical difficulties involved in obtaining the cooperation of school systems and teachers in administering a research program requiring repeated time consuming measurement of large numbers of pupils.[43]

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[43]Ryans, "The Investigation of Teacher Characteristics," p. 379.

Anyone who has taught in the public schools can appreciate these difficulties. The classroom consists of from thirty to forty personalities each reacting to a given situation in a different way. To try to generalize from these behavior patterns and from those of the teacher's interaction with the pupils becomes a tremendous undertaking and even then the results or conclusions would probably lose their significance when viewed in a different setting with different personalities. So, rather than fight the myriad of difficulties, we try to train teachers at our teacher training institutions to have the various qualities that should make more effective teachers.

> But in the final analysis we are forced to admit that our procedures are very arbitrary and a priori in nature; that we can not really identify good and poor teachers with any assurance because we do not know how the standards that we set up are related to successful teaching; that we can not test the validity of the measures we devise (nor, and this is at least equally important, can we test the validy of the hypotheses upon which our teacher training curriculums are based) because we have no adequate criteria of teaching effectiveness... . Certainly until we are able to establish adequate criteria of teaching compentency, our whole system of teacher training, appointment, promotion and tenure fundamentally is on shaky ground.[44]

This is a serious challenge; one that merits the attention of college and public school personnel. They must ask themselves, "What is being done to improve the effectiveness of teachers?" and,

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[44]Ryans, "Criteria of Teaching Effectiveness," p. 379.

"How do we know the things we are doing are improving teaching?" Each superintendent must ask himself, "What is my basis for hiring new teachers?" "What criteria do I use to measure the effectiveness of my teachers?" and, "What can I do to make my selections and ratings more reliable?" Much earnest evaluation needs to be done. Methods need to be devised to evaluate the college program to see if and where emphasis is misplaced, or where more emphasis can be placed.

Perhaps superintendents should devise a rating scale to evaluate beginning teachers somewhat similar to those used to evaluate student teachers. In this manner the college could determine deficiencies in the teacher's training as seen by the different public school administrators and consider these factors when evaluating the college program. Admittedly, this will not solve all the problems inherent in poor teaching, but it would be a good starting place. To use a familiar refrain, "Where there's a will there's a way." Or, as Ryans affirms:

> It may be noted that the study of the personal and social characteristics of teachers sometimes has been regarded, in view of the relative complexity of the problem, as incapable of objective study or measurement; such characteristics have been thought of as educational intangibles. The results of attempts to study behaviors and measure interests and personality characteristics in other occupational and professional fields, however, suggest the feasibility of such an approach to the understanding of certain characteristics of teachers. It does not seem unreasonable to think that some progress can be made in the

direction of describing teachers in terms of observable behaviors and developing devices for the prediction of such observable behaviors.[45]

It is quite possible that some of the factors considered in this study would have shown correlations of more significance if the ratings had been more objective and had some of the suggestions presented here been used when determining the ratings of first year teachers.

GENERAL CONSIDERATIONS

While tabulating material for this study, a large segment of information was procured which could be used by others for further studies of teacher prediction, grading and curriculum revision. This study sample material for those not receiving degrees in education will be filed in the Office of the Dean of Students for the convenience of any person interested in pursuing the problem further.

There were 444 Freshmen that entered Central in the Fall of 1950. Of these Freshmen, 118 or 26.5 per cent received a Bachelor of Arts Degree in Education. From the 118 who received degrees 22, or 18.6 per cent show no indication that they ever entered the teaching field. Several of the men in this non-teaching group are in the

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[45]Ryans, "The Investigation of Teacher Characteristics", pp. 372-373.

services. However, the loss to teaching through marriage or positions in industry probably reached ten per cent of the group. Degrees were also granted in other areas. One received a degree in biology, two in economics, one in mathematics, one in physics and five received Arts and Science Degrees in other fields not designated. Also, of those 444 who entered in 1950, eight are in school at Central again after serving in the armed forces. It seems safe to assume, since they are beyond the years of greatest student mortality, that at least five of these will receive degrees in education. This brings the total graduating number to 136 or 30.6 per cent of those entering. It is difficult to determine how many took pre-professional courses and subsequently enrolled at a university. Even allowing as much as twenty per cent for this, there are still an estimated fifty per cent of the entering class dropping out for one reason or another. The implications are strong, therefore, for a broad study to determine why these students leave Central.

