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RESEARCH MEMORANDUM

NUMBER 54-3

March 1954

VALIDATION OF BIOGRAPHICAL INFORMATION BLANK, OCB-4, DA PRT 2462
FOR OFFICER CANDIDATE SCHOOL SELECTION

A-3-121-12

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PERSONNEL RESEARCH AND PROCEDURES DIVISION, TAGO

ABSTRACT

Research Memorandum 54-3. A-3-121-12. March 1954.

Validation of Biographical Information Blank, OCB-4, DA PRT 2462 for Officer Candidate School selection.

The tryout and validation is described of OCB-4, using a sample of about 1400 students in 5 OCS's. OCB-4 was constructed from the most valid content of a large item pool representing 16 previous leadership studies (only 1 of which was with OCS samples). Predetermined or validity generalization scoring keys were validated against leadership rankings made early in the course by fellow candidates and tactical officers. Results obtained with first classes in each school, and later verified on the remaining classes, indicated that OCB-4 was sufficiently superior to OCB-3 (currently used) to warrant operational use. A variety of keys as tried out on OCB-4; a single right-answer key yielded as high validity as any combination of keys. Several systems were tried for weighting the instruments in the selection battery; the simplest, unweighted combination was as effective as any of the more elaborate systems investigated.--LAPRU

Research Memorandum released: 12 April 1954.

VALIDATION OF BIOGRAPHICAL INFORMATION BLANK, OCB-4, DA PRT 2462 FOR OFFICER CANDIDATE SCHOOL SELECTION

I. BACKGROUND

Late in 1951, as part of the final effort under PR 3405, a pair of Biographical Information Blanks was constructed from material developed during several years of research on leadership. The validation of these two BIB's, OCB-4 and OCB-5, represented one of the first tasks under PR A-3-121. The instruments were constructed from a large pool of items and both were administered during the same period. However, because of its content, it was anticipated that OCB-4 would be more valid than OCB-5; it was hoped that its validity would be sufficiently high to merit its immediate operational use. Accordingly, a much fuller analysis of the OCB-4 data was undertaken. This memorandum describes the first phases of the research conducted in connection with OCB-4. (Validity generalization keys and interim OCS leadership criteria were used.) A separate and briefer memorandum is in preparation for OCB-5. It is planned, at a later date, to include the most valid items from both BIB's in a new operational instrument.

A. CHARACTERISTICS OF THE INSTRUMENTS

Details of the construction of the two BIB's are contained in Research Memorandum 52-42, "Construction of Biographical Information Blanks OCB-4 and OCB-5", in brief, a pool of valid items drawn from instrument development studies in ROTC, West Point, OCS, Integration, Leaders' Course, etc., was found to be too large for a single, manageable BIB. Items from the pool for which the greatest amount of information was available were assembled into OCB-4. Sufficient new Yes-No content was added to the remainder of the pool to create an OCB-5 of equivalent size. All the available preferred-choice pairs went into OCB-4. The Yes-No content of OCB included the 120 "characteristics" items appearing in OCB-4. In terms of item types, the two instruments had the following general characteristics:

OCB-4	30	5-choice background items (most valid)
	180	Forced choice pairs
	60	Yes-No "valid" items
	60	Yes-No "suppressor" items
	330	Total
OCB-5	30	5-choice background items (some with no validation data)
	300	Yes-No items (some of unknown validity)
	330	Total

B. DESIGN OF THE VALIDATION STUDY AND COLLECTION OF DATA

Arrangements were made during the spring of 1952 to administer the experimental BIB's to all officer candidates entering 37 specified OCS classes. Provisions were made to obtain criterion data for these candidates from the schools and selection information from the major commanders responsible for their assignments.

