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An Experiment – Rapid Improvement in English Usage and Spelling Skills

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AN EXPERIMENT--RAPID IMPROVEMENT
IN ENGLISH USAGE AND SPELLING SKILLS

A Thesis
Presented to
the Graduate Faculty
Central Washington College of Education

In Partial Fulfillment
of the Requirements for the Degree
Master of Education

by
Robert H. Benesh
March 1960

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APPROVED FOR THE GRADUATE FACULTY

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CHAPTER I

INTRODUCTION AND STATEMENT OF THE PROBLEM

I. GRADUATE SCHOOL STANDARDS AND THE EXPERIMENTAL TESTING PROGRAM AT CENTRAL WASHINGTON COLLEGE OF EDUCATION (CWCE)

For a great many years faculty in graduate schools have been plagued with problems of selection and retention and the criteria for success among graduate students. The criticality of this situation has become aggravated by the swelling population and by rapidly increasing numbers of applications for graduate study. Therefore, it not only appears logical that some sort of standards are needed for entrance into such study, but it becomes necessary to confine the total number of graduate students to one compatible with available facilities and teachers. Then too, other moot questions arise: Can graduate schools' standards be established upon the premise that students entering are, on the average, superior to those in the lower academic levels? Do they, and will they, perform at higher skill levels? Are they more intelligent; do they possess more experience and knowledge? If we could compare a representative group of graduate students with a group of seniors or juniors by means of some standardized intelligence, aptitude, or

comprehensive test of knowledge, shouldn't we expect higher average scores from the graduates? Such thinking among the faculty of the CWCE graduate school evolved a course of action in the summer of 1957.

The Graduate Study Committee decided to inaugurate an experimental testing program for graduate students enrolled at CWCE. This committee acted upon the premise that the ability to use English properly was an important criteria toward success in obtaining a higher degree. At this point the committee became concerned about how to determine English usage and spelling abilities of these students. The natural step, of course, was to select some standardized tests; this was done. The Cooperative English Test, Forms OM and PM, was selected; the committee decided to omit the Vocabulary section, (Section III). They decided to use senior college forms for American representative teachers' colleges. One hundred seventeen graduate students took this test. The results were indeed surprising, bringing to light a real problem. The median scores of these graduate students were discouragingly low when compared with college seniors in American educational institutions.

II. RESULTS AT CWCE FROM TESTING BY MEANS OF THE COOPERATIVE ENGLISH TEST

The 1957 summer school graduate students had a median percentile of 30.63 in the English usage and one of 43.39 in the spelling portion. Immediately a basic and general assumption is placed in jeopardy--that students working toward an advanced degree are superior in performance to students at lower academic levels. The committee, of course, did not rest on the summer of 1957 results. The English usage and spelling tests were used thereafter for all successive classes of Education 507 (Introduction to Graduate Study).¹ Successive results of the tests were quite similar to the median scores given above.

The graduate students at this college were not superior students, in so far as English usage and spelling were concerned. The discouraging thought arose that perhaps they would compare unfavorably in other skills (such things as use of mathematics, knowledge of geography, knowledge of government, and retention of understandings in other academic areas). The foregoing dramatized the

¹This course is required of all students working toward the Master of Education degree at Central Washington College of Education.

problem of selection and retention in graduate school and led to the present problem: how to use standardized testing as a graduate admissions requirement.

III. STATEMENT OF THE PROBLEM

As a member of the spring quarter, 1958, Education 507 class, the writer became strongly concerned with these problems. It became evident that these problems should be explored, isolated, and described, that some logical course of action might thereby be revealed. Of necessity this exploration would be limited to English usage and spelling. The results of the experimental testing were a valid and valuable place from which to start. For the purpose of this experiment the problem was defined as follows: graduate students at CWCE consist, in the main, of public school teachers and administrators. Their scores in the Cooperative English Test ranked them in the lower third compared with college seniors in representative teachers' colleges in this country. It was determined that a means should be devised to find out if these test results were acceptable as conclusive evidence of ability.

CHAPTER II

BACKGROUND AND A HYPOTHESIS

I. SHOULD PERFORMANCE BY GRADUATE STUDENTS BE "SUPERIOR"?

Requirements related to performance have been a necessary part of the program in graduate schools since the eighteenth century. They have covered the areas of knowledge, skills, attitudes, understanding, and personal qualities. The thesis that gave support to careful selection of individuals performing on the graduate levels began with the graduate school movement. The belief that graduate students' performance should be superior to that of undergraduate students has been championed in every quarter. The difficulties which grew out of these seemingly agreed upon purposes were related to how the assessments should be performed; what assessments should be performed; the conclusiveness of the findings as evidenced by tests, recommendations, grades, and evaluations; and the limits which need to be imposed to accomplish a high quality solution.

The latter point has become an objective pursued by many graduate school faculties. This pursuit has proceeded in a number of directions and would more properly be stated as "search" rather than pursuit.

Many graduate schools have introduced standardized testing to select students for admission into their graduate studies programs. Some schools have gone a step farther and used standardized tests not only for selection, but to determine retention. Some have taken a third step, requiring certain minimum standardized scores as a prerequisite for the Master's Degree. Such an approach, however, could do nothing toward improving the substandard performances by graduate students. On the contrary, the selection and retention test would limit the Master's Degree to the superior performer. Since more students wish graduate study than the resources of graduate schools can handle, this limiting appears to be justified. The real problem, however, is not solved at all, merely taken advantage of in the light of inadequate graduate study resources. Because the retention test does not solve nor even approach the problem of improving the substandard performances of graduate students, it was decided that the substandard indices exhibited by students at this college should be examined. Low scores were shown in the Cooperative English Test. Are these scores valid? What are the courses? Can anything be done to improve the situation?

II. A HYPOTHESIS--"LATENT SKILLS"

The following hypothesis was adopted. Except in the college and in a few specialized jobs, the critical atmosphere for use of skills such as English usage, spelling, and others important in the institution of learning does not exist. College seniors may be at their peak of performance in such areas. After they leave college the lack of criticality and lack of stress by themselves and their superiors cause these skills to gradually become rusty. When they return for graduate studies, they are not on a "plateau" but in a "rut."

The validity of the preceding hypothesis might be revealed by seeing how rapidly graduate students' skills are recalled as they progress in the graduate program. Suppose that performance progressed from below standard to above standard in a short period of time. This would suggest that the skills had existed all the time, and that once the rust were removed, effectiveness could rise sharply. That is the premise behind this experiment.

CHAPTER III

PROCEDURES FOR THE EXPERIMENT

I. PRELIMINARY CONSIDERATION

Research conducted by a candidate for a Master's Degree suffers limitations. Most often the researcher is laboring under a time commitment--a year's residence, certain required subjects, some electives, a minimum grade point average, and an approved thesis. In other words, when one must study something, he is subject to certain considerations and limitations--time, resources, previous research, empirical evidence, acceptability, and many other factors. These factors were considered and an experiment was devised. The experiment was pointed toward supporting or denying Cooperative English Test results as valid indicators of ability. It was designed to explore the effectiveness of certain techniques for rapidly improving CWCE graduate students' use of English and spelling. This was predicated upon the hypothesis that these skills were still possessed but merely "rusty." By providing an atmosphere of criticality, competition and motivation, a group of these teachers (graduate students) should rapidly recall skills in the use of English and spelling. It was decided that the experiment would be conducted to see if this would happen.