There were 127 transfer students entering Central during the Fall of 1950. Of these, forty-nine or 38.5 per cent received teaching degrees. Degrees were also granted to one person in the fine arts, one in psychology, one in recreation and to four people in economics for a total of fifty-six degrees or 44.0 per cent of those entering. Again, allowing twenty per cent in pre-professional courses, an estimated thirty-five per cent of those transfer students left college before

securing a degree. Here too, a need is presented for a follow-up study to ascertain why these students left college.

Freshmen ACE Scores. The centile scores obtained by Freshmen ranged from -1 to 99+, using all-college norms. Education degrees were eventually issued to 118 of these people whose centile scores ranged from 3 to 96.

Table VII shows that there were more Freshmen scoring in the lowest decile group than there were in the entire fourth quartile. This indicates that the entering Freshmen at Central do not match the all-college norms. Records kept by the Dean of Students bear this out.

> The American Psychological Examination was used again to secure measures of general scholastic aptitude. The 1950-51 freshmen performed about as well as the 1949-50 freshmen did. In terms of performance of freshmen groups, 1938-1949, this year's freshmen score somewhat below the general average. In terms of national college freshmen percentile norms the 1950-51 freshmen score below key levels at all points.[46]

Another point worth noting is that nearly twenty-eight per cent of the teachers in this study came from those scoring in the first quartile and less than seventeen per cent came from the fourth quartile. This situation becomes more extreme when we compare the highest decile with the lowest decile. Teachers ultimately entering teaching

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[46]E. E. Samuelson, The 1950-51 College Testing Program, Unpublished study, Central Washington College of Education, 1952, p. 1.

TABLE VII

BREAKDOWN OF ACE EXAMINATION SCORES OF 444 FRESHMEN

Groups	Number	Per cent of Total Group	Per cent of B. A. Group
Freshmen scoring within the First Decile	85	19.1	
B. A. degrees in Education received in First Decile group	15	3.3	11.9
Freshmen scoring within the Tenth Decile	16	3.6	
B. A. degrees in Education received in Tenth Decile group	4	.9	3.4
Freshmen scoring within the First Quartile	172	38.7	
B. A. degrees in Education received in First Quartile group	33	7.4	27.9
Freshmen scoring within the Fourth Quartile	64	14.4	
B. A. degrees in Education received in Fourth Quartile group	20	4.5	16.9

from the first decile outnumber teachers from the tenth decile almost four to one. This leads to the question, "Are we getting the best potential material to go into teacher education?" If ACE scores are valid indicators, then it appears as if we are not. This is not an advocacy for using ACE scores as the criterion for entrance into teacher education, but it is an advocacy for better guidance in the high schools and colleges. It seems that with proper guidance, or even inducement, more capable people would go into the teaching profession. Now that teacher's salaries are more commensurate with those in other fields, it is hoped that more high caliber men and women will go into the teaching profession.

Transfer Student ACE Scores. The ACE scores for transfer students are necessarily based on Freshmen norms. Consequently their centile scores tend to be higher in general than those of the entering Freshmen.

It appears, when comparing Table VIII with Table VII that the transfer students have more mental ability than do the Freshmen. Most of the discrepancy is due to the fact that these pupil's scores are based on Freshmen norms. Drop-outs produce different normative characteristics and college experience should enable a person to obtain a higher score than one who had not had this experience. If