During April, May, and June 1952, the BIB's were administered to the candidates as part of their processing into OCS. All administrations were conducted by school personnel, under written directions from Personnel Research Branch. Schools and classes (indicated by numerical designation) were divided as follows:

OCB-4 Classes	OCB-5 Classes
Infantry 34, 35, 36	Infantry 31, 32, 33
Ground General 52, 54	Ground General 51, 53
Signal 16 through 20	Ordnance 93 through 96
Field Artillery 25 through 28	Armored 13 through 16
Engineer 24 through 30	Anti-Aircraft 7, 8, and 10

By dividing the classes between the two instruments, as shown, the design for administration was particularly effective in several respects. The largest and most representative schools were tested with both instruments, providing opportunity for within-school comparisons where the results would be most important to the program as a whole. Combat Arms and Technical Branch Schools were equally represented on each instrument, so that these differences could be controlled, when necessary, or used effectively wherever attempts at differential prediction might be desirable. (Double cross-validation samples were set up along the combat-technical dichotomy.) At the same time, no school was required to test (and report) a burdensome number of classes, which would have been the case if adequate validation samples for both instruments were drawn from each school.

The group of candidates admitted to these classes had many desirable characteristics, from validation point of view. For the most part, they were selected under SR 350-350-20 (25 Sep 51), which eliminated direct selection from civilian life and minimized selection from other Services. Reservists recalled involuntarily were offered opportunities for release during the months preceding testing, so that the bulk of the candidates were selective service inductees, with only a few voluntary reservists and Regular Army personnel. For these reasons, it was felt that the classes represented not only a sample of the contemporary OCS input, but also were representative of the kinds of classes likely to be formed under mobilization conditions. The schools were also sampled at a peak load period, when facilities were operating at full capacity and when the selection ratio was relatively high. The fairly broad range of talent thus provided in the OCS program eliminated at least some of the restriction-in-range problem usually brought about by more extensive preselection.

As soon as they became available, the first Associates' rankings and Tactical Officers' rankings were submitted for each of the tested classes. In the interests of time, it was planned to validate each of the instruments in two stages: first, against the criteria obtained from the first class tested in each school; then, against the criteria obtained from all remaining classes at the completion of the interim data collection period. Validity generalization keys were used in each instance.

The Associates' and Tactical Officers' rankings used as criteria were obtained between the fourth and eighth weeks of training. The decision to use these early, interim measures for validation criteria was based upon three considerations:

1. Criterion range. Validation against final criteria allows only for prediction of final class standings in a sample reduced by about 40%. To use all the data available (that is, to include nongraduates in the validation sample), it is necessary to use serial correlations, or to assign arbitrary criterion scores to the nongraduates. Both procedures involve limiting assumptions and at best are only approximations to full-range validation.

2. Adequacy. No satisfactory evidence exists to support assumptions that final data are in some way "better" than interim data. In the absence of correlations between these within-school measures and some later, follow-up criterion, a priori contentions support the use of interim data as strongly as they support final data. Assuming that interim data are as reliable as final data, and as closely related to a follow-up criterion, the interim data are more adequate for validation purposes (as indicated above) in view of the greater range available. It can also be argued that individual ratings will be more independent (experimentally) when collected earlier.

3. Time. Interim data could be collected, per class, 3 or 4 months earlier than final data. The validation of OCB-4 against interim data in first classes tested (the validation which led to its operational use) was completed in early September 1952, less than six weeks after the last test administration and several weeks before the graduation of the first class. Use of early data in first classes, rather than final data in all classes, saved at least seven months in introducing OCB-4 to field use.

II. VALIDATION OF OCB-4

A. VARIABLES[1]

1. Predictors

100. Officer Candidate Applicant Evaluation Report, OCE-2, DA PRT 652. A preferred-choice and graphic rating scale completed by an NCO and indorsed by a commissioned officer.

110. Officer Candidate Applicant Conduct of the Interview, OCI-4, DA PRT 737. Preferred-choice (adjectival) and graphic scales completed by members of a commissioned officer interview board.

130. Officer Candidate Biographical Information Blank, OCB-3, DA PRT 735. 238 Background, Preferred Choice, Quintet and Multiphasic items.

140. OCB-4, total score, predetermined (validity generalization) key (141-142) + (143+144+145).

141. OCB-4, background "rights" key, from items 1-30.

142. OCB-4, background "wrongs" key, from items 1-30.

143. OCB-4, Yes-No "valid" key, items 391-450.

144. OCB-4, Yes-No "suppressor" key, items 331-390. (This set of items was scored in the positive direction, making it possible to add the score to the others in arriving at variable 140.)