II. SETTING FOR THE EXPERIMENT

The experiment was scheduled to occur during a six-week period of the 1958 summer session. An Experimental Group and a Control Group of approximately fifteen members each were selected by matching raw scores in the Cooperative English Test. A reasonably private classroom was selected in the Air Force R.O.T.C. Building. Two one-half hour meeting periods per week were scheduled with the expectation of achieving a total of sixteen meetings for each Experimental Group member. Members of the Control Group were not involved in this as they were unaware that they had been selected; in fact the Control Group became aware of their participation for the first time when they were re-examined by an alternate form of the Cooperative English Test at the end of the experiment. The necessary arrangements were made at the beginning of the second half of the 1958 summer session. The first meeting with the Experimental Group members in July, 1958, was used primarily for explanation, the instructor's comments being somewhat like the following:

Sixteen reading quiz exercises have been prepared. The purpose of these is to aid you to improve your use of English and your spelling. I am aware that most of you were willing to participate in this experiment and the numerous meetings required in completing it. Should any of you change your mind, please advise me and other arrangements will be made. At the conclusion of the experiment

you will be tested and subsequently advised of any improvement you have shown in these topics. The sixteen reading quiz exercises will be called 'motivating experiences.' Coffee and doughnuts will be available each time, and I hope that the experiences will be comfortable, pleasant, and meaningful. These reading quiz exercises consist of short articles, most of which are quite interesting and all relating to words, spelling, reading ease, use of English, writing, and similar topics.

III. CONDUCTING THE EXPERIMENT

The Experimental Group and Control Group were selected on a basis of matched scores, and with one exception the pairs were selected from the lower quartile ranks, filling out a total of fifteen pairs. As mentioned previously, the experiment was conducted during the second six-week period in the summer session, and at the end of the experiment, each group was re-examined by means of an alternate form of the Cooperative English Test. Differences in scores were analyzed and interpreted. As had been planned, the Control Group members were not aware of their relation to the experiment until they took the alternate form of this examination at the end of the summer session.

The Experimental Group attended two meetings each week, averaging twelve for each member. At these meetings, the investigator provided coffee and doughnuts in a reasonably comfortable and private classroom. Members were advised of the importance of the experiment and the

importance, to them, of good use and spelling of English. A competitive atmosphere was achieved through the use of reading quiz exercises, all relating to the need for good writing, speaking, spelling, and grammar, and some on the history of words, their use, etc. The investigator made himself available for group discussions and for private discussions with members of the group; many such meetings resulted. The Experimental Group was not subjected to conventional learning experiences, i.e., lectures, drill, homework, written assignments, etc. The average reading quiz experience lasted approximately twenty minutes, and materials could not be removed from the room by the students. Also, reading quiz exercises were not drills in use and spelling of English but were all related to the need for improving reading, spelling, writing, speaking, and understanding English.

During the six-week period, four questionnaires (see Appendix E) were given to group members; these were to ascertain willingness to participate and to "goad" members toward improvement. The final questionnaire asked members if they felt that they had received any benefits from their participation. Then, at the end of the six-week period, the Experimental Group and the Control Group were re-examined with the Cooperative English Test.

At the end of the experiment it was apparent that there were relationships affecting the results; that is, all of the variables involved had not been under control. A suggestion occurred that the classroom environment must have stimulated members of both groups in some way. It seemed obvious that the stress placed on improving writing, communicating, and the suggestions for writing a thesis were motivating factors causing these students to bear down and improve in their use of English and other elements of communication. Observation of some of these classes did not reveal any particular stress toward improving spelling. Experimental Group results strongly suggested that variables concerning this type of performance were more carefully controlled. Another relationship worth mentioning concerns the brevity of the experimental period, i.e., six weeks. This problem had been realized all along--while planning the experiment, during the experiment, and subsequently. Unfortunately, no other course of action was available to permit the experiment to continue for a longer period of time. When the experiment was over, the evaluation of results took these factors into consideration.

CHAPTER IV

RESULTS OF THE EXPERIMENT

I. PRE-TESTING AND POST-TESTING OF MATCHED PAIRS

The Cooperative English Test (except the vocabulary portion) was administered to the Experimental Group and the Control Group. The pre-test scores were statistically compared. The analysis revealed no significant difference in the mean raw scores of the matched pairs in these groups.

The abbreviated table shown on the following page reveals that the mean (or average) raw scores from the first taking of the test are almost identical. This established that the Experimental Group and the Control Group may be considered equal in the abilities or skills in which they were tested. The "standard deviation," "standard deviation of the mean," etc. are additional statistical steps for establishing the reliability of the comparisons. The groups differed in average raw scores by only two-tenths of a point in English usage and by about seventh-tenths of a point in spelling.

A statistical analysis of the post-test scores revealed no significant difference between these two groups in respect to the English Usage Raw Scores. In other

TABLE I

A t-TEST COMPUTATION FOR DETERMINING IF A SIGNIFICANT DIFFERENCE EXISTS BETWEEN THE MEAN RAW SCORES OF TWO UNRELATED GROUPS (EXPERIMENTAL GROUP AND CONTROL GROUP) IN ENGLISH USAGE AND SPELLING (4:129)

Group	Test	Number	Group mean Raw score	Standard deviation	Standard error of the mean	Standard error of the difference	Degrees of freedom	t-Test	Significance
Exp	English Usage	15	45.60	6.31	1.14	1.68	28	.12	Not significant
Control	English Usage	15	45.40	7.22	1.23				
Exp	Spelling	15	49.87	7.01	2.86	2.86	28	.30	Not significant
Control	Spelling	15	49.20	8.10	2.16				

words, both groups had gained, but had gained by almost the same amount. The two groups differed considerably, however, when compared by post-test spelling scores.

Both groups were tested after the experiment was ended, an alternate form of the Cooperative English Test being used. The average raw scores for English usage differed by only about seventh-tenths of a point, yet both groups improved significantly and equally. As a matter of fact, from ranking in the lower third, as compared to seniors in teacher colleges, they elevated themselves to the lower portion of the middle third--and within only six weeks. Spelling results tell a different story. The Experimental Group improved significantly, from an average raw score of 49.87 to 54.53. The Control Group actually lowered in their average spelling score.

II. CONCLUSIONS

Statistical evaluation of the improvement of the mean English usage score by Experimental Group members revealed that the experiences of the summer session significantly improved performance in the use of English and in spelling. The experiences arranged especially for the Experimental Group contributed to their somewhat greater improvement in English usage than that of the Control Group. Statistical analysis of the differences between the

TABLE II

ANALYSIS OF ENGLISH USAGE AND SPELLING PRE-TEST AND POST-TEST RAW SCORE
DIFFERENCES BY THE DIRECT DIFFERENCE METHOD (2:268-274; 4:167-171)²

Group	Test	Number	Pre-Test mean	Post-Test mean	Standard error of the difference	Standard error of mean difference	Degrees of freedom	t-Test	Significance
Exp	English Usage	15	45.60	49.73	5.46	1.44	14	2.87	Significant beyond 5%
Control	English Usage	15	45.42	49.00	4.01	1.07	14	3.43	Significant beyond 1%
Exp	Spelling	15	49.87	54.53	6.23	1.67	14	2.81	Significant beyond 5%
Control	Spelling	15	49.20	48.47	4.17	1.11	14	-.60	Not significant

²The Homogeneity of Variances test was applied. The F-test revealed that the significant differences shown above were not attributable to variances within groups.

two groups indicates that the special experiences of the Experimental Group can be accepted as the reason for this larger improvement at a level of confidence stated thusly: there are sixteen chances in seventeen that these special experiences were the cause of the greater improvement. On the other hand, the greater improvement in spelling by members of the Experimental Group can be acceptable at a level of confidence of better than one in a hundred times; that is, better than ninety-nine times out a hundred the experimental conditions can be accepted as the cause for the greater spelling improvement. Statistical analysis of the net combined gains by the Experimental Group were revealed as significant; in this case there was only one chance in twenty that chance or other factors caused this improvement.

Thus it appears that the stimulating of one's desire for improving, even in a period as short as six weeks, can produce successful results. The conclusion is: both groups showed almost equal improvement in their English usage scores. The Experimental Group showed a marked improvement in spelling whereas the Control Group declined slightly. The spelling results conformed to expectations, but the English usage results suggested that the controls established for this part of the experiment were inadequate. In other words, it is possible that the environmental factors for the Experimental Group were not sufficiently

isolated and controlled in respect to the stimulating of proficiency for using English.