TABLE VIII

BREAKDOWN OF ACE SCORES FOR 127 TRANSFER STUDENTS ENTERING CENTRAL IN THE FALL OF 1950

	Number	Per cent of Total Group	Per cent of Total Group
Transfer students whose scores fall within the First decile	9	7.0	
Students within this group receiving B.A. degrees in Education	1	.8	1.9
Transfer students whose scores fall within the Tenth decile	13	10.2	
Students within this group receiving B.A. degrees in Education	3	2.3	5.8
Transfer students whose scores fall within the First Quartile	23	18.1	
Students within this group receiving B.A. degrees in Education	9	7.0	17.6
Transfer students whose scores fall within the Fourth Quartile	39	30.7	
Students within this group receiving B.A. degrees in Education	15	11.8	29.4

these scores could be made equitable with Freshmen, this table would come closer to what would be more acceptable to educators. That is, the fourth quartile - first quartile ratio in Table VIII is over five to one in favor of the fourth quartile, while Table VII shows a ratio of almost two to one in favor of the first quartile for Freshmen.

Freshmen High School Grade Point Averages. Table IX shows that 11 per cent of the teachers in this study had a HSGPA of less than 2.00. However, the academic survival of this group was very low. It is interesting to note that the people procuring degrees in the 3.00 or over group outnumbered the below 2.00 group by a three to one ratio. The average group (2.00-2.99) made up forty-six per cent of the total group and fifty-four per cent of the teachers. This factor again brings to mind an earlier point; more should be done to see that high caliber people, both personally and academically, go into the teaching profession. It seems reasonable that public school teachers begin to stress the good points of teaching and not dwell so much on the less desirable features of the profession.

Grades in Professional Courses. Table X shows, as will the other tables dealing with professional course grades, that a very large majority of the people taking these courses acquire grades of "C" or

TABLE IX

BREAKDOWN OF HSGPA'S FOR 444 FRESHMEN ENTERING CENTRAL IN THE FALL OF 1950

	Number	Per cent of Total	Per cent of Teachers
Freshmen entering with HSGPA's of less than 2.00	80	18.0	
B.A. degrees in Education within this group	13	2.9	11.1
Freshmen entering with HSGPA's between 2.00 and 2.99	205	46.1	
B.A. degrees in Education within this group	64	14.4	54.2
Freshmen entering with HSGPA's of 3.00 or above	98	22.1	
B.A. degrees in Education within this group	36	8.1	30.5
Freshmen entering with no recorded HSGPA's	61	13.8	
B.A. degrees in Education within this group	5	1.1	4.2

TABLE X

BREAKDOWN OF GRADES RECEIVED BY 115 FRESHMEN AND 46 TRANSFER STUDENTS ENROLLED IN ED. 307

Grades received	Number		Per cent	
	Freshmen	Transfers	Freshmen	Transfers
Received A's (4.00)	19	6	16.5	13.0
Received B's (3.00)	50	26	43.4	56.5
Received C's (2.00)	45	12	38.7	26.0
Received D's (1.00)	1	2	.8	4.3
Received E's (0.00)	0	0	0	0

TABLE XI

BREAKDOWN OF GRADES RECEIVED BY 115 FRESHMEN AND 52 TRANSFER STUDENTS ENROLLED IN ED. 312 OR 313

Grades received	Number		Per cent	
	Freshmen	Transfers	Freshmen	Transfers
Received A's (4.00)	15	5	3.0	9.6
Received B's (3.00)	55	17	47.8	32.6
Received C's (2.00)	41	27	35.6	51.9
Received D's (1.00)	4	2	3.4	3.8
Received E's (0.00)	0	1	0	1.8

TABLE XII

BREAKDOWN OF GRADES RECEIVED BY 112 FRESHMEN AND 52 TRANSFER STUDENTS ENROLLED IN ED. 472

Grades Received	Number		Per cent	
	Freshmen	Transfers	Freshmen	Transfers
Received A's (4.00)	33	6	30.2	11.3
Received B's (3.00)	46	22	42.2	41.5
Received C's (2.00)	30	24	27.5	45.2
Received D's (1.00)	0	1	0	1.8
Received E's (0.00)	0	0	0	0

TABLE XIII

BREAKDOWN OF GRADES RECEIVED BY 117 FRESHMEN AND 53 TRANSFER STUDENTS ENROLLED IN ED. 473

Grades Received	Number		Per cent	
	Freshmen	Transfers	Freshmen	Transfers
Received A's (4.00)	22	5	20.1	12.5
Received B's (3.00)	47	17	43.1	42.5
Received C's (2.00)	34	17	3.1	42.5
Received D's (1.00)	6	1	5.5	2.5
Received E's (0.00)	0	0	0	0