145. OCB-4, preferred-choice key, items 151 through 330

146. Biographical Information Blank, OCB-4, proposed Operational key: Background, Yes-No valid scale, and Preferred Choice (var. 141 plus 143 plus 145).

170. OCE-2 plus OCI-4 plus OCB-3 (Sum of variables 100, 110, and 130). This is the Composite Selection Score on the basis of which otherwise eligible applicants were selected or rejected. This variable is defined in Step 5, Table 4.

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[1] The coding system is necessitated by the fact that a large number and variety of variables occur in this program, and recur through a series of projects. Cross reference from one project to another and within projects will be frequent. In reports for inservice personnel such as this memorandum, PRT item numbers will also be indicated to facilitate reference.

174. OCE-2 plus OCI-4 plus OCB-4. (Sum of variables 100, 110, and 146.) This is the proposed Composite Selection Score, incorporating OCB-4 instead of OCB-3. This variable is defined in Step 4, Table 4.

2. Criteria

211. First Tactical Officers' Rankings (CR), obtained prior to the eighth week of training. Normalized

221. First Fellow Candidates' Rankings (CR), obtained prior to the eighth week of training. Normalized

241. Composite criterion, combining normalized Tactical Officers' and Associates' rankings. (Average of variables 211 and 221.)

B. VALIDATION AGAINST EARLY LEADERSHIP RANKINGS IN THE FIRST CLASSES TESTED

As a first step in validating OCB-4, part score and total score validity coefficients were computed separately for each of the early classes tested. One school, Ground General, having been delayed in reporting, only four schools were represented in this analysis. The results are presented in Table 1.

A perusal of Table 1[2/] lent confirmation to at least one methodological hypothesis: that validity generalization (using material valid in one population for predicting related criteria in another population) can be used to advantage in BIB development work. Table 1 is extracted from Table 1a which includes means and sigmas. Of 330 items in OCB-4 (all keyed), only 32 had been selected and keyed on the basis of results obtained in OCS research. While most of the material used in present BIB's has a common ancestry, the items in OCB-4 were selected largely from results obtained in ROTC, at West Point, and in miscellaneous, non-OCS leadership studies.

The overall validity of the OCB-4--particularly the extent to which it "held-up" in the Combat Schools (Infantry and Field Artillery) where less hopeful results were anticipated--suggested the advisability of continuing the analysis of the instrument for possible immediate use in the operational OCS selection program.

C. DEVELOPMENT AND EVALUATION OF AN OPERATIONAL OCB-4 KEY

To be considered for operational purposes, the OCB-4 would have to meet two criteria in addition to validity alone. One was statistical: it must combine with the other available predictors to produce a composite

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[2/] All validity coefficients presented in this report are cross-validity coefficients, i.e., computed on samples which are independent of any item-analysis samples.

TABLE 1.

Correlation of OCB-4 total and part scores against leadership rankings* in first classes tested in four OCS's

	School and Class									
	Infantry 34 (N = 127)		Signal 16 (N = 65)		Field Arty 25 (N = 97)		Engineer 25, 26 (N = 82)		1st Classes (N = 371)	
OCB-4 Keys	OR*	CR*	OR	CR	OR	CR	OR	CR	OR	CR
140 Total	.31	.25	.55	.49	.34	.32	.37	.43	.35	.31
141 Bkg +	.31	.29	.45	.40	.32	.17	.28	.22	.30	.26
142 Bkg -	-.16	-.17	-.22	-.26	-.13	-.09	-.21	-.28	-.17	-.18
143 YNv	.30	.29	.31	.21	.14	.11	.27	.40	.25	.25
144 YNs	.10	.08	.20	.23	-.20	-.17	.03	.10	.03	.06
145 FC	.13	-.06	.45	.44	.24	.27	.24	.29	.21	.20

*Tactical Officers (var. 211)
Fellow Candidates (var. 221)

selection score clearly superior to that obtainable with the OCB-3. The other was administrative: it must be amenable to scoring in a manner which would not be overly burdensome in the field.