During and after the experiment, possible improvements for control appeared evident. These discoveries might be of value if future studies of this problem were to be considered. Experimental Group members' time used in the experiment consisted of only a tiny fraction of their graduate school experiences. Another limitation consisted of the total period used for the experiment--six weeks. A longer period of time might expand the opportunity for contrast between experimental and control groups. Additional data could be considered for comparison and as criteria for selecting participants in such an experiment; such data as intelligence scores and freshman English usage and spelling scores might have enhanced the validity of the results. Lastly, it was impossible to prevent the Control Group from becoming exposed to motivation and learning processes involving English usage and spelling. These experiences were quite evident in Education 507 classes. Possibly a Control Group could be selected from comparable persons teaching in the public schools in Washington. Such a group should provide a more realistic comparison with the group being subjected to experimental conditions and controls.

CHAPTER V

SUMMARY, CONSIDERATIONS, AND RECOMMENDATIONS

The following chapter will briefly review the isolation of a problem, the methods for investigating it, and the actual results of the experiment. A step further--this chapter attempts to apply the results of the experiment by offering some conclusions and recommendations for consideration at Central Washington College of Education. These considerations and recommendations are aimed at improving the quality of English usage and spelling of graduate students at this college.

I. A SUMMARY OF THE PROBLEM, BACKGROUND, AND THE COURSE OF ACTION THAT WAS SELECTED

Beginning in 1957 the English usage and spelling portions of the Cooperative English Test were administered to graduate students at CWCE. The examination was taken by graduate students when they enrolled for Education 507, Introduction to Graduate Study, the results being compared with the percentile norms recorded for senior students in representative teachers colleges in the United States. The record of graduate students at CWCE was not complimentary. A median percentile rank of fifty for both English usage and spelling is the established norm resulting from

standardized testing of seniors at the representative teachers colleges. Median percentile ranks for CWCE graduate students were near the thirtieth percentile for English usage and near the fortieth for spelling. The Education 507 class of the spring quarter of 1958 had a median percentile of thirty one for English usage and forty one for spelling. It was this occasion that prompted an experiment. The purpose of the experiment was to test the effectiveness of certain methods for improving English usage and spelling performance of graduate students at CWCE.

A startling fact was that most of the graduate students involved were either public school teachers and administrators or were completing requirements for obtaining a teaching certificate in the State of Washington. Somewhat startling was the fact that the percentile medians of the earlier classes were also representative of public school teachers and administrators enrolled in graduate school for the purpose of professional improvement. The results were perturbing to these students (teachers) as well as to the faculty of CWCE Graduate School. How could these teachers and teachers-to-be guide public school pupils in the art of expression if they couldn't spell or use English properly? A second question arose: Were the skills for using English and for spelling latent? It was

conceivable that these skills could become latent because of the lack of stress by these students or because few of them were being critically appraised concerning these skills. At any rate, a critical appraisal became necessary upon their enrollment in Education 507.

The two questions above induced another: If skills had become latent, could a technique be devised for sharpening graduate students' abilities for using English and for spelling? Meanwhile, the graduate school faculty had been discussing ideas for improving the English and spelling of their students. Among the ideas they had discussed was one for requiring a refresher course in grammar and composition and using standardized tests to establish minimums for a student's qualification as a Master's degree candidate. This chain of circumstances prompted the notion that a graduate thesis project could be used for exploring some aspects of the apparent problem. The present thesis explores the effectiveness of certain techniques for improving CWCE graduate students' use of English and spelling.

It is believed possible that English and spelling skills can become latent in much the same way as golfing or bowling skills decline from lack of practice. Another example is the lowered proficiency of a person's ability to use foreign languages as a result of diminished use and practice. The graduate students who had been tested were

mostly public school teachers. Perhaps the subject specialization of these teachers and teachers-to-be had allowed too little practice of grammar and spelling. Another consideration was that public school teachers probably have few occasions where their use of English or spelling is critically reviewed by others. This differs from the environment of most persons in administrative or staff jobs; these persons frequently write reports and letters, their writing being reviewed and edited by their supervisors. Therefore, it seemed possible that these particular graduate students had been unaware of a decline in skills (or gradual encroachment of error) until they entered graduate school. A hypothesis evolved: By providing an atmosphere of criticality, competition, and motivation, a group of these teachers should rapidly recall or build up skills in the use of English and spelling. It was decided that an experiment would be conducted to see if this would happen.

II. THE EXPERIMENT AND ITS RESULTS

At the beginning of the second half of the 1958 summer session, the English usage and spelling portions of the Cooperative English Test were administered to students enrolled in Introduction to Graduate Study (Education 507). Utilizing the basis of matched scores, the Experimental

Group and the Control Group were selected from among these students; there were fifteen members in each group. A statistical comparison was used so that these could be considered as comparable groups for the purpose of the experiment. Members of the Experimental Group were aware of their participation; members of the Control Group were not. As indicated in the previous paragraph, an atmosphere of motivation was created for use with the Experimental Group.

An average of twelve motivating experiences were accomplished by each member of the Experimental Group. During the period of the experiment four questionnaires were accomplished by each Experimental Group member (note appendices). These questionnaires, introduced to stimulate desire for improving, included some basic fundamentals of English usage and spelling. All of the quizzes were graded and the grades were published. Individual group members could recognize their own grades by a code numbering device. These scores were not considered pertinent to the objective of this experiment but were talked about and published as a motivating device. In many discussions with the Experimental Group members it seemed evident that these scores did provide motivation as the members were concerned about these when comparing them with scores of other individuals. Group members often consulted with the investigator during their free time. Almost always, the subject

was steered to word use, art of communication, and similar topics. All but one of the members seemed to enjoy the experiment. After the members had completed a maximum of sixteen exercises, they were examined by an alternate form of the Cooperative English Test. Shortly after this they were provided with an analysis of their improvement as revealed by this examination. The same day members of the Control Group were re-examined by an alternate form of the Cooperative English Test and learned for the first time that they were involved in an experiment.

Tables I and II, page 14 and 16 respectively, summarize the results of the experiment. Appendix A and B reveal in greater detail the methods of obtaining the results. In substance the results were as follows: both the Experimental Group and the Control Group made a statistically significant gain in their test scores for English usage.

On the other hand, the results of the spelling scores revealed that while no gain was made by the Control Group, the Experimental Group made a significant gain. It was then necessary to conclude that the special motivating experiences could not be given credit for improvement in the use of English demonstrated by the Experimental Group. It is believed, however, that the environment created during the course, Introduction to Graduate Study, must have been equally stimulating to the desire of both groups for

improving their ability to express themselves in writing. This view is supported by personal observations made during these classes. These students were being constantly reminded of the need for better expression, particularly writing, as the course was directed toward helping them select a thesis subject or a term paper subject as well as stressing the precision and quality that would be required. On the other hand, no particular stress on spelling was apparent. Perhaps the students planned to utilize their advisors or their typists to assist in this area; or perhaps they just were not concerned about spelling. At any rate the Experimental Group produced a statistically significant gain in their spelling scores. It was concluded that the experimental environment was responsible for this gain.

III. CONSIDERATIONS AND RECOMMENDATIONS

As stated previously, both the Experimental Group and the Control Group improved to an almost equal degree their ability for using English. This fact suggests that the graduate school experiences of these students encourage their recall of earlier-learned fundamentals of grammar and speech. No doubt the fact that they were required to write various compositions, including a thesis or a term paper proposal, placed stress on good writing and encouraged

their improving. Is it not a fact that when a person is performing under a critical eye, he will not only try to improve but will? On the other hand, the spelling results of the two groups were quite different. The Experimental Group was encouraged strongly to improve spelling and was told that it was important. Personal observations of graduate classes, including Education 507, did not reveal that stress was placed upon spelling. It is true that spelling errors were corrected when evident in a student's composition, but it was not talked about much in class nor among the students. It is possible, too, that whoever typed these compositions may have been of some assistance to the author in detecting and correcting spelling errors. At any rate the differences between the two groups were significant indeed.