TABLE XIV

BREAKDOWN OF GRADES RECEIVED BY 117 FRESHMEN AND 53 TRANSFER STUDENTS ENROLLED IN ED. 442

Grades Received	Number		Per cent	
	Freshmen	Transfers	Freshmen	Transfers
Received A's (4.00)	45	14	38.4	26.4
Received 3.5's	7	0	5.9	0
Received B's (3.00)	56	28	47.8	52.8
Received 2.5's	0	1	0	1.8
Received C's (2.00)	8	9	6.8	16.9
Received 1.5's	0	0	0	0
Received D's (1.00)	0	0	0	0
Received E's (0.00)	1	1	.8	1.8

better. Only three out of 161 students who took Ed. 307 obtained a "D" and no one earned an "E".

As one looks back over the preceeding tables it is noticed that the number of D and E grades are few. As a matter of fact, there are only seventeen D's and three E's given in all the professional courses. There are, however, four people included who received D's or E's, took the course over and earned a C or better. In these cases the average of the two grades was used in this study.

This seems to indicate one or a combination of several things: (1) By their junior year the students had made up their minds that they wanted to be teachers and therefore did acceptable work in the education courses. (2) The selectivity of the college program had eliminated the majority of D and E students, thus leaving only the average or better students in school. (3) Perhaps a phenomenon similar to that which occurs when supervisors rate teachers happens. That is, a five point grading scale becomes, in essence, a three point scale wherein any acceptable performance gets rated average or better. A study of methods of getting a wider diversity of rating which will still eliminate a connotation of failure or poor performance might be made. Or, (4) still more likely, a combination of these could contribute to this apparent success.

This study, then, found only two Freshmen factors that were related to successful first year teaching which reached the five per cent level of confidence; the courses Introduction to Teaching and Curriculum and Methods. ACE examination scores, high school grade point averages, Elementary Education, Secondary Education, Directed Teaching and the number of activities engaged in while at college show no significant relationship to first year teaching success.

On the other hand, the transfer group showed three factors that were related; Curriculum and Methods, Elementary Education and Directed Teaching. Curriculum and Methods was the only factor in either group reaching the one per cent level of confidence. It was also the only factor that was significant for both the Freshmen and the transfer students.

This study indicates that there should probably be some further research as to the reliability and validity of the rating scale used to determine success in first-year teaching. The study also indicates that an evaluation of criteria used by superintendents who hire teachers needs to be undertaken to ascertain whether or not the things they are looking for in applicants are really as important as has been supposed. And, finally, the college must endeavor to keep abreast and conduct studies such as these in order that it may adopt a program to meet the needs of the public schools.

CHAPTER IV

SUMMARY AND CONCLUSIONS

The purpose of this study was to investigate whether either high school grade point averages, American Council on Education examination scores, grades received in professional courses, or the number of activities engaged in while at college were related to success in first-year teaching as judged by public school supervisors. The professional courses included in this study were: Introduction to Teaching (Ed. 307), Curriculum and Methods (Ed. 312 or 313), Elementary Education (Ed. 472), Secondary Education (Ed. 473), and Directed Teaching (Ed. 442). The original study sample consisted of 444 Freshmen and 127 transfer students that entered Central Washington College of Education during the Fall Quarter of 1950. Pearson Product-Moment Coefficients of Correlation were computed to determine the extent of relationship of the various factors to success in first-year teaching.

Only two factors correlated sufficiently high with rated teaching success to reach statistical significance when using the group that entered Central as Freshmen and who later obtained degrees in Education. Grades in Introduction to Teaching and Curriculum and Methods correlated .251 and .205 with supervisor's ratings. Both

were significant at the five per cent level of confidence. None of the other factors reached this significance level.