In order to assess revised scoring procedures, the parts of the OCB-4 were intercorrelated with the criterion measures. In this way, it would be possible to abstract from the instrument those parts which combine best. The intercorrelation matrix (based upon the 371 cases in the available first classes tested) is presented as Table 2.

The intercorrelation matrix demonstrated that the Yes-No suppressor key (var. 144) did not correlate with the valid key (var. 143) sufficiently well for effective suppressor action. This, together with its erratic behavior among schools (as seen in Table 1) led to its omission from an operational key.

The Background "Wrongs" portion (var. 142), which required separate scoring with a negative key, could be retained in an operational key only if its contribution to total validity were sufficiently great to offset the disadvantage of separate handling. With a validity of .19, and a correlation with the Background "Rights" key of .55, the "Wrongs" key succeeded only in increasing the variance of a background portion without improving the validity of the "Rights" key alone.

TABLE 1a.

Correlation of OCB-4 total and part scores against leadership rankings* in first classes tested in four OCS's.

School and Class	Total Key	Sub-Keys					Criteria	
		Bkg +	Bkg -	YNv	YNs	FC	Tac Offr.	Fellow Cand.
Infantry 34 (N = 127)								
r (211)	.31	.31	-.16	.30	.10	.13	----	----
r (221)	.25	.29	-.17	.29	.08	.06	----	----
M	165.6	15.8	7.8	39.0	19.0	99.8	50.1	49.3
σ	13.3	3.5	2.4	5.2	6.0	9.4	19.0	18.2
Signal 16 (N = 65)								
r (211)	.55	.45	-.22	.31	.20	.45	----	----
r (221)	.49	.40	-.26	.21	.23	.44	----	----
M	158.5	15.6	7.6	39.0	16.5	94.6	50.8	52.8
σ	11.4	4.2	2.2	4.9	5.3	7.9	18.6	17.1
Field Artillery 25 (N = 97)								
r (211)	.34	.32	-.13	.14	-.20	.24	----	----
r (221)	.32	.17	-.09	.11	-.17	.27	----	----
M	157.9	14.9	8.1	37.7	18.7	94.4	49.6	52.1
σ	14.3	3.8	2.5	4.8	5.1	8.8	19.2	18.8
Engineer 25 and 26 (N = 82)								
r (211)	.37	.28	-.21	.27	.03	.24	----	----
r (221)	.43	.22	-.28	.40	.10	.29	----	----
M	159.3	15.9	7.5	37.7	17.9	95.1	50.7	50.6
σ	12.2	4.0	2.3	5.5	6.7	8.4	18.2	18.3
1st Classes Combined (N = 371)								
r (211)	.35	.30	-.17	.23	.03	.21	----	----
r (221)	.31	.26	-.18	.25	.08	.20	----	----
M	161.0	15.6	7.8	38.4	18.2	96.5	50.8	50.9
σ	13.4	3.9	2.4	5.2	5.9	9.2	18.6	18.2

*Tactical Officers (Var. 211)
Fellow Candidates (Var. 221)

TABLE 2.

Intercorrelation of OCB-4 total and part scores and three leadership criteria, for first classes tested in four OCS's.
(N = 371)

	VARIABLE									
Variable	140	141	142	143	144	145	211	221	Mean	σ
140 (total)									160.8	13.4
141 (Bkg +)	.52								15.6	3.9
142 (Bkg -)	-.38	-.55							7.8	2.4
143 (YNv)	.53	.32	-.27						38.4	5.1
144 (YNs)	-.08	.20	-.27	.40					18.2	5.9
145 (PC)	.79	.16	-.11	.28	.13				96.4	9.1
211 (CR)	.35	.30	-.17	.25	.03	.22			50.7	18.6
221 (CR)	.32	.26	-.18	.25	.06	.20	.81		50.9	18.2
241 (Comp)	.35	.29	-.19	.26	.05	.22	.95	.95	51.0	17.5

The first combination apparently worthy of consideration as an operational key (146) consisted of Background "Rights" plus Yes-No "Valid" plus Preferred Choice (141+143+145). This combination (Table 3) produced a validity coefficient of .37 against the composite criterion (var. 241)[2/], slightly better (in this sample) than the total combination of parts. This key met the validity and "field feasibility" requirements, and was tentatively adopted for operational use pending a study of its interaction with the other predictors.