Results of the experiment suggest that the English Cooperative Test should be administered after, as well as before, a graduate student's completion of Introduction to Graduate Study. It appears possible that a quarter of graduate attendance, and particularly attendance in Education 507, stirs the student toward recall of latent talents for the use of English. It is recommended that this portion of the test be given both before and after one quarter of graduate school, or after Education 507 has been completed.

Results of the experiment suggest that the first quarter of graduate study may not stimulate a particular desire for improving spelling ability. Marked improvement was shown by the Experimental Group and none by the Control Group. By the same token, Cooperative English Test scores were revealed to the students during their first week of attendance; thus the poor performers were aware of their lack of proficiency. On the other hand, spelling is probably a less complex skill and could be improved faster if the effort were made. This probability is borne out by the results of the experiment. It is recommended that several quizzes be introduced into Introduction to Graduate Study (Education 507) and that those teaching other graduate subjects establish a critical atmosphere concerning spelling performance.

Thirdly, it is recommended that the use of reading quiz exercises be considered for further study and experiment as possible English usage, vocabulary, and spelling aids. Pre-testing and post-testing of all graduate students would make an assemblage of additional data available to guide such studies.

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APPENDIX A

EXAMPLE FOR COMPUTING A t-TEST TO DETERMINE IF A
SIGNIFICANT DIFFERENCE EXISTS BETWEEN THE MEAN
RAW SCORES OF TWO UNRELATED GROUPS (4)³

Experimental Group (15 subjects)	Control Group (15 subjects)
Number (N_1) = 15	$N_2 = 15$
Mean (M_1) = 45.60	$M_2 = 45.40$
Standard Deviation (SD_1) = 6.31	$SD_2 = 7.22$
$SE_{M_1} = \frac{SD_1}{\sqrt{N_1-1}} = \frac{6.31}{3.74} = 1.14$	$SE_{M_2} = \frac{SD_2}{\sqrt{N_2-1}} = \frac{7.22}{3.74} = 1.23$
$SE_{Diff} = \sqrt{SE_{M_1}^2 + SE_{M_2}^2} = \sqrt{1.30 + 1.52}$	$= \sqrt{(1.14)^2 + (1.23)^2}$
$= 1.68$	$= 1.68$
$t = \frac{M_1 - M_2}{SE_{Diff}} = \frac{45.60 - 45.40}{1.68} = .12$	$= \frac{.20}{1.68} = .12$

³Data in this example consist of Experimental and Control Group mean raw scores from the English Usage Test.

APPENDIX B

EXAMPLE FOR COMPUTING A *t*-TEST BY THE DIRECT DIFFERENCE
METHOD USING INDIVIDUAL SUBJECTS, PRE-TEST AND
POST-TEST RAW SCORE DIFFERENCES (4)⁴

Subject	Pre-Test score	Post-Test score	Difference (D)	(Difference) ² (D) ²
1	62	64	2	4
2	52	55	3	9
3	49	52	3	9
4	49	49	0	0
5	47	54	7	49
6	46	52	6	36
7	46	49	3	9
8	46	48	2	4
9	45	48	3	9
10	43	46	3	9
11	42	46	4	16
12	42	35	-7	49
13	41	60	19	361
14	40	43	3	9
15	34	45	11	121

Number = 15 $M_1 = 45.6$ $M_2 = 49.73$ SumD (+) = 69 SumD² = 694
(Mean)

SumD (-) = -7

SumD = 62 $M_D = \frac{62}{15} = 4.13$

(1) $SE_D = \frac{\text{SumD}^2 - (N_D)^2}{N}$

(4) $SE_{M_D} = \frac{SD_D}{\sqrt{N-1}}$

(2) $SE_D = \frac{694 - (4.13)^2}{15}$

(5) $SE_{M_D} = \frac{5.4}{\sqrt{14}}$

(3) $SE_D = 5.4$

(6) $SE_{M_D} = 1.44$

(7) $t = \frac{4.13}{1.44} = 2.87$

⁴Experimental Group test scores used for this example.

APPENDIX C

Distribution of Percentile Scores of
C.W.C.E. Graduate Students Tested During Period
Summer 1957 through Autumn 1958

	<u>Cooperative English Test</u>		American Council
	I. Usage	II. Spelling	Psychological Examination
90 - 99	25	43	30
80 - 89	16	11	23
70 - 79	12	10	18
60 - 69	19	16	10
50 - 59	17	15	10
40 - 49	22	46	14
30 - 39	16	35	7
20 - 29	45	21	7
10 - 19	46	25	11
0 - 9	48	38	6
N	266	260	136
Median	28.67	42.39	71.67
Q ₃	62.90	69.39	88.26
Q ₁	14.02	20.95	42.14
Per cent below 20 Percentile	35.3	24.2	12.5

REPORT OF ENGLISH TESTING OF GRADUATE STUDENTS

Summer Quarter 1957

I. INTRODUCTION

During the summer quarter 1957 the Graduate Study Committee decided to inaugurate an experimental testing program for graduate students then enrolled at Central Washington College of Education. The feeling was expressed by committee members that the ability of graduate students to employ good English usage was an important criterion for determining their qualification for the Master of Education degree. This led immediately to the question of how able were C.W.C.E. graduate students in the fields of English usage and Spelling. It was decided to select a reputable test and to administer this test to a group of candidates for the Master of Education degree who were completing their work in the summer quarter 1957. It was later decided to also administer the test to all sections in Education 507, Introduction to Graduate Study.

The Cooperative English Test, Forms OM and PM, was selected for use in this experimental program; however, it was decided to omit the section of the test dealing with Vocabulary (Section III). The total test time was fifty minutes. It was also decided to use senior college norms for American teacher's colleges. The test was administered

to graduate student groups on August sixth and seventh. The total number of graduate students taking the test was 117, thirty-nine of whom were students completing the Master of Education degree requirements that summer.

II. ANALYSIS OF TEST RESULTS

Tables I and II on pages 43 and 44 show the distribution of percentile scores for all graduate student sections and for the entire group in English Usage and Spelling. Median percentile ranks in English Usage for the various groups ranged from 24 in one group taking Education 507, Introduction to Graduate Study, to 42 in another class group. The 1957 Master of Education graduates had a median percentile score of 38. Since the median percentile score should have been 50 - the norm for senior college students in American teacher's colleges - it is at once apparent that C.W.C.E. graduate students in the summer quarter of 1957 are not outstanding in test performance in English Usage. In fact, the groups tested are quite low in median scores. This is also indicated by the fact that 58 out of 117 (49.6 per cent of the entire group tested) scored below the 30th percentile.

Of the groups tested the graduating M.E. candidates placed second, the median for two class groups being below the median for the M.E. graduates, while the median for one

class group was above the M.E. graduate median. In all class sections, however, the proportion of English Usage scores below the 30th percentile is high (38.5 per cent to 60.0 per cent).

Scores in Spelling (Part II of the Cooperative English Test) average higher for all groups tested. The median percentile score for all groups was 43 while the range of group medians was from 40 to 45 (see Table III, page 45). Since a norm of 50 was to be expected it was apparent that graduate student performance on the Spelling section is somewhat below normal. Extremely low scores, however, are not so frequent as was the case in the test performance of graduate students in English Usage.

III. FURTHER ANALYSIS OF THE ABILITY OF MASTER OF EDUCATION CANDIDATES IN ENGLISH

Because the Graduate Study Committee members were also interested in the validity of the Cooperative English Test, it was decided to request the advisers of Master's candidates to rate their students on a nine-point scale for both English Usage and Spelling. A copy of the form developed and used is contained in this report (see Appendix). Thirty-five rating forms were filled out and returned. An examination of these ratings reveals that no ratings below 3 on the scale were submitted and only three

ratings below 5 were recorded. This means that ratings were actually distributed over a 7 point range and not over a 9 point range as planned for. Twenty of the thirty-five ratings (57.1 per cent) were in the top three categories.

Table III, page 45 presents a scattergram of English Usage test scores and adviser ratings in English Usage for the M.E. candidates. A significant positive correlation is noted; in fact, the coefficient of correlation proved to be $0.47 \pm .15$ which compares favorably with the usually obtained correlation coefficients for intelligence test achievement measure computation. However, some notable exceptions to the expected correlation are indicated.