Three factors were found to be statistically significant for the group who entered Central as transfer students and later received degrees in Education. Curriculum and Methods with an r of .456, was found to be significant at the one per cent level of confidence. Elementary Education and Directed Teaching, with r's of .354 and .354 respectively, were found to be statistically significant at the five per cent level of confidence. The course titled Curriculum and Methods was the only factor found to be significantly related with teaching success for both the Freshmen and transfer student groups. Reasons for the lack of significance of various factors related to teaching success were discussed and hypotheses were made which might improve the relationships. Serious questions concerning the reliability and validity of supervisor's ratings as the criterion for teaching success were discussed.

CONCLUSIONS

Several conclusions become apparent as a result of this study.

1. Neither the high school grade point average nor the American Council on Education examination is a very good predictor of teaching success.

2. If ACE scores are to be used for purposes of guidance for teaching success some method such as developing empirical keys should be designed that will make the use of this examination more valid. In this way advisors and other college personnel may have a firmer base for any advice that is given a student on the basis of his test score. This is a different matter than predicting success in college courses which are considered in other studies.

3. It seems advisable for the college to investigate the desirability as well as the feasibility of using new devices, or new ways of predicting from the present ones, in the battery of entrance examinations; to be used for guidance purposes.

4. If college activities are to be included in the student's placement file, a careful study should be made as to what things should or should not be included as activities. It also seems desirable to include space on the placement blank for jobs held while in college so that this factor can be taken into consideration along with college activities.

5. If academic grades are to be used for the prediction of teaching success some means should be found that will enable grades in academic work to have a wider range. If correlation studies are to reach more significance, a wider range of grades than what is evident in this study seems necessary. The grades in use today become,

fundamentally, a three point scale, as the D and E grades are rarely used. A similar phenomenon occurred in supervisor's ratings. Exceedingly few first-year teachers received ratings of below average. This seems to imply that there are few less than average upper division students in education or first-year teachers.

6. A more objective measure of teaching success is necessary. A rating scale in which the criteria to be evaluated are arrived at after thorough research and used by all supervisors who rate teachers is needed. This would, it seems, eliminate some of the problems now evident in rating teaching success.

7. Public school supervisors need to keep abreast of studies concerning teaching success so that their basis for hiring teachers is not determined too heavily by what has been done in the past. Knowledge of objective data concerning teaching success should support his contentions as to what a good teacher is.

8. Further studies of this nature should be instigated to check all possible factors that may lead to prediction of academic work or teaching success.

9. The large percentage of drop-outs at Central indicates a need for an extensive study to find out why these people leave before obtaining a degree since only a small percentage of them left because of academic failure.

10. An extended and/or improved program of guidance, it seems evident, needs to be installed at college as well as in the public schools. Many high caliber youth do not go on to college, many do not finish and too many pass up the opportunity for a teaching career from lack of incentive. Guidance counsellors can do a great deal to improve this situation.

This study was undertaken as an attempt to locate factors that lead to teaching success. If the results of this study are not used as a basis for further research, or as a basis for some serious considerations on the part of college and public school personnel alike to view the present program of rating teaching success with a critical eye, then the study only partially fulfills its purpose. If, on the other hand, new studies are undertaken to evaluate present methods and procedures for predicting successful teaching, the study will have served its purpose well.

This writer agrees with Roy Ullman when he states:

> The outcome of this study makes the general problem (prediction of teaching success) more challenging than before. Possibly other studies similar to the present one can be made and it may be that finally all the factors essential to teaching success can be determined. Once these factors are known and a sufficiently large number of cases have been studied to permit generalization, results as accurate as any which can be secured when human traits are being considered, may be expected.[47]

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[47]Ullman, op. cit., p. 608.

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APPENDIX

APPENDIX I

Mid-year rating of _____

Please check the one category which most nearly characterizes the quality of work the above-named teacher is now doing. Additional comments are encouraged and space has been provided for them at the bottom of this page.

1	2	3	4	5
Superior	Good	Average	Passable	Unsatisfactory

1. Highest Rating
   Definitely superior teaching for a beginning teacher. Would compare favorably with the best twenty-five per cent of teachers in this system.

2. Rating of Good
   Work of teacher distinctly above average for a beginning teacher. Would compare with teachers in the system whose work is better than average, though not superior.