To compare this new BIB with the OCB-3, as an operational selector, the key was intercorrelated with the members of the selection battery and the composite criterion. New variables concerned here were 100, 110 and 150.

The matrix resulting from these intercorrelations is presented as Table 3. The 280 cases included in this computation were the members of the first classes for whom complete selection data were available.

To determine an appropriate combination of predictors, and to compare this with the set in operational use, the matrix furnished information for these sets of computations. For comparative purposes, validity coefficients were determined for:

[2/] Agreement between the two sets of criterion rankings(211, 221) was so high (r=.81) that an average of the two was used as a representative criterion measure. The amount of agreement is of particular interest since the measures were obtained early in the courses under conditions which would tend to minimize the influence that one measure would have on the other.

1. The most valid combination of OCE-2, OCI-4 and OCB-4 (Multiple R).

2. Other combinations of the three predictors, involving less cumbersome weights.

3. The combination of predictors used operationally (OCF-2 OCI-4 and OCB-3).

TABLE 3.

Intercorrelation of OCB-4, operational selection instruments, and composite criterion for 280 cases in four OCS's. (First classes omitted.)

Variable	100	110	130	146	Mean	σ
100 (OCE)					104.9	22.9
110 (OCI)	.12				27.5	7.5
130 (OCB-3)	.12	.19			26.3	3.9
146 (OCB-4)	.10	.14	.27		150.0	13.6
241 (Comp. Criterion)	.20	.28	.18	.37	50.2	17.2

Table 4 summarizes the calculations. Each row of the table represents a weighted combination of the predictors, yielding the validity recorded in the last column.

TABLE 4.

Correlation with composite criterion (var. 241) of various combinations of predictors, as determined from the intercorrelation matrix in Table 3.

Calculations	Variables and Weights								Validity of weighted combination against criterion (241)
	OCE(100)		OCI (110)		OCB-4(146)		OCB-3(130)		
	B	b	B	b	B	b	B	b	
Step 1	.147	.111	.215	.493	.324	.411	-	-	.457
Step 2		1		5		4	-	-	.457
Step 3		1		2		2	-	-	.444
Step 4		1		1		1	-	-	.441*
Step 5		1		1		-		1	.339**

*Var. 174 **Var. 170

Steps 1 and 2 in Table 4 are empirical combinations, using weights derived from the data. Steps 3 and 4 used arbitrary weights, provided for in the plan of analysis because of their simplicity of application. Step 5, involving OCB-3, represents the unit-weighted combination of predictors which was in operational use when these candidates were selected, i.e., Step 5 represents a validation of the then-operational composite selection score.

The validity of Step 1, .457, represents the maximum obtainable validity using linear combinations of the variables, as they are interrelated in Table 3. In Step 2, the b weights were rounded to the nearest integer, with no loss in validity. Steps 3 and 4, using simple, arbitrary weights, give practically identical results, with a loss in this sample of less than .02 from the maximum validity obtainable.

From this information, Step 4 was adopted as the proposed new operational Composite Selection Score for use in the officer candidate procurement program. While this represented simply the substitution of the OCB-4 (keyed as var. 146) for the OCB-3, the primary justification for the change is given in the difference in validity coefficients between Steps 4 and 5 (.44 vs .34), rather than the difference in BIB validity coefficients as shown in Table 3 (.37 vs .18)--the substitution of OCB-4 for OCB-3 could be effected only after demonstration that it would combine with the other predictors to produce an improved composite.

As a final check on the elements of the composite, validity coefficients were reported separately for the school subsamples involved. Table 5 includes the results of these analyses.

TABLE 5.