For example, five of the 24 ratings of 6 or higher (i.e. above average on the scale) were for M.E. candidates who scored below the 30th percentile on the English Usage section of the Cooperative English Test. Likewise, nine of the 24 ratings of 6 or higher were for students scoring below the 40th percentile. This constitutes 37.5 per cent of the group so rated - a sizable proportion!

It must be concluded that adviser ratings do not always square with objective test results in a test of English Usage. Doubtless some of the discrepancy may be due to adviser subjectivity in rating but this hardly explains away all of the discrepancy. Some degree of test unreliability and/or lack of validity is probably also present.

Table IV on page 46 presents a similar scattergram of Spelling test scores and adviser ratings. In this case a greater degree of correlation is evident; the coefficient of correlation proves to be $0.62 \pm .11$ which is remarkably good. Doubtless "spelling ability" is more readily apparent and ratings tend, therefore, to square with the test scores.

IV. RECOMMENDATIONS

The summer (1957) experiment was interesting and worthwhile and it is apparent that much useful data were obtained. However, it is to be regretted that the decision to initiate the experiment was made so late in the quarter and that haste was necessary. Errors in the administration of the program were, therefore, inevitable. Even so, the testing program yielded some valuable data.

Some recommendations and suggestions may be in order. The first recommendation is that the program of English testing of graduate students be continued. Perhaps the experimental phase should be extended for another year without prejudice as to eventual graduate school policy. In any event it is recommended that the Cooperative English Test be given in all Ed. 507 (Introduction to Graduate Study) classes; this could be - and should be - a definite requirement.

However, it is also important to agree on the use of test results. For the present further analysis of test results is needed. It is important to utilize other measures (e.g. ratings) as well in order to establish clear-cut proof of test validity. Assuming, however, that the low scores on the test are significant it is recommended that the test results be used as a basis for the guidance of graduate students. Students scoring below the 20th percentile on the English Usage section may well be required to take additional course work in English Composition and appropriate course offerings in this field should be made available. In any event all graduate students scoring below the 40th percentile norm should be asked to take the test again. This may mean that a test score "floor" would eventually be set; at present it would be sufficient to suggest the criterion of "significant improvement in English Usage" as a basic requirement for admission to graduate study.

A final suggestion constitutes a word of caution. It is strongly recommended that English test scores not be used as a sole basis for admission to (or exclusion from) graduate study. More research is needed at present and enticing shortcuts should be avoided, at least until more interpretative data is at hand to justify sound conclusions. The guidance process should allow for as much data

gathering as possible and for a deliberate procedure in formulating judgments; rubber stamp methods should be avoided.

TABLE I

DISTRIBUTION OF PERCENTILE SCORES ON THE ENGLISH USAGE
SECTION OF THE COOPERATIVE ENGLISH TEST MADE BY
GRADUATE STUDENTS AT CENTRAL WASHINGTON COLLEGE OF EDUCATION
Summer Quarter 1957

Percentiles	Ed. 507 Class Sections			1957 M.E. Graduates	All Groups	1958 Spring Usage Spelling	
	(1)	(2)	(3)				
95 - 99		2	1	3	6	0	1
90 - 94	3		1	2	6		
80 - 89	2	1		2	5	2	0
70 - 79	2		1	1	4	1	1
60 - 69	2	2		4	8	1	0
50 - 59	3	1	1	2	7	1	3
40 - 49	3	3	4	5	15	1	1
30 - 39		1	2	5	8	1	3
20 - 29	3	4	6	7	20	2	1
10 - 19	7	4	2	4	17	4	4
5 - 9	2	3	2	3	10		
0 - 4	<u>2</u>	<u>4</u>	<u>4</u>	<u>1</u>	<u>11</u>	<u>3</u>	<u>2</u>
N	29	25	24	39	117	16	16
Median Percentile	41.67 (42)	23.75 (24)	26.67 (27)	38.00 (38)	30.63 (31)	25	33

TABLE II

DISTRIBUTION OF PERCENTILE SCORES ON THE SPELLING
SECTION OF THE COOPERATIVE ENGLISH TEST MADE BY
GRADUATE STUDENTS AT CENTRAL WASHINGTON COLLEGE OF EDUCATION
Summer Quarter 1957

Percentiles	Ed. 507 Class Sections			1957 M.E. Graduates	All Groups
	(1)	(2)	(3)		
95 - 99	3	3	3	6	15
90 - 94		1	1	1	2
80 - 89	2				2
70 - 79	1		1	2	4
60 - 69	3	3		1	7
50 - 59	2		2	1	5
40 - 49	6	6	4	12	28
30 - 39	1	5	4	3	13
20 - 29	5	4	2	3	14
10 - 19	2		1	2	5
5 - 9	3		1	1	5
0 - 4	<u>1</u>	<u>1</u>	<u>3</u>	<u>2</u>	<u>7</u>
N	29	22	22	34	107
Median Percentile	44.17 (44)	41.67 (42)	40.00 (40)	45.00 (45)	43.39 (43)

TABLE III
 SCATTERGRAM OF ENGLISH USAGE SCORES AND ADVISER RATINGS
 FOR
 GRADUATE GROUP RECEIVING MASTER OF EDUCATION DEGREE
 Summer Quarter 1957

Ratings on English Usage

		1	2	3	4	5	6	7	8	9	N
Percentile Scores in English Usage Cooperative English Test	90 - 99						1	2	1	1	5
	80 - 89							1		1	2
	70 - 79								1		1
	60 - 69							3		1	4
	50 - 59				1	1					2
	40 - 49					1	1		1	1	4
	30 - 39					1		1	3		5
	20 - 29				1	2	2	1			6
	10 - 19					2		1			3
	0 - 9			1		1			1		3
	N			1	2	8	4	9	7	4	35

TABLE IV
 SCATTERGRAM OF SPELLING SCORES AND ADVISER RATINGS
 FOR
 GRADUATE GROUP RECEIVING MASTER OF EDUCATION DEGREE
 Summer Quarter 1957

Ratings in Spelling

		1	2	3	4	5	6	7	8	9	N
Percentile Scores on Part II. Spelling Cooperative English Test	90 - 99							1	4	2	7
	80 - 89							1	1	3	5
	70 - 79									1	1
	60 - 69									1	1
	50 - 59					1					1
	40 - 49					3	1	1	2	2	9
	30 - 39					1		1	1		3
	20 - 29					1	1		1		3
	10 - 19					2					2
	0 - 9				2	1					
N					2	9	2	4	9	9	35

APPENDIX

The Graduate Study Committee is trying to establish data on the compositional skills of graduate students in order to provide more effective guidance.

Would you please rate the student whose name appears on the rating blank below on the quality of work done in the process of writing the term paper or thesis under your direction this summer. Please rate both English Usage and Spelling by placing a check at the appropriate point on the scale.

Please return these rating blanks to my mailbox or to the Personnel Office by _____.

E. E. Samuelson
Dean of Students

Name of Graduate Student _____

Adviser's Name _____

English

Poor					Average					Excellent
	1	2	3	4	5	6	7	8	9	

Spelling

Poor					Average					Excellent
	1	2	3	4	5	6	7	8	9	

APPENDIX D

A LISTING AND AN EXAMPLE OF THE
READING QUIZ EXERCISES

Sixteen different reading quiz exercises were utilized in the experiment (1).⁵ They were:

1. "The Romance of Words" by Wilfred Funk and Norman Lewis,
2. "Vocabulary and Success" by Johnson O'Connor,
3. "Teaching of Listening" by Ralph G. Nichols,
4. "Be a Perfect Speller in 30 Minutes" by Norman Lewis,
5. "How Words Crash the Dictionary" by Paula Philips,
6. "Simple Secrets of Public Speaking" by Dale Carnegie,
7. "Talking Down and Reading Up" by Rudolf Flesch,
8. "Language Differences" by Charles C. Fries,
9. "A Master-Word Approach to Vocabulary" by James I. Brown,
10. "Fun with the Dictionary" by Gelett Burgess,
11. "What is Good English" by Albert H. Marckwardt,
12. "How to Read a Dictionary" by Mortimer J. Adler,
13. "Why Study English?" reprinted by permission of the General Electric Company,
14. "Percy's Vocabulary Lesson" by Hiram Percy Maxim,

⁵All of these articles were used from Efficient Reading (Boston: D. C. Heath and Company, 1952), regular edition and alternate edition workbooks by James I. Brown, University of Minnesota.