3. Rating of average
   Work of teacher satisfactory though not exceptional. Would classify teacher as belonging to large group of average teachers at present.

4. Rating as Passable
   Work of teacher somewhat below average but passable for a beginning teacher. If work improves, teacher will be retained in the system next year.

5. Rating of Unsatisfactory
   Work of teacher below reasonable standards. Needs help but so far has profited from suggestions and criticisms to a limited degree only. Not likely to be retained next year.

Remarks:

Signed _____

Position _____

Date _____

APPENDIX II

AN EXAMPLE OF THE COMPUTATION OF R

$$r = \frac{37836.50 - \frac{(38)(9316)}{95}}{\sqrt{\left[1872.50 - \frac{148996}{95}\right]\left[954396 - \frac{86787856}{95}\right]}} =$$

$$\frac{37836.50 - \frac{3595976}{95}}{\sqrt{[1872.50 - 1568.37]\,[954396 - 913556.37]}} =$$

$$\frac{37{,}836.50 - 37{,}852.37}{\sqrt{[304.13]\,[40839.63]}} = \frac{15.87}{\sqrt{12420556.67}} =$$

$$\frac{-15.87}{3523.28} = r = -.0045$$

APPENDIX III

TABLE SHOWING SCORES OF FACTORS CONSIDERED FOR 118 STUDENTS RECEIVING DEGREES IN EDUCATION FROM THE 444 FRESHMEN THAT ENTERED CENTRAL DURING THE FALL OF 1950

Student No.	ACE Score	HSGPA	Ed. 307 Grade	Ed. 312 or 313 Grade	Ed. 472 Grade	Ed. 473 Grade	Ed. 442 Grade	Activities	Teacher Rating
1	17	3.33	3	3	3	3	4	7	5
2	38	2.92	3	4	4	3	4	7	4
10	30	2.92	3	3	4	2	3.5	3	4
12	80	4.00	3	3	4	3	3	3	3
15	92	2.41	4	3	4	3	4	0	5
16	27	1.72	2	3	3	2	3	1	4
18	84		4	2	2	2	2	4	4
23	82	2.44	3	2	2	4	3	7	none
25	57	2.80	2	3		3	3	0	4
34	19	3.00	2	2	4	3	3	1	none
37	8	2.52	3	2	2	2	3	4	5
44	81	2.93	3	2	4	4	3	8	4
46	85	2.62	2	3	2	3	3.5	0	none
60	44	3.52	4	4	4	4	2	6	5

Student No.	ACE Score	HSGPA	Ed. 307 Grade	Ed. 312 or 313 Grade	Ed. 472 Grade	Ed. 473 Grade	Ed. 442 Grade	Activities	Teacher Rating
62	28	2.57	3	3	3	4	3	1	4.5
63	47	1.67	2	1	2	3	3	1	none
70	49	2.48	3	2	3	1	3	0	none
75	9	2.60	2			2	3	1	3
77	28	3.03	2	2	3	4	4	4	4
78	87	3.24	3	4	3	4	3.5	3	4
83	22	2.47	2	3	2	3	3	0	4
94	28	3.20	2	2	3	3	3	1	none
97	18	3.37	2	3	3	3	4	4	4
102	55	3.56	4	3		3	4	0	5
113	57	2.75	3	2	2		4	3	none
114	84	1.82	4	3	3	2	3	2	4
121	14	2.79	3	3	3	2	4	8	4
130	79	2.39	3	3	3	2	4	1	4.5
131	28	2.34	3	3	3	2	3	1	5
132	96	3.55	3	4	4		3	4	none
136	66	2.88	4		4	2	4	0	3
139	3	2.44	2	4		2	4	3	3
143	29	3.03	4	4	4	3	3	4	none
157	59	2.91	3	3	3	3	4	1	3.5
159	8	1.68	3	4		4	4	0	3
160	50	3.43	3	3	4	3	3	3	none
164	42	2.00	2	2	3	1	4	3	4
170	71	3.41	3	3	4	2	4	6	4
171	3	3.03	3	3	3	2	3	1	5

