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THE EVALUATION OF LEADERS' SCHOOL GRADUATES:
RELATIONSHIPS BETWEEN CURRICULAR
ELEMENTS AND INTERIM CRITERIA. FR-41.

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H. B. J. L.

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PR 4105

THE EVALUATION OF LEADERS' SCHOOL GRADUATES:
RELATIONSHIPS BETWEEN CURRICULAR
ELEMENTS AND INTERIM CRITERIA

Foreword:

FRS reports are primarily technical. While conclusions affecting military policy or operations may appear in them, they are not intended as a basis for official action. Findings and conclusions contained in FRS reports are intended to guide the conduct of further research. When research findings suggest recommendations for administrative action, such recommendations are made separately to the appropriate military agency.

18 January 1950
Personnel Research Section
Personnel Research and Procedures Branch, AGO

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THE EVALUATION OF LEADERS' SCHOOL GRADUATES: RELATIONSHIPS
BETWEEN CURRICULAR ELEMENTS AND INTERIM CRITERIA

I. AUTHORITY

Under Disposition Form, File No. WDGPA 352, from D/P and A to TAG, Subject: Potential Leaders' School(s), dated 7 April 1947, the Personnel Research Section was directed to:

A. Prepare, construct, adapt or use existing instruments and write procedures for selection of men with no prior service from the replacement stream of these schools;

B. Prepare rating and grading forms and procedures for the evaluation of students' performance in the Potential Leaders' Course, in coordination with the Army Ground Forces; and,

C. Advise and assist the Army Ground Forces on curriculum content and training methods of the course.

The population for this research program included graduates of the Leaders' Schools which are currently operating at Fort Dix, N. J., Fort Knox, Ky., Fort Ord, Calif., and Fort Jackson, S. C.

II. PURPOSE

The purpose of this study is to determine the relationships between the various curriculum elements of the Leaders' Course and the several evaluation measures obtained during leaders' training. It is anticipated that the results of this study will serve as a guide for further research and a basis for improving methods of evaluation and training in Leaders' Schools.

III. POPULATIONS

The populations of Leaders' School graduates covered in this report are shown in Table I below.

TABLE I
POPULATIONS

Group	School	Classes	N
A	Fort Knox	8 - 13	260
B ₁	Fort Knox	27 - 42	231
C ₁	Fort Ord	9 - 21	259
D ₁	Fort Ord	9 - 29	427
E	Fort Ord	22 - 29	168
F	Fort Ord	30 - 41	202
G	Fort Jackson	23 - 32	103
H	Fort Jackson	33 - 38	100
I	Fort Dix	56 - 66	193

1/ These two overlapping populations are included in this report since they were employed for separate analyses involving different variables.

IV. VARIABLES

The variables in this study are as follows:^{2/}

- a. Leaders Reaction Test (PRT 847, 1005)
- b. Buddy Rating - Student Leadership Evaluation Report (PRT 826, 827, 828, 829)
- c. Faculty Board Rating - Leader's Course Board Rating and Report Form (WD AGO PRT 1621)
- d. Acting NCO Rating
- e. Methods of Instruction
- f. Leadership
- g. Small Job Management
- h. Leading Small Units in Combat
- i. Troop Information and Education
- j. Physical Training

^{2/} For detailed description of the variables in this study, see Appendix I.

- k. Dismounted Drill
- l. Physical Training and Dismounted Drill
- m. Merits
- n. Demerits
- o. Phase I Total
- p. Final Score

Variables a through d inclusive constitute the interim criterion variables. The Leaders Reaction Test and the Buddy Rating were devised by PRS technicians and standard forms were used from school to school. A standard form was also used for variable c, Faculty Board Rating. The form for variable d, Acting NCO Rating, was not standard so that the degree to which the same thing is being measured in different schools is probably more questionable than in the case of the first three interim criterion variables listed.

Phase I Total is a summation of all grades and ratings received during the first three weeks of the course. Hence, it is a composite of all the variables listed above except items c, d, and p. Phase I Total is a variable of differing significance from school to school as each school did not include the same curriculum elements in computing the Phase I Total. However, this variable is based largely on the grades in curriculum elements (items c through l, inclusive).

With respect to the standards and methods used in grading the curriculum elements, there is also considerable variation among the schools.

V. RESULTS AND DISCUSSION

A. Relationships among interim criteria

The intercorrelations among the four interim criteria are shown in Table II below. The capital letter in parentheses following each correlation coefficient indicates the particular population (see Table I, page 2).

