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16 July 1946

THE VALIDITY OF THE RADIO INFORMATION TEST FORMS 1 AND 2  
IN PREDICTING SUCCESS AMONG TRAINEES AT THE RADIO  
REPAIR COURSE AND IN THE COMMUNICATIONS COURSE AT  
THE TANK DESTROYER TRAINING SCHOOL, CAMP HOOD, TEXAS  
FEBRUARY 1944

I. PURPOSE

To determine the validity of the Radio Information Test, Forms 1 and 2 and the Radio Experience Check List in predicting grades in the Enlisted Radio Repair Course and the Enlisted Communications Course at the Tank Destroyer School, Camp Hood, Texas.

II. POPULATIONS

1. The members of Classes 2, 6 and 7 of the Communications Course at the Tank Destroyer School, numbering 86 in all, and a second equivalent group including Classes 3, 4, 5 and 8 totalling 117 cases. Requirements for the course are AGCT-1 and MA scores of 90.

2. The members of Classes 1, 2 and 5 of the Enlisted Radio Repair courses, numbering 79 cases in all and a second equivalent group of 62 cases in Classes 3 and 4. Minimum requirements for this course are AGCT-1 and MA scores of 100, 8th Grade education and prior graduation from the Enlisted Communication Course.

III. VARIABLES

A. Experimental tests

1. Forms 1 and 2 of the Radio Information Test (Experimental). These tests differed from previously constructed tests, such as those of the TK series in that it was desired to obtain items which would differentiate within the general reception center population. To achieve this end, subject matter experts with considerable experience in teaching electricity and radio at the practical rather than at the theoretical or verbal level were engaged to write items for these tests. Forms 1 and 2 each consisted of 148 items, three of which were practice items. The scoring formula was  $R-1/3 W$ . No time limit was imposed.

2. The Electrical and Radio Experience Check List contains 33 operations involving odd jobs or informal experiences with radio or electricity tools of the sort that were thought to occur with appreciable frequency in the general population. The subject is asked to indicate with a single check those jobs done or tools used at least once and with a double check those done at least 5 times in the last two years. The score is the total number of checks.

B. Tests scores obtained from Form 20.

1. AGCT-1 standard score
2. MA standard score

C. Criteria

1. In the enlisted communications course time allotments and tests were as follows:

1st & 2nd Weeks - Theory

3d Week - Map Reading

4th to 7th Weeks - Communication Post Subjects: Message Center, Code & Cipher, Voice Procedure, Preventive Maintenance of Radio Sets and Wire Communications.

8th to 10th Week - Field Operations

Practical field work covering field tactics of Message Center, and all of the other material covered in the preceding seven weeks.

KCS given to EM at end of field operations based upon judgment of all of the instructors. "Leadership" considered by instructors to be a valuable criteria in this final rating & assignment of MOS. No Graded Tests (GT) given after completion of 7th week of course.

It is evident that this course contains a very considerable amount of material not related to radio theory or practice. Consequently, too much emphasis should not be placed upon the correlation with grades obtained from these courses in judging the effectiveness of the test.

2. Similar descriptive material is given below for the Enlisted Radio Repairman Course:

1st Week - Circuit tracing & review on Radio Theory.

2d Week - First week of T & R (Practical Work in Radio Testing & Repairing, in the Communication Dept's. Radio Laboratory.) Consists in Orientation in Radio Sets 610, 608, 506.

3d Week - Practical Work in T&R on 610 Radio.

4th Week - Practical Work in T&R on 608 Radio.

5th Week - Practical Work in T&R on 506 Transmitter.

6th Week - Practical Work in T&R on 506 Receiver.

1 Graded Test (GT) in 1st Week on Theory

5 Weekly "Progress" grade reports thereafter, given numerical values. These are based on each week's work in T&R, short quizzes, and observation by instructors.

While the grades for theory and practical work were obtained and processed separately, it would seem that greater emphasis should be placed on the latter. Since Radio theory was taught in only a very short initial period in the course, it is quite probable that little change in the amount of information possessed by a given individual occurred as a result of this training. This being the case, the meaning of correlation between a radio information test given just before the course and grades determined by an

achievement test--which is very similar to the radio information test--given a week afterwards is not too clear. Probably the coefficient obtained is more in the nature of a reliability coefficient than a validity coefficient, or it may merely show the degree of similarity of content between the two information tests.

#### IV. PROCEDURE

##### A. In the field

The tests and check lists were administered at the beginning of the courses. Both the Enlisted Communications Course and the Enlisted Radio Repairman Classes were divided at random between those taking Forms 1 and 2 of the Radio Information Test.