Student No.	ACE Score	HSGPA	Ed. 307 Grade	Ed. 312 or 313 Grade	Ed. 472 Grade	Ed. 473 Grade	Ed. 442 Grade	Activities	Teacher Rating
172	7	3.47	4	3	4	4	4	8	4
173	41	1.90	2	2	2	3	4	3	4
176	62	1.79	2	2	3	2	3	3	none
179	71		2	3	3	3	2	0	4
182	9	2.09	2	2	3	3	3	0	4
183	19	3.08	3	3	3	3	4	2	4
184	13	2.33	2	3	4	2	3	3	4.5
185	24	3.97	4	4	4	3	3	8	5
187	75	3.68	3	3	4	4	3	2	5
193	66	2.66	2	1	2	2	2	0	none
200	66	3.31	3	4	3		3	8	4
202	9	2.78	2	2		4	4	3	4
204	6	2.64	4	2	4	4	4	7	none
206	13	2.21	2	2	2	3	4	4	4
207	41	2.05	3	3	3	3	3		none
216	22	2.85	2	3	3	4	3	1	4
217	21	1.52	3	2	2	2	3	2	4
220	29	2.53	2	2	3	2	4	5	4
221	81	3.98	4	4	4	4	4	3	5
222	35	3.11	4	3	4	3	4	9	4
230	38	2.23	1	2	2		3	0	3
233	10	2.48	2	3	2	2	3	2	4
238	4	2.19	2	2	3		4	1	4
239	2	2.18	3	2		2	0		none
242	42	2.70	3	2	2	2	3.5	0	none

Student No.	ACE Score	HSGPA	Ed. 307 Grade	Ed. 312 or 313 Grade	Ed. 472 Grade	Ed. 473 Grade	Ed. 442 Grade	Activities	Teacher Rating
244	81	3.17	3	4	3	3	3	15	4
245	72	2.33	3	3	3	2	4	3	4
248	20	2.27		2	3	1	4	5	5
251	32	2.19	3	3	2	1	3	4	none
252	17	2.52	2	2	2	3	4	6	4.5
257	33	2.44	2	2	4	3	3	4	5
259	62	2.45	4	3	4	3	4	10	4
263	85	3.00	3	4	4	4	4	8	4
264	8	3.03	4	3	2	3	4	6	4
267	72		3	2	3	2	3	0	3
275	28	1.37	2	3	4	2	4	3	4
278	75	3.23	2	1	3	1	3	5	4
279	15	2.58	2	3	2	1	4	3	4
285	69	2.55	3	2	3	4	3	3	5
288	54	2.00	3	3	4	2	3	3	4
290	21	2.57	2	3	3	4	3	6	5
291	92	3.44	3	4	4	4	3	8	4
294	84	3.37	4	3	3	4	3	5	3
300	63	1.63	2	2	3	2	3	1	4
306	13	1.25	2	2	2	2	4	2	4
309	91	1.82	4	3	4	3	4	4	none
318	65	2.91	2	2	2	3	3	2	4
319	75	2.97	2	2	2	3	4	1	3
320	27	2.60	3	4	4	3	3	8	4
325	14	2.30	2	1	3	2	3	1	4

Student No.	ACE Score	HSGPA	Ed. 307 Grade	Ed. 312 or 313 Grade	Ed. 472 Grade	Ed. 473 Grade	Ed. 442 Grade	Activities	Teacher Rating
332	10	1.83	3	3	3	3	3	0	4
334	84	3.91	3	3	2		4	4	4
341	23	3.09	3	3		4	4	0	3
356	82	2.31	2	3	2	3	4	4	none
361	42							2	3.5
363	55	2.97	4	2	3	3	4	1	3
365	47		2	2	2	2	2	0	3.5
374	41	2.91	3	3	3	3	3	5	4
383	50	3.58	3	3	3	2	3	3	4
387	16	2.88	2	2	3	3	3	6	4
390	5	2.90	2	3	4		3	8	5
391	7	3.07	3	3	3		3	3	4.5
394	6		3	4	4	2	2	0	4.5
397	60	2.40	3	2	3	3	4	5	5
398	89	3.66	3	3	4	3	3	0	none
399	38	279	3	3	4	3	4	8	4
400	75	3.29	2	3	3	3	2	2	none
406	28	2.83	2	3	2	2	4	2	3
408	49	3.59	4	3	4	4	3	9	4
413	62	2.96	3	2	2	4	4	8	5
416	20	2.35	3	3	3	3	3.5	20	4
417	63	2.55		2	2	2	3	0	4
418	45	2.88	2	3	4	3	2	2	4.5
420	72	3.91	4	3	3	4	3	4	5
424	9	1.99	2	2	3	2	3.5	0	3