TABLE II
INTERCORRELATIONS AMONG INTERIM CRITERIA

	Buddy Rating		Board Rating		Acting NCO Rating	
Leaders	.10(A)	.12(B)	.15(A)	.24(I)	.04(A)	.03(B)
Reaction Test	.29(F)	.13(I)			.10(F)	.03(I)
Buddy			.39(A)	.50(D)	.14(A)	.29(B)
Rating			.40(I)		.10(D)	.21(F)
					.38(G)	.19(I)
Board					.64(A)	.35(C)
Rating					.26(E)	.30(I)

Although the intercorrelations are, in general, rather low, there appears to be a significant relationship between Buddy Rating and Board Rating and Acting NCO Rating. Because of the contamination among the interim criteria due to the availability of Buddy Ratings and Leaders Reaction Test results to Board members, and the possible availability of Board evaluations to those rating the Acting NCO Ratings, it is difficult to make any positive statements regarding the degree of relationship among the criteria. The important point is that the intercorrelations tend to be small in spite of contamination--which would seem to indicate that the criteria are measuring different aspects of NCO leadership ability.

B. The Leaders Reaction Test

The correlations between the Leaders Reaction Test and each of the various curriculum elements are presented in Table III.

TABLE III
CORRELATION COEFFICIENTS OF LEADERS REACTION TEST
WITH CURRICULUM MEASURES

Measure	Group				
	A	B	F	I	M ₂ ^{2/}
o. Phase I Total 1/	.49	.17	.74		.46
p. Final Score 1/	.27	.13	.63	.52	.39
e. Methods of Instruction	.55	.13	-.01	.30	.20
f. Leadership	.22	.12	-.07	.14	.11
g. Small Job Management		.03			.03
h. Leading Small Units in Combat		.15			.15
i. Troop Information and Education	.11				.11
j. Physical Training	.17			.16	.17
k. Dismounted Drill	.13			.24	.21
m. Merits	-.01			-.13	-.05
n. Demerits	-.17			-.01	-.10

1/ Part-Whole Correlations

2/ For an over-all view, the average validity is listed in column headed M₂^{2/} in all the tables that follow. These averages were obtained by weighting each correlation by the number of cases on which it was based and dividing by the total N.

There appears to be no curriculum element derived independently of the Leaders Reaction Test which correlated highly with it. However, considering the type of data, one might point to the r's for the following variables as indicative of relationships which may be worthwhile investigating further:

Ft. Knox (A): Method of Instruction (e)
Leadership (f)

Ft. Dix (I): Method of Instruction (e)
Dismounted Drill (k)

The general low magnitude of the correlations suggest the following possibilities:

1. The Leaders Reaction Test is an unreliable measure--probably because of variability among the raters, or because the composition of the groups which students are assigned to lead during the test is so variable that the raters do not have comparable bases for making ratings.

2. The Leaders Reaction Test measures factors which are not heavily involved in any of the other measures of achievement in the course.

C. The Buddy Rating

The correlations between Buddy Rating and each of the curriculum elements are presented in Table IV below.

TABLE IV
CORRELATION COEFFICIENTS OF BUDDY RATING WITH CURRICULUM MEASURES

Measure	Group							
	A	B	D	F	G	H	I	N ₂
o. Phase I Total 1/	.42	.56	.54	.27				.47
p. Final Score 1/	.44	.70	.50	.55	.33	.71	.24	.50
e. Methods of Instruction	.37	.40	.48	.21	.31	.50	.10	.35
f. Leadership	.32	.49	.40	.18	.40	.40	-.03	.31
g. Small Job Management		.40						.40
h. Leading Small Units in Combat		.35						.35
i. Troop Information and Education	.29				.16	.25		.25
j. Physical Training	.37						.03	.23
k. Dismounted Drill	.36						.11	.25
l. Phys. Tr. and Dis. Drill			.37		.07	.30		.31
m. Merits	.18						.13	.13
n. Demerits	.01				-.13		-.23	-.10
1/ Part-Whole Correlations								

On the whole these correlations are substantially higher than those shown in Table II (page 4). Here again, although the magnitude of the r's obtained against curriculum elements derived independently of the Buddy Rating is not high, one might single out the r's for the following variables as probably of some significance and worthy of further investigation:

VARIABLES	Fort Knox(A) r	Fort Knox(B) r	Fort Ord(D) r	Fort Jackson(G) r	Fort Jackson(H) r
Methods of Instruction (e)	.37	.40	.48	.31	.50
Leadership (f)	.32	.49	.40	.40	.40
Troop Information and Education (i)	.29				
Physical Training (j)	.37				
Dismounted Drill (k)	.36				
Small Job Management (g)		.40			
Leading Small Units in Combat (h)		.35			
Physical Training and Dismounted Drill (l)			.37		.30

From the viewpoint of the type of data, the Buddy Rating may be considered a reasonable interim criteria.