##### B. In PRS

1. Intercorrelations, means and SD's were computed for all variables separately, by course and by form of the Radio Information Test administered. Each  $r$  was computed for all cases available.

2. The frequency distributions for the information tests were determined.

3. Biserial correlations between the criterion and each item were computed, together with difficulty values in both the Enlisted Communications and the Radio Repairman Courses.

4. These data were transferred to the item cards employed in a total score item analysis on a reception center population. This total score item analysis was accomplished in the study referred to in the introduction of this paper (PRS #568). Cards had been prepared with item content and difficulty values for five quintiles of the test. In selecting the items the validities against grades in the Radio Repair Course were more heavily weighted than those for the Enlisted Communications Course. Difficulty values from the original item analysis study with new inductees were used in preference to those obtained with the selected service school populations used in the present validity studies. In general it was attempted to obtain items with high validity, low difficulty values, and low correlations with the remaining items.

#### V. RESULTS

1. The means, SD's and intercorrelations for the enlisted communication trainees taking Form 1 and for those taking Form 2 are presented as Table I while comparable data for the Enlisted Radio Repairman are presented as Table II.

TABLE I

MEANS, STANDARD DEVIATIONS AND INTERCORRELATIONS OF TEST SCORES AND THE FINAL COURSE GRADE AMONG TRAINEES IN THE ENLISTED COMMUNICATIONS COURSE AT THE TANK DESTROYER SCHOOL PRESENTED SEPARATELY FOR THOSE TAKING FORM 1 AND THOSE TAKING FORM 2 OF THE RADIO INFORMATION TEST CAMP HOOD, TEXAS, FEBRUARY, 1944.

	1	2	3	4	5
MEAN **	111.1	108.6	15.7	22.1	84.2
SD **	12.9	14.0	13.7	10.0	13.9
F 1. AGCT-1		.57(86)*	.26(86)*	.14(86)*	.60(86)*
O 2. MA			.49(86)*	.38(86)*	.48(86)*
R 3. RADIO INF. -1				.43(91)*	.45(91)*
M 4. EXPERIENCE CHECK LIST					.25(91)*
I 5. COURSE GRADES					
	1	2	3	4	5
MEAN **	112.3	108.0	19.0	23.2	86.9
SD **	12.0	13.8	17.4	12.3	12.3
F 1. AGCT-1		.54(110)*	.29(117)*	.17(117)*	.45(117)*
O 2. MA			.53(110)*	.26(110)*	.45(110)*
R 3. RADIO INF. -1				.54(131)*	.44(131)*
M 4. EXPERIENCE CHECK LIST					.13(131)*
2 5. COURSE GRADES					

\* Number of Cases

\*\* The means and standard deviations are those obtained in computing that coefficient involving the largest number of cases.

TABLE II

MEANS, STANDARD DEVIATIONS AND INTERCORRELATIONS OF TEST SCORES AMONG ENLISTED RADIO REPAIRMEN AT THE TANK DESTROYER SCHOOL PRESENTED SEPARATELY FOR THOSE TAKING FORM 1 AND THOSE TAKING FORM 2 OF THE RADIO INFORMATION TEST, CAMP HOOD, TEXAS, FEBRUARY 1944

	1	2	3	4	5	6
MEAN **	116.3	114.9	37.2	32.7	84.3	83.8
S.D.**	8.7	12.8	24.6	13.7	11.1	5.5
F 1. AGCT-1		.24(67)*	.31(75)*	.23(75)*	.23(75)*	.36(75)*
O 2. MA			.54(67)*	.54(67)*	.48(67)*	.38(67)*
R 3. RADIO INF.-1				.69(79)*	.63(79)*	.63(78)*
M 4. EXP. CHECK LIST					.51(79)*	.50(78)*
1 5. RADIO THEORY COURSE GRADE						.49(78)*
6. TEST AND REPAIR COURSE GRADE						

	1	2	3	4	5	6
MEAN **	116.0	113.8	11.0	32.2	84.4	84.4
S.D. **	11.6	11.3	24.2	12.0	13.2	4.2
F 1. AGCT-1		.36(55)*	.17(57)*	.04(58)*	.16(57)*	.22(57)*
O 2. MA			.41(55)*	.25(55)*	.40(54)*	.46(54)*
R 3. RADIO INF.-2				.62(62)*	.60(59)*	.56(59)*
M 4. EXP. CHECK LIST					.44(59)*	.42(59)*
2 5. RADIO THEORY COURSE GRADE						.65(58)*
6. TEST AND REPAIR COURSE GRADE						

\* Number of Cases

\*\* The means and standard deviations cited are those obtained in computing that coefficient involving the largest number of cases.