Student No.	ACE Score	HSGPA	Ed. 307 Grade	Ed. 312 or 313 Grade	Ed. 472 Grade	Ed. 473 Grade	Ed. 442 Grade	Activities	Teacher Rating
428	10	2.69	2	2	2	3	3	3	none
430	60	2.47	3	2	2	3	2	0	none
431	29	2.06	2	3	2	3	4	0	3
433	29	3.00	3	2	3	3	3.5	4	4

APPENDIX IV

TABLE SHOWING SCORES OF FACTORS CONSIDERED FOR 49 STUDENTS RECEIVING DEGREES IN EDUCATION FROM THE 127 TRANSFER STUDENTS THAT ENTERED CENTRAL DURING THE FALL OF 1950

Student No.	ACE Score	Ed. 307 Grade	Ed. 312 or 313 Grade	Ed. 472 Grade	Ed. 473 Grade	Ed. 442 Grade	Activities	Teacher Rating
2	28			2			1	4
6	55	2	2			2	3	4
8	39	3	2	2	2	3	5	none
11	65	2	2		2	4	4	4
26	60	3	2	2	3	4	1	3.5
27	17	2	2	3	2	3	0	4
29	50	3	2	3	3	2	5	2
30	9	3	3	2	2	4	0	3.5
34	60			2			0	none
36	39	2	2	3	3	4	3	none
37	84	3	3	3	3	4	7	none
38	57	2	2	2	2	3	1	3
39	19	3	2	3	2	3	0	5

Student No.	ACE Score	Ed. 307 Grade	Ed. 312 or 313 Grade	Ed. 472 Grade	Ed. 473 Grade	Ed. 442 Grade	Activities	Teacher Rating
46	52	3	2	3	3	4	0	4
47	99		3			3	2	none
49	50	3	3	3		2	5	3
55	96			2		3	3	none
56	73	3	3	3	3	3	3	5
57	87	3	3	2	2	2.5	0	4
58	17	3	2	3	3	4	1	3
59	7	3	2	2	2	2	2	1
62	78		4	3	3	4	2	5
64	75	3	3	3	2	3	0	5
65	12			2		2	3	5
67	68	3	2	3	2	3	5	4
73	89	4	4	4	4	4	5	none
79	57	4	2	3	3	3	0	5
81	56	3	4	3		3	4	4
82	21	3	2	1	2	3	0	3
86	62	3	2	2	3	3	1	3
88	92	4	3	4	4	4	4	5
89	87	2	2	3	3	3	2	4
90	63	2	2	3	2	2	0	3
93	60	3	3	4	4	4	6	none
94	50	4	2	2	3	3	0	4
96	66	3	2	2	2	3	1	3
97	83	3	3	2	3	3	0	4
98	85	2	2	2	2	3	3	2.5

Student No.	ACE Score	Ed. 307 Grade	Ed. 312 or 313 Grade	Ed. 472 Grade	Ed. 473 Grade	Ed. 442 Grade	Activities	Teacher Rating
101	59			3		3	6	none
104	83			3		3	1	none
109	19	2	2	2	2	3	1	3
110	71	3	3	2		3	2	4
113	71					3	6	none
115	69	3	3	3		4	1	5
116	49	3	4	4	2	4	1	4
117	49	3	3	3	4	3	1	3
118	89		4	3	2	3	0	3.5
122	17	1	2	2	3	3	2	4
124	19	4	2	3	3	3	3	3.5