It should be pointed out that "buddy rating" in this study refers specifically to associations and personal contacts occurring in the Leaders' Course. Hence, the value of Buddy Rating as a criterion is lessened by the extent to which it is contaminated by academic ratings. Also the problem of whether training in the curriculum elements is contributing to the development of leadership ability must remain unsolved until controlled before-and-after experiments have been accomplished.

D. The Board Rating

The correlations between Faculty Board Rating and each of the other variables are presented in Table V below.

TABLE V
CORRELATION COEFFICIENTS OF FACULTY BOARD RATING WITH CURRICULUM MEASURES

Measure	Group				M _r
	A	C	E	I	
o. Phase I Total 1/	.56	.70	.78		.60
p. Final Score 1/	.77	.73	.74	.53	.66
e. Methods of Instruction	.55	.53	.65	.23	.43
f. Leadership	.36	.37	.46	.02	.28
i. Troop Information	.22				.22
j. Physical Training	.30			.05	.19
k. Dismounted Drill	.29			.53	.31
l. Physical Tr. and Dis. Drill		.71	.63		.70
n. Merits		.03	.19		.10
n. Demerits	-.13	-.09		-.07	-.12
1/ Part-Whole Correlations					

Correlations here tend to run definitely higher than in Tables II and III (page 4). However, this is undoubtedly due to the fact that members of the Boards use the curricular grades in determining their ratings. It would appear that this practice is more prevalent in groups C and E than in A and I.

E. The Acting NCO Rating

The correlations between Acting NCO Rating and each of the curriculum measures are presented in Table VI below.

TABLE VI
CORRELATION COEFFICIENTS OF ACTING NCO RATING WITH CURRICULUM MEASURES

Measure	Group									M _r
	A	B	C	E	F	G	H	I		
o. Phase I Total	.04	.16	.32	.26	.07					.17
p. Final Score 1/	.73	.43	.54	.19	.55	.82	.71	.28		.55
c. Methods of Instruction	.01	.09	.29	.22	-.04	.01	.49	-.02		.15
f. Leadership	.00	.13	.19	.07	-.03	-.01	.37	-.08		.10
g. Small Job Management		.15								.15
h. Leading Small Units in Combat		.14								.14
i. Troop Information	-.07					.59	.30			.14
j. Physical Training	.10							-.06		.03
k. Dismounted Drill	.07							.10		.09
l. Phys. Tr. and Dis. Drill			.28	.18		.06	.24			.21
m. Merits	-.01		.14					.03		.07
n. Demerits	-.13		.06					-.06	-.04	
3/ Part-whole Correlations										

With very few exceptions, these correlations are of negligible or near-negligible magnitudes. It should also be noted that attempts to predict Acting NCO Rating through the use of the Biographical Information Blank, OCB-2, (see FRS Report 764) 3/ proved unfruitful, while that instrument did show significant validities in predicting Buddy Rating and Final Score. The data presented here and reports from FRS representatives in the field suggest the following comments:

1. The 3-week period of assignment as acting NCO may not be sufficient time for a busy training company commander to make an adequate appraisal of the Leaders' Course Trainee.

2. The practice of assigning students to routine nonleadership jobs probably has acted to distort the ratings given by some of the company commanders.

3/ Item Analysis and Development of Scoring keys for the Leaders' Course Bib (Form OCB-2; WD AGO FRT-735), FRS Report 764, The Adjutant General's Office, Personnel Research Section.

3. It may be well to extend the period of assignment during this second phase of the Leaders' Course or to supplant or augment it with long term (1 to 6 months) assignments of a probationary nature.

F. Additional Comments:

1. Neither Merits nor Demerits appear to have appreciable relationship to the criterion measures. Within limits, the behavior of trainees under discipline would appear to be of no particular importance in relation to leadership ability as evaluated by any of the other measures.

2. Little can be said at present about the positive relationship of the curriculum elements to leadership ability as measured by ratings. This is because significant correlations for these elements were found only for ratings which showed evidence of contamination with scholastic grades (Buddy and Board Ratings), while those ratings known to be physically independent of academic grades (Leaders Reaction Test score and Acting NCO Rating) failed to show significant correlations with the curriculum elements.