15. "Vocabulary First-Aid" by Paul Witty,
16. "Sentences Come First" by Rudolf Flesch,
17. "Test Your Vocabulary" reprinted by permission from
"Changing Times," the Kiplinger Magazine, November,
1954,
18. "The Words They Didn't Know" by W. P. Kirkwood.

THE ROMANCE OF WORDS⁶

Wilfred Funk and Norman Lewis

From now on we want you to look at words intently, to be inordinately curious about them and to examine them syllable by syllable, letter by letter. They are your tools of understanding and self-expression. Collect them. Keep them in condition. Learn how to handle them. Develop a fastidious, but not a fussy, choice. Work always towards good taste in their use. Train your ear for their harmonies.

We urge you not to take words for granted just because they have been part of your daily speech since childhood. You must examine them. Turn them over and over, and see the seal and superscription on each one, as though you were handling a coin. We would like you actually to fall in love with words.

Words, as you know, are not dead things. They are fairly wriggling with life. They are the exciting and mysterious tokens of our thoughts, and like human beings, they are born, come to maturity, grow old and die, and sometimes they are even re-born in a new age. A word, from its birth to its death, is a process, not a static thing.

Words, like living trees, have roots, branches and leaves.

Shall we stay with this analogy for a few moments, and see how perfect it is?

The story of the root of a word is the story of its origin. The study of origins is called etymology, which in turn has its roots in the Greek word etymon meaning "true" and the Greek ending--logia meaning "knowledge." So etymology means the true knowledge of words.

Every word in our language is a frozen metaphor, a frozen picture. It is this poetry behind words that gives language its overwhelming power. And the more intimately

⁶Reprinted from 30 DAYS TO A MORE POWERFUL VOCABULARY, by Wilfred Funk, and Norman Lewis, by permission of the publishers, Wilfred Funk, Inc., New York, 1956.

we know the romance that lies within each word, the better understanding we will have of its meaning.

For instance, on certain occasions you will probably say that you have "calculated" the cost of something or other. What does this term "calculate" really mean? Here is the story. Years ago, ancient Romans had an instrument called a hodometer, or "road measurer," which corresponds to our modern taximeter. If you had hired a two-wheeled Roman vehicle to ride, say, to the Forum, you might have found in the back a tin can with a revolving cover that held a quantity of pebbles. This can was so contrived that each time the wheel turned the metal cover also revolved and a pebble dropped through a hole into the receptacle below. At the end of your trip you counted the pebbles and calculated your bill. You see the Latin word for pebble was calculus, and that's where our word "calculate" comes from.

There are, of course, many words with much simpler histories than this. When you speak of a "surplus," for instance, you are merely saying that you have a sur (French for "over") plus (French for "more") or a sur-plus. That is, you have an "over-more" than you need.

Should you be in a snooty mood for the nonce, and happen to look at someone rather haughtily, your friends might call you supercilious, a word which comes from the Latin supercilium, meaning that "eyebrow" you just raised. That person you are so fond of, who has become your companion,--(cum (Latin for "with") and panis (Latin for "bread"))--is simply one who eats bread with you. That's all. Again, "trumps" in bridge is from the French "trionphe" or triumph, an old-time game of cards. In modern cards one suit is allowed to triumph over, or to "trump" the other suits. And still again, in the army, the lieutenant is literally one who takes the place of the captain when the latter is not around. From the French lieu (we use it in "in lieu of") and tenir, "to hold." The captain, in turn, derives from the Latin word caput (head); colonel comes from columna (the "column" that he leads).

If, by any chance, you would like to twit your friend, the Wall Street broker, just tell him that his professional title came from the Middle English word brocour, a broacher, or one who opens, or broaches, a cask to draw off the wine or liquor. We still employ the same word in the original sense when we say "he broached (or opened up) the subject." Finally the broacher, or broker, became a

salesman of wine. Then of other things, such as stocks and bonds.

These are the roots of words. We next come to the branches. The branches of our language tree are those many groups of words that have grown out from one original root.

Let's take an example. The Latin term spectare which means "to see" contains the root spec, and from this one root have sprouted more than 240 English words. We find the root hidden in such words as spectacles, those things you "see" through; in respect, the tribute you give to a person you care to "see" again; inspect, "to see" into; disrespect (dis--unwilling; re--again; spec--to see) therefore, when you treat someone with disrespect, you make it plain that you do not care to see him again; introspection, looking or seeing within; spectator, one who "sees" or watches.

Turning to the Greek language, which has so largely enriched our own, we discover the root appearing in English as graph. This means "to write" and has been a prolific source of words for us. We have telegraph, which literally means "far writing"; phonograph, "sound-writing"; photograph, "light-writing"; stenographer, one who "does condensed writing"; a graphic description, one that is just as clear and effective as though it had been written down; mimeograph, "to write a copy or imitation."

We have in our language a host of roots such as these. There is the Latin spirare, meaning "to blow or breathe," from which we get such English words as inspire (breathe into); expire (breathe out); perspire (breathe through); respiration (breathing again or often). And there is also our word "liable" that comes from the Latin ligare, "to bind." This fascinating root lig has branched out into oblige and obligate (to bind to do something); and, with the root no longer so obvious, "league" (those nations or other organizations that are bound together); and even the word "ally" which is from ad and ligare, to bind to one another.

These, then, are the branches. We turn now to the leaves. If the roots are the origins of words and the branches are the word families that stem out of them, the leaves of this language tree would be the words themselves and their meanings.

Each given word, in its beginning, had, no doubt, only one meaning. But words are so full of life that they are continually sprouting the green shoots of new meanings.

Shall we choose just one word as an instance of the amazing vitality of language? The simple three letter word run, up to this moment of writing, has more than 90 dictionary definitions. There is the run in your stocking and the run on the bank and a run in baseball. The clock may run down but you run up a bill. Colors run. You may run a race or run a business or you may have the run of the mill, or quite different, the run of the house when you get the run of things. And this little dynamic word, we can assure you, is not yet through with its varied career.

Is it any wonder that our unabridged dictionaries contain as many as 600,000 living and usable words, words sparkling with life, prolific in their breeding, luxuriant in their growth, continually shifting and changing in their meanings?

Words even have definite personalities and characters. They can be sweet, sour, discordant, musical. They can be sweet or acrid; soft or sharp; hostile or friendly.

From this time on, as we enter our word studies, try to become self-conscious about words. Look at them, if possible, with the fresh eyes of one who is seeing them for the first time. If we have persuaded you to do this, you will then be on the way to the success that can be won with a more powerful vocabulary (3).

COMPREHENSION CHECK QUESTIONS

(Questions are of two types--"multiple--choice" and "true-false." Answer with a number, indicating the correct choice, or with T. or F.)