Correlation with composite criterion (Variable 241) of the elements of the composite selection score for each OCS subsample. (First classes tested.)

	Variable											
	OCE(100)				OC1(110)				OCB-4(146)			
School	N	r	Mean	σ	N	r	Mean	σ	N	r	Mean	σ
Infantry	103	.16	96.3	21.3	106	.31	26.8	7.1	127	.28	154.7	13.3
Signal	29	.33	122.3	96.1	30	.35	29.2	12.1	65	.55	149.5	11.9
Field Arty	82	.31	102.7	22.8	83	.12	27.2	6.9	97	.28	146.7	13.1
Engineer	66	.21	113.4	20.8	68	.32	26.1	8.7	82	.47	148.6	12.4
Combined	280	.20	104.9	22.9	280	.28	27.1	7.5	280	.37	150.0	13.6

It is apparent from the table that these samples were reasonably homogeneous with respect to predictability. For the most part, minor deficiencies on one instrument were compensated by above average predictability on another. The only consistently different sample was that drawn from the Signal School, which produced highest absolute validity coefficients (based upon smallest N's) on each predictor.

Of particular importance is the observation that none of these school samples was singularly affected by the rekeying of the OCB-4. For ease of reference, portions of Tables 1 and 5 are reproduced here as Table 6. This table gives the total score validity of the OCB-4 (against the two ranking criteria separately) and the operational key validity (var. 146) for each school sample.

TABLE 6.

Comparison of validities of OCB-4 total score (var. 140) and proposed operational key (var. 146). (First Classes Tested.)

School	N	OCB-4 Total (140) OR(211)	OCB-4 Total (140) CR(221)	OCB-4 Operational (146) Comp. Criterion (241)
Infantry	127	.31	.25	.28
Signal	65	.55	.49	.55
Field Artillery	97	.34	.32	.28
Engineer	82	.37	.43	.47

For the most part, the differences between the total score (140) and operational key (146) validity coefficients in any one school were no greater than the differences between the two validity coefficients reported for the total score.

D. VALIDATION OF THE OCB-4 AGAINST EARLY LEADERSHIP RANKINGS IN THE LATER CLASSES TESTED

When early leadership rankings had been received for all classes tested with OCB-4, some portions of the preceding analysis were repeated with the larger sample. The part-score intercorrelation matrix was reproduced (Table 7); the operational OCB-4 key (var. 146) was revalidated by schools (Table 8); and this key, the OCB-3, and both the old and the new selection composites were revalidated for the combined "later" classes (Table 9).

TABLE 7.

Intercorrelation of OCB-4 total score, part scores and three leadership criteria for later classes tested in five OCS's. (N = 1027)

Variable	140	141	142	143	144	145	211	221	Mean	σ
140 (Total)									161.8	12.9
141 (Bkg +)	.58								16.3	4.3
142 (Bkg -)	-.49	-.56							7.5	2.3
143 (YNv)	.36	.26	-.22						37.3	6.0
144 (YNs)	-.17	.11	-.10	.62					18.2	7.0
145 (FC)	.73	.13	-.13	.18	.05				97.0	7.9
211 (OR)	.26	.18	-.19	.14	.01	.17			50.8	18.7
221 (CR)	.27	.19	-.20	.12	.03	.21	.76		51.0	18.2
241 (Comp)	.28	.19	-.21	.14	.02	.20	.94	.94	51.1	17.3

TABLE 8.

Correlations of the composite criterion (var. 241) and the operational OCB-4 key (var. 146) by schools for later classes tested.

School	N	r	Variable 146 Mean	σ
Infantry	257	.23	151.1	12.4
Ground General	183	.35	151.8	12.8
Signal	182	.36	151.5	12.2
Field Artillery	245	.19	151.3	12.2
Engineer	160	.21	149.7	13.6
All Combined	1027	.26	151.7	12.6

TABLE 9.

Correlations of the composite criterion (Var.241) with (operational and proposed) individual and composite predictor scores.
(Later Classes.)