VI Technicians

- A. Program Coordinator: Dr. Hubert E. Brogden
- B. Project Director: Dr. Richard H. Gaylord
- C. Statistical Advisor: Unassigned
- D. Preparation of Report: Dr. Richard H. Gaylord

Appendix I

VARIABLES

Headquarters, Army Ground Forces, in letter GNOCT-11 353/5039 (17 Mar 48), Subject: Rating System for Leaders' Course Students with attached Manual, Rating of Students in Army Ground Forces Leaders' Courses, states that the following measures have been selected as "those best reflecting leadership":

- a. The Leaders' Reaction Test - A performance test involving 20 specified leadership situations. The test is conducted in accordance with PRT-1005.
- b. The Buddy Rating (Student Leadership Evaluation Report) - Accomplishment of the ratings by fellow students is described in Manual, Student Leadership Evaluation Report (DA AGO PRT-326). Rating groups of 3 to 15 men who have had good opportunity to know each other are assembled to fill out the Rating Sheet (PRT-327), and the Description Sheet (PRT-328). In accomplishing the Rating Sheet each member of the assembled group indicates his choices for the three best and the three poorest leaders in the group. Through the use of PRT-329, these ratings are summarized and a single over-all score derived. The description sheet consists of a list of 10 forced-choice pairs of characteristics. Ratings are made by each member of the group for each man he knows well enough to rate by selecting one element of each forced-choice pair he feels is most characteristic of the ratee.
- c. Faculty Board Rating - Board Ratings are accomplished by four officer instructors of the Leaders' School. Three ratings are accomplished independently by members of the board on the Leaders' Course Rating and Report Form. All raters are permitted to consult records and employ any other information at their disposal. The board president - the fourth member - then collates the ratings and records their sum as the final official entry.
- d. Acting NCO Rating (Company Commander's Rating) - An evaluation of the trainee's leadership qualities is obtained by observation of his conduct in practical work as an NCO and Assistant Instructor during a 3-week assignment to a basic training company. A rating is accomplished by the commander of the training company. Until February 1948, the rating forms varied from installation to installation, however, these old forms appear on examination to be measuring essentially the same factors.

In addition to the interim criteria listed above, data are available for the following additional measures obtained during the Leaders' Course:

- o. Phase I Total - This is a summation of all grades and ratings received during the first three weeks of the course. During this Phase, trainees are given academic and practical training in various elements which are felt to contribute to excellence in leadership.
- p. Final Score - This is the sum of the four interim criterion measures described in Section a through d.
- e. Methods of Instruction - 29 hours of instruction during Phase I. Topics covered during this time include: Military Training, Principles of Learning, The Lecture Method, The Conference Method, The Demonstration Method, Use of Reference Material, Preparation and Use of Training Aids, The Lesson Plan, Class Management, Methods of Testing, Student Practical Application of Methods of Instruction. The grade is determined by the instructor.
- f. Leadership - 17 hours of Phase I instruction. Topics included are: Introduction to Leadership, Psychological Aspects of Leadership, Personal Adjustment, Round Table Discussion, Roles of the Army Leader, Objectives of the Leader, Leader-Subordinate Relations, Combat Leadership, Solution of Leaders' Problems not Involving Battle Leadership, Selection, Evaluation and Promotion of the Army Leader. Twelve additional hours are devoted to the Leaders Reaction Test. Grades are given by the instructor.
- g. Small Job Management - 8 hours. In this instruction, practical problems in Foremanship are given to and solved by the students. Grades are assigned by the instructor.
- h. Leading Small Units in Combat - 10 hours. Consists of several practical problems to be solved by the students, stressing especially the duties of leaders of patrols or other small units on tactical missions. Graded by instructor.
- i. Troop Information and Education - 6 hours. Lectures on the purpose, mission and benefits of the Troop I and E Program; educational aspects of the program and how they may be obtained; the methods and conduct of discussion. In the last two hours, the students practice discussion leading. Graded by instructor.
- j. Physical Training - 10 hours. Participation in and practical instruction on how to conduct conditioning exercises, competitive and athletics; how to organize, instruct and supervise physical training and athletics. Graded by instructor.

- k. Dismounted Drill - 8 hours. Review of school of the soldier and drill for foot troops, including mass and extended formations, inspections and methods of conducting drill. Graded by instructor.
- l. Physical Training and Dismounted Drill - An over-all grade for elements j and k.
- m. Merits - Merits are assigned at the discretion of the Leaders' School staff for excellence in conduct.
- n. Demerits - Demerits are assigned at the discretion of the Leaders' School staff for disciplinary infractions.