1. Words are specifically likened to
(1) families; (2) trees; (3) personalities;
(4) seeds. 1. _____
2. "Calculate" comes from a Latin word mean-
ing (1) "cover"; (2) "hodometer";
(3) "vehicle"; (4) "pebble." 2. _____
3. From the Latin verb spectare have come
English words to the number of about
(1) 60; (2) 180; (3) 240; (4) 310. 3. _____
4. The word companion means literally one
who (1) eats bread with you; (2) farms
with you; (3) drinks with you; (4) walks
with you. 4. _____
5. Of living and usable words, our unabridged
dictionaries contain about (1) 300,000;
(2) 600,000; (3) 900,000; (4) 1,200,000. 5. _____
6. Specific mention was made of the Greek
word appearing in English as (1) ology;
(2) graph; (3) philos; (4) phobia. 6. _____

Receptive Comprehension

7. The purpose of this selection is to demon-
strate (1) the importance of dictionary
study; (2) the fascination of words; (3)
the interesting role of Latin and Greek in
our language; (4) the close relationship
between vocabulary and success. 7. _____
8. The one word which perhaps best illus-
trates the amazing vitality of language is
the word (1) supercilious; (2) inspect;
(3) inspire; (4) run. 8. _____

9. The authors emphasize (1) using the dictionary daily; (2) looking at words analytically; (3) falling in love with words; (4) studying classical elements. 9. _____
10. The discussion of the Latin verbs spectare and spirare was intended to suggest the importance (1) of roots; (2) of definitions; (3) of literal meanings; (4) of Latin. 10. _____
11. The authors imply that understanding words means knowing dictionary definitions. 11. _____
12. You would conclude from this selection that vocabulary time should be spent in the study of unknown words(1). 12. _____
- (8 off for each mistake) Reflective Comprehension _____
- Total Comprehension Score _____

APPENDIX E

EXPERIMENTAL GROUP QUESTIONNAIRES

The following are four questionnaires which were utilized with the Experimental Group. In addition to being questionnaires these letters were devised to service as "stimulators and reminders" of the need for better expression and spelling.

C
O
P
Y

CENTRAL WASHINGTON COLLEGE OF EDUCATION
Ellensburg, Washington

June 30, 1958

Dear Fellow Graduate Student:

Your willingness to participate in an experiment for improving English usage and spelling is appreciated. There needs to be two periods each week, the periods averaging 30 minutes in length. No outside work or preparation is required.

All materials necessary will be provided at these meetings. Please regard these meetings as "coffee call" -- coffee, tea and doughnuts will be provided.

I sincerely believe you will enjoy this experiment, and that the experiences will be valuable for both of us. Your participation is of urgent necessity and your cooperation will be appreciated. Sooner or later, you will be faced with this same need when you perform your own research for your Master's.

Below is a blank schedule. Please indicate your first, second and third choices for two meetings each week -- beginning the second week in July and through August 14th.

Use the numerals 1, 2 and 3 for both of these choices (note example). Please return this letter to Dr. Samuelson. Thank you.

PERIOD	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
3rd	1		1		
4th					
5th	2		2		
6th	3			3	
7th					
8th					

June 30, 1958
Page 2

NOTE: Please circle the best period next week for an initial meeting so that I may explain the problem and the nature of the experiment.

REMARKS:

Robert H. Benesh

C
O
P
Y

CENTRAL WASHINGTON COLLEGE OF EDUCATION
Ellensburg, Washington

July 2, 1958

Dear

Thank you for your response concerning an experiment for improving English usage and spelling. My attempt to establish meetings for your group results in the following schedule: (Meetings will be conducted in the AFROTC building - telephone number WO 27027).

MEETING NUMBER	DATE	DAY	TIME
1	Jul 10	Thursday	8:40-9:15 A.M.
2	Jul 10	Thursday	1:20-2:00 P.M.
3	Jul 15	Tuesday	8:40-9:15 A.M.
4	Jul 17	Thursday	1:20-2:00 P.M.
5	Jul 22	Tuesday	8:40-9:15 A.M.
6	Jul 24	Thursday	1:20-2:00 P.M.
7	Jul 31	Thursday	8:40-9:15 A.M.
8	Jul 31	Thursday	1:20-2:00 P.M.
9	Aug 7	Thursday	8:40-9:15 A.M.
10	Aug 7	Thursday	1:20-2:00 P.M.
11	Aug 12	Tuesday	8:40-9:15 A.M. (makeup period)

At this point, you are due an explanation concerning the experiment. To minimize the explaining needed at our first meeting (July 10th) I shall summarize my project in this letter. Before I do this, I shall introduce myself to you.

My job here is Professor of Air Science, which entails the accomplishing of this college's Air Force ROTC program. My superiors (and the college) permit my part time accomplishment of college courses -- hence the work for a Master's in Education. My objective is educational assignments in the Air Force and for teaching after retirement.

Dr. Samuelson, my graduate advisor, guided me to a thesis project during last Spring in his class - Education 507. The Problem: How to Improve CWCE Graduate Students' English Usage and Spelling.

July 2, 1958
Page 2

Why this Problem? This stemmed from hearing a great deal of comment concerning the communicating ability of CWCE students, at all class levels. Next, it was heard that some aptitude and knowledge minimums might be in order for candidates for the Master's in Education. Lastly, a review of Cooperative English Examination (CEE) scores from CWCE graduates' records revealed low medians for all groups. Why is this so, and can anything be done, to improve skills at graduate levels.

What can be done? In my opinion (and others') the CEE scores may lead to false assumptions. I believe the skills for English usage and spelling are latent among many of our graduate students. Has the lack of stressing these skills by the individual and his organization allowed "rust to accumulate on the steel"? An experiment might reveal if this is so. Results of the experiment might influence college decisions concerning graduate students' qualifications for a Master's Degree and whether or not "therapeutic" courses in English are practical at graduate level. Or, results of the experiment might lead elsewhere - or nowhere.

The Experiment: Three separate groups seem necessary.

1. Compare CEE scores for 15 completed graduate students. (First tested at the beginning of their graduate program, a second test given after thesis or Plan II paper is complete). We will get an indication of how much English usage and spelling skills improve from graduate school experiences.
2. A control group, each individual matched with an experimental group contemporary, has been selected. These persons will be reexamined at the end of this Summer Session by means of the CEE. These individuals are unaware of their participation.
3. An experimental group: By exposing you, as well as the other members of your group, to a series of motivating experiences, you may consciously or otherwise place stress upon your English usage and spelling. If this is what it takes to clear some rust from your steel, your retake of the CEE will reveal this. This we shall find out the middle of August.

July 2, 1958
Page 3

In conclusion, we shall meet Thursday, July 10, at 8:40 A.M. At that time, you will become acquainted with the machinery of the experiment.

Your cooperation will be welcome (and is necessary) as will be any suggestions you may wish to offer.

Sincerely,

ROBERT H. BENESH

CENTRAL WASHINGTON COLLEGE OF EDUCATION
Ellensburg, Washington

22 July 1958

Dear Fellow Student:

By now, you have accomplished some of the experimental activities related to my research. A difficulty is the lack of day-to-day contacts between us. The need exists to keep alive your interest for improving. The best way I can do this is by contacting you frequently and with a questioning attitude - "Are you constantly thinking of your English usage and spelling?" "When you read, do you seek out the vital areas and stress these?" "Are you thinking before you write or speak and making adjustments?"

There are sixteen read-test folders with which you are now familiar. The goal for each of you is a minimum of ten -- more if your time will permit it. In many cases, two can be completed during one period. Also, you may come in individually, where schedule conflicts arise.

Please try to think of these exercises during your other communicating, listening, and reading activities. The more you think about English usage and spelling, the more the opportunity for recall is afforded. When you're writing or speaking, play a game of rephrasing your expressions. When you do this, think of some of the different ways a statement can be phrased -- all grammatically correct. Use complex and compound sentences for practice; i.e., "Having thought of nothing else to cover, the teacher gave his students a 'pop-quiz' " or, "The teacher thought of nothing else to cover and gave his students a 'pop-quiz.'" By using subordinate clauses ("Having thought of nothing else to cover") with main clauses ("The teacher gave . . ."), you can sharpen your thinking and your style.

The attachment is a questionnaire. Please fill it in and return it to me at our next meeting. I need this material to guide our progress with the experiment.

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Thank you again for your helpful cooperation.

Sincerely,

ROBERT H. BENESH

Please consider each question carefully. You need only to write an answer for the last question. The last question asks if you have fully considered each item and answered each, in your own mind. Please do this, as these items are very necessary motivating elements for my experiment. Please forgive my reference to all of you as teachers. If you are not a teacher, rephrase the question around your personal profession.

