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15 March 1946

SUPPLEMENT

TO

REPORT AND RECOMMENDATIONS

Project 4071b

PREDICTION OF TACTICAL PERFORMANCE OF
OFFICER CANDIDATES IN THE SIGNAL CORPS
(4071b).

15 March 1946

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I. INTRODUCTION.

The report (PRS 711) upon "Prediction of Leadership Qualifications of Officer Candidates in the Signal Corps" showed three independent factors in the various criteria assembled in OCS for the validation of predictors: I, Scholarship, II, Personal Leadership; and III, Tactical Performance. AGCT and OCT were shown to be valid predictors of Scholarship, as indicated in earlier studies. The instruments under study as leadership predictors: The Biographical Information Blank (OCS-1), The Recommendation Blank (OCS-1), The Interview Blank (OCS-1) and The Military Report (OCS-1) were shown to be promising predictors of Personal Leadership and recommended for Army-wide validation.

Analysis was not completed at the time of the report (PRS 711) of the Prediction of Tactical Performance by these instruments, but it was stated that:

> The instruments developed in this study predict tactical officers' ratings. These ratings, however, contain both the personal leadership and the tactical performance factors. Which factor is the more important in accounting for this relationship has not been determined but it is probable that both are involved, with the personal leadership factor pre-dominant. Whether the tactical performance factor is of sufficient importance to warrant attempts to predict it more accurately is a matter for further study.

II. PREDICTION OF TACTICAL OFFICERS' RATINGS

The correlations in Tables I and II are between the instruments under development as leadership predictors and first month leadership criteria from students and tactical officers for Class 51 and Class 52 Samples as follows:

1 (AN-S-S)   Anonymous nomination made by students in sections of each class.
3 (ALR-S-S)   Average of leadership ratings made by students in section of each class.
4 (ALR-JTO-C) Average of leadership ratings made by junior tactical officers of students in each class.
5 (LR-STO-C)   Leadership ranking of students in a class by senior tactical officer.

It is noted that the predictors predict the tactical officers' ratings, as stated above, and, on the whole, just about as well as they predict the student ratings.

III. FACTOR LOADINGS.

These student and tactical officers' criteria were shown in the report (PRS 711) to have both Personal Leadership (Factor II) and Tactical Performance (Factor III) loadings as indicated in Table III. Which factor is the more important in accounting for the relationship of the instruments, shown in Tables I and II, to the criteria was not determined in PRS 711.

To determine the degree to which the predictors predict the two factors, the correlations of the instruments with the criteria (Tables I and II) are added to the results of the previous factor analysis (Table III) by the method of Dwyer's extension. The results are shown in Table IV for the prediction of the two factors by the instruments.

Factor loadings for the leadership predictors are all significant, with one exception, on Personal Leadership and they are all insignificant on Tactical Performance. The instruments predict Personal Leadership, as previously reported (PRS 711) but do not predict Tactical Performance.

TABLE I.
CORRELATION BETWEEN PREDICTORS AND STUDENT OR TACTICAL
OFFICERS' CRITERIA, FIRST MONTH, FOR CLASS 51 SAMPLE
(N = 51 to 81)

			Correlation with Criterion			
Predictors	Mean	Sigma	1 (AN-S-S)	3 (ALR-S-S)	4 (ALR-JTO-C)	5 (LR-STO-C)
Recommendation Blank (Ave. of Blanks Rec'd)	66.1	6.0	.41	.45	.32	.33
Biographical Information Blank	89.0	12.4	.38	.35	.32	.34
Military Report - NCO (Ave. of Blanks Rec'd)	277.0	58.5	.19	.19	.32	.26
Interview Blank (Total of 5 members of Board)	421.6	41.8	.18	.26	.04	.24

TABLE II.
CORRELATION BETWEEN PREDICTORS AND STUDENT OR TACTICAL
OFFICERS' CRITERIA, FIRST MONTH, FOR CLASS 52 SAMPLE
(N = 30 to 42)

			Correlation with Criterion			
Predictors	Mean	Sigma	1 (AN-S-S)	3 (ALR-S-S)	4 (ALR-JTO-C)	5 (LR-STO-C)
Recommendation Blank (Ave. of Blanks Rec'd)	66.5	5.43	.36	.43	.25	.44
Biographical Information Blank	89.1	12.9	.44	.35	.21	.42
Military Report - NCO (Ave. of Blanks Rec'd)	232.8	41.7	.33	.34	.08	.04
Interview Blank (Total of 5 members of Board)	374.9	26.9	.13	.32	.43	.23

IV. CONCLUSIONS.

The tentative conclusion expressed in PRS 711 that probably both factors, Personal Leadership and Tactical Performance, "are involved, with the personal leadership factor predominant", is modified to state that the measurement by the predictors is exclusively of the personal leadership factor.

In this connection it should be noted that the tactical officers are about equally concerned in their leadership ratings at the end of the first month with the personal leadership factor as with the tactical performance factor. This is shown by the factor loadings in Table III. Also, the tactical officers' leadership ratings on the Class 51 Sample for the second and fourth months show about equal concern for the two factors. Below are factor loadings on Class 51 Sample, showing this, for the two tactical officers' criteria (4 and 5) on the two factors, where the criteria were received at various periods of training in OCS.

Criteria	Factor I (Personal Leadership)			Factor II (Tactical Performance)		
	First Month	Second Month	Fourth Month	First Month	Second Month	Fourth Month
4 (ALR-JTO-C)	(.47)	(.50)	(.62)	(.59)	(.66)	(.56)
5 (LR-STO-C)	(.56)	(.38)	(.52)	(.52)	(.79)	(.60)

Whether the tactical performance factor, independent of the personal leadership factor, is sufficiently important to warrant attempts to predict it with separate instruments, or whether it can be learned satisfactorily during officer training by candidates admitted to OCS who are qualified in Scholarship (Factor I) and Personal Leadership (Factor II) is a question for future study.

TABLE III.
FACTOR LOADINGS OF LEADERSHIP CRITERIA, FIRST MONTH, CLASS 51 AND CLASS 52 SAMPLES (FROM TABLE V, PRS 711)

Criteria	Factor II (Personal Leadership)		Factor III (Tactical Performance)	
	Class 51	Class 52	Class 51	Class 52
1 (AN-S-S)	(.75)	(.82)	-.02	.04
3 (ALR-S-S)	(.79)	(.83)	-.10	-.04
4 (ALR-JTO-C)	(.47)	(.50)	(.59)	(.67)
5 (LR-STO-C)	(.56)	(.56)	(.52)	(.67)

TABLE IV.

FACTOR LOADINGS OF INSTRUMENTS FOR CLASS 51 AND CLASS 52 SAMPLE

Predictors	Factor II (Personal Leadership)		Factor III (Tactical Performance)	
	Class 51	Class 52	Class 51	Class 52
Recommendation Blank	(.56)	(.46)	.06	.15
Biographical Information Blank	(.48)	(.47)	.14	.10
Military Report – NCO	.27	(.39)	.27	-.22
Interview Blank	(.30)	(.44)	-.C5	.15