Variable	N	r	Mean	σ
130 (OCB-3)	828	.17	26.7	4.3
170 (OCB-3 Comp)	802	.27	163.1	24.5
146 (OCB-4)	1027	.26	151.1	12.6
174 (OCB-4 Comp)	802	.31	287.2	27.8

The classes involved in these analyses are all tested classes not reported in section B and C, above. They include:

Infantry, Classes 35, 36
Ground General, 52, 54
Signal, 17 through 20
Field Artillery, 26, 27, 28
Engineer, 27 through 30

All of the Ground General (Branch Immaterial) classes are represented here, the data for class 52 having been received too late for inclusion in the earlier analyses. For the remaining schools, all classes other than the first classes tested are reported at this point.

In general, the revalidation with the later classes confirms the results of the earlier analysis, but with almost uniformly lower validity coefficients. In Table 10 several of the values reported previously are brought together for ease of comparison. This table also contains validities (correlation of sums) of certain variables for early and later classes combined. Of the part scores used in constructing the operational OCB-4 key (var. 146), both the Background "rights" and the Yes-No "Valid" portions produced lower validity coefficients in the later sample. Only the Preferred Choice key showed no change. The lower validity coefficients for these parts were of course revealed in the values for variable 146 and, in turn, in the lower validity of the new composite selection score, variable 174. While values were not obtained for the OCE and the OCI in the later sample, it can be inferred that these also predicted the earlier group better than the later one. The differences in early and late validity coefficients for both composite scores (170 and 174) were greater than can be accounted for solely by the two BIB's.

The relationships among the predictors, however, remain the same, and justify the decisions which were made, in the interests of time, on the basis of the early data alone.

TABLE 10.

Comparison of validities (against composite leadership rankings) of several predictors in earlier and later OCB-4 samples

Variable	Classes			Variable	Classes		
	Early	Later	Combined		Early	Later	Combined
140 (total)	.35	.28		130 (OCB-3)	.18	.17	
141 (Bkg +)	.29	.19	.24	170 (OCB-3 Comp)	.34	.27	
142 (Bkg -)	-.19	-.21		146 (OCB-4)	.37	.26	.29
143 (YNv)	.26	.14	.17	174 (OCB-4 Comp)	.44	.31	
144 (YNs)	.05	.02					
145 (FC)	.22	.20	.21				

III. SUMMARY

This memorandum describes the tryout and validation of an experimental self-description blank, OCB-4, using a sample of approximately 1,400 students in five Army Officer Candidate Schools. OCB-4 was constructed from the most valid content of a large item pool which represented sixteen previous leadership studies, of which only one was concerned with Officer Candidate School samples.

Predetermined, or "validity generalization" scoring keys were validated against leadership rankings made early in the course by fellow candidates and tactical officers. An initial validation of keys was based on a sample which consisted of the first class in each of the schools. Validities were computed for part scores and total score, for each school separately, and for the combined schools.

A variety of keys was tried out on OCB-4. It was found that a single right-answer key yielded as high validity as a combination of all keys. Several systems were tried for weighting the instruments in the selection battery. The simplest, unweighted combination was as effective as any of the more elaborate systems investigated. This combination was then compared with the operational battery which included OCB-3. Results obtained from the analysis of the data on the first classes indicated that OCB-4 was sufficiently superior to OCB-3, the biographical information blank in current use, to warrant its introduction into operational use.

A second validation analysis, using the remaining classes tested with OCB-4, verified the results obtained with the first classes. When an item analysis is completed, it will be possible to devise improved scoring keys and to construct a single BIB incorporating the best content of OCB-4 and two other instruments (OCB-5 and OCB-6).

In this study, the analyses which were undertaken were directed toward operational, rather than theoretical objectives. Advantage was taken of a near-mobilization situation for testing and data collection. This minimized the amount of preselection within the OCS sample and also allowed a basis for comparing selective effectiveness among several branches. The operation of validity generalization and the demonstrated greater consistency of preferred-choice items are of considerable theoretical interest. This study demonstrates that such items of current theoretical interest will lead to the development and introduction of more effective and practical instruments for the selection of Officer Candidates.

PERSONNEL

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