1. Do you, as a teacher, feel that your speech and writing characteristics "rub off" on your students? Are you an example to them, in respect to grammar?
2. What are the principal parts of speech?
3. What is a conjunction -- a preposition -- a verbal?
4. What is a complex sentence? A main clause? A subordinate clause?
5. Regardless of your teaching specialties, do you feel an obligation for coaching your students concerning their grammar, speech, and spelling?
6. Do you know of anyone, except the English teacher, who is qualified and is guiding the grammar, speech, and spelling of each of your students? Is it possible that the English teacher is the only one in the great majority of cases?
7. By the same token, is there any person or agency that criticizes your grammar and spelling? Do you wish, sometimes, that someone would do this?
8. And one step further; if your English usage and spelling are not being critically appraised by others, do you provide this appraisal for yourself?
9. What is the difference between the adjective and the adverb? Is the sentence, "Drive slow," grammatically correct?
10. What is a "dangling participle"? A "dangling gerund phrase"?

Example: Riding through the park, a statue of a horse was seen. (dangling participle)

Better: Riding through the park, we saw a statue of a horse.

(dangling gerund) Scratching for fleas, I was eyed suspiciously by the monkey. (I would look suspicious!)

11. There are four main kinds of words -- four main kinds of work that words do. Words assert, name, modify, or connect. The verbs assert. What parts of speech name, modify or connect? (Verb, noun, pronoun, adjective, adverb, preposition, conjunction, interjection)
12. When should "summer" "spring" or "fall" be capitalized? What about "north", "west", "college" and "president"?
13. One of the most important rules pertaining to the use of commas is, "never separate 'inseparables' ". They must not separate (1) subject-verb, (2) verb-object, (3) adjective-noun. Two commas may, of course, interrupt such elements, but never one separative comma. If this is so, are the commas in the following sentences used properly: (1) That he is honest can not be doubted. (2) The clerk wore a low, coarse, stiff, collar.
(Note: Single commas separate; sets of two commas interrupt. "I am, you know, trying to do my job."
(interrupt))
14. What about quotation marks and the related punctuation? Are there errors in the following example?
"It is time," he said, "to begin work."
"It is time," he said again. "We must go."
Jack's answer was simple. "You are right. I just heard Pete yell, 'Let's go.' "
15. (Please circle your answer to these questions.) Have you carefully reviewed and answered all of these questions? (Yes or No) If you were not sure of the answer, did you check with a reference or an authority? (Yes or no) Do you think the time and effort you are devoting to my research will produce any personal dividend for yourself? (Yes or No)

Please don't be offended by question number 15. I admit that it is a "needler." Thanks for your cooperation. To

promote objectivity, please do not sign this questionnaire.

REMARKS:

Please return the questionnaire to me.

FOUR HUNDRED WORDS OFTEN MISPELLED

absence	annual	breathe	competent	criticism	discipline
accept	answer	buried	competition	crowd	discussed
accidentally	anxious	business	completely	crystal	diseases
accommodates	apparent	busy	compliment	deceive	dissatisfied
accompanied	appearances	cafeteria	comrade	decided	dissipation
accustomed	appetite	candidate	concentration	decision	divided
achieved	approaching	canvas	concern	definite	divine
acquainted	appropriate	capital	confident	definition	division
across	argument	captain	conquer	dependent	doesn't
address	around	carrying	conscientious	descent	don't
advice	aroused	cemetery	conscious	describe	dormitories
adviser	arrangements	certain	consider	description	effect
aerial	arrival	changing	consistent	desert	efficiency
aggravate	ascend	characteristic	continually	desirable	eighth
aisle	association	choice	controlled	despair	eliminated
alley	athletic	choose	convenience	desperate	embarrassed
all right	attendance	chosen	coolly	dessert	emphasized
almost	awful	climbed	copies	determine	environment
already	awkward	clothes	corner	device	equipped
altar	bachelor	coarse	council	didn't	especially
altogether	barren	coming	counsel	different	essential
always	before	committee	countries	dining	etc.
amateur	beginning	common	course	disappeared	exaggerated
among	believed	comparative	courteous	disappointed	excellent
amount	benefited	compel	courtesy	disastrous	exercise

exhausted	guard	interfere	marriage	operate	pleasant
exhilaration	hadn't	interpreted	mathematics	opinion	politics
existence	handle	invitation	meant	opportunity	porch
expense	handsome	irresistible	merely	optimistic	portrayed
experience	height	its	miniature	organization	possess
fascinating	heroes	it's	minutes	original	possible
February	hindrance	knew	mischievous	paid	practically
fiery	hoping	knowledge	misspelled	parallel	prairie
finally	humorous	laboratory	momentous	paralyzed	preceding
financial	hungry	laid	mournful	parliament	preference
forcibly	hurriedly	later	murmur	particular	prejudiced
foreign	hurrying	latter	mysterious	partner	preparations
formerly	hypocrisy	led	naturally	pastime	presence
forth	identity	lightning	necessary	perform	principal
forty	imagination	literally	neither	perhaps	principles
fourth	imitation	literature	nevertheless	permanent	privilege
freshman	immediately	livelihood	nickel	permissible	probably
friend	incidentally	loneliness	niece	perseverance	procedure
fundamental	increase	loose	ninety	persistent	proceeded
generally	independent	lose	noticeable	personally	professional
genius	indispensable	losing	occasion	persuade	professor
government	influential	loyalty	occurred	physically	prominent
grammar	intellectual	lying	occurrence	piece	pronunciation
grandeur	intelligence	magazine	o'clock	plain	propeller
grievance	interested	maintenance	omitted	planning	prophecy

prophesied
proved
psychology
pursuing
quantity

quarter
quiet
quite
really
receded

received
recognize
recommend
referred
relieve

religious
repetition
representative
respectability
restaurant

rhythm
sacrifice
scarcely
scene
schedule

secretary
seems
seize
sense
sentence

sentinel
separate
sergeant
severely
shepherd

shining
shone
shown
siege
similar

sincerely
sophomore
source
speak
specimen

speech
stationery
stopped
strange
strength

stretched
striking
studying
succeed
successful

summer
superintendent
supersede
suppression
surely

surprise
surround
synonym
technical
temperament

tendency
their
those
threw
tired

together
too
toward
tragedy
transferred

tries
truly
twelfth
unconscious
university

unnecessary
until
unusual
usually
valuable

varied
vegetable
vengeance
view
village

villain
Wednesday
weird
whether
whose

woman
wonderful
won't
writing
you're

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CENTRAL WASHINGTON COLLEGE OF EDUCATION
Ellensburg, Washington

August 13, 1958

Dear _____:

Cooperative English Exam:

	<u>English Usage</u>	<u>Spelling</u>
Maximum gain	57 percentile	45 percentile
Minimum gain	-7 percentile	-12 percentile
Your gain	<u> percentile</u>	<u> percentile</u>

Experimental Exercise Results:

Average % score	<u>72.65</u>
Maximum score (average %)	<u>83.90</u>
Minimum score (average %)	<u>61.40</u>
Your score (average %)	<u> </u>
Average "T" score	<u>50</u>
Maximum "T" score (average)	<u>58.54</u>
Minimum "T" score (average)	<u>39.20</u>
Your "T" score (average)	<u> </u>

Thank you again for being a most helpful participant in my experiment. Preliminary results reveal the overall gain of the experimental group was significant. The average

gain in English usage was 9.25 percentile and for spelling was 11.75 percentile.

Yours sincerely,

ROBERT H. BENESH

Please turn this in to Dr. Samuelson (unsigned) on Friday, during your final period in Education 507.

1. Did you gain any "dividend" from your participation in this experiment? (Explain if desired)

2. On the contrary, do you feel that the time you spent provided little or no return for you? (Explain if desired)

3. Do you believe that your interest in improving your English usage and spelling will persist upon your return to your regular work?

4. Do you have any suggestions for "revitalizing" future CWCE graduate students' abilities in the art of communicating?

5. Do you desire to make any other comments concerning the experiment? (Explain if desired)