2. The means and standard deviations are of some interest. Even though the entrance standards with respect to AGCT-1 and MA were theoretically the same, the means are higher for AGCT-1 in each instance and the SD's lower--showing a pattern which might well have occurred if selection were on AGCT-1 alone. In the case of those in the Enlisted Communications Course selection definitely lowered the correlations of AGCT-1 and possibly those of MA with other variables. In this connection it might be noted that the means of the AGCT-1 are higher than those usually obtained in courses where entrance is based on a score of 90 on the AGCT-1 and the MA. The degree to which selective factors influenced the intercorrelations of the variables of Table II is not so clear. It can be seen that the AGCT-1 and MA means are each somewhat higher than in the case of the Enlisted Communications Course Trainees (Table I).

The means on the Radio Information Tests are considerably higher and those for the check list somewhat higher than in Table I. These differences offer no definite clue as to the selective procedure.

3. The intercorrelations of Table I show a decided superiority of AGCT-1 over the other predictors in spite of the aforementioned biasing effect which must have occurred because of selection on AGCT-1. If we drop out the Experience Check List as apparently contributing no increment of predictive efficiency and correct the correlations \*\* for restriction on the assumption that selection occurred on AGCT-1 alone, we obtain the entries listed in Table III. Since the means of selection appears less clear in the case of Table II no attempt was made to correct the correlations for selection.

TABLE III

INTERCORRELATIONS CORRECTED FOR RESTRICTION IN RANGE OF TEST SCORES AND FINAL COURSE GRADES AMONG TRAINEES IN THE ENLISTED COMMUNICATIONS COURSE AT THE TANK DESTROYER SCHOOL, CAMP HOOD, TEXAS, FEBRUARY, 1944

	1	2	3	4
1. AGCT-1		.80	.50	.77
2. MA			.50	.71
3. RADIO INFORMATION				.52
4. COURSE GRADES				

From Table III it can be seen that when allowance is made for the effect of the restricted range of AGCT, Radio Information adds nothing to the prediction obtainable with AGCT-1 alone.

\* Correlations with AGCT-1 were corrected according to the formula  $rk / (1 - (1-k^2)r)^{\frac{1}{2}}$  while the remaining formula  $(ryz - (1-k^2) rxyrzz) / (1 - (1-k^2) r^2x)^{\frac{1}{2}} - (1 - (1-k^2) rzx)^{\frac{1}{2}}$  where x is AGCT and k is the ratio of obtained SD for AGCT to 22.5-its assumed value in the general population.

\*\* The average of the two entries in the two component parts of Table I weighted according to their N's, was employed as an estimate of the correlations as they would have been if the two populations had been thrown together before the correlations were computed. It seemed justifiable to assume that this procedure would yield an accurate estimate since the missing elements of the full formula functions of the difference between overall means and SD's and means and SD's for each sub-population are very small in each instance.

4. Turning back for a moment, it may be noted that the pattern of intercorrelation in the two matrices of Table II is distinctly different from that in Table I with respect to several points. First of all, the experimental tests and the check list correlate much more highly with grades in Table II than in Table I. On the other hand the validity of AGCT-1 is very considerably lower and that of MA somewhat lower in Table II than in Table I. While the SD's of AGCT-1 and MA are smaller in Table II, it is not certain that the restriction occurred directly on either or both of these variables, and in any event, the drop in validity does not appear due to this factor. The rather considerable drop in the correlations between AGCT-1 and MA are of interest in this connection. No explanation for this drop is readily apparent. Note that the pattern of correlations with grades in Radio Theory and other predictors corresponds rather closely to the correlations between Test and Repair grades and the various predictors even though the first is an information measure of a verbal type and the second consists largely of evaluations of practical work of the courses.

5. While the validity of the check list is clearly higher in Table II than in Table I, its correlation with the Radio Information Test is also considerably increased over the values obtained in Table I. Hence, even in Table II it adds little or nothing to prediction of either of the criteria. It might of course be maintained that the check list is more nearly a criterion than a predictor. If this were true it is to the advantage of the Radio Information Test that it correlates highly with the check list. While it appears rather unusual that the Check List should add nothing to the predictive efficiency of the Radio Information Test in predicting goodness of performance in work of a practical nature, the problem could not be wholly settled without measures of performance on the job.

6. An important aspect of an evaluation of the Radio Information Test for selecting trainees is the problem of item difficulty. After the original analysis, the work on the test was abandoned, since the distributions were positively skewed to an extreme degree in the Reception Center population for which the test was constructed. Since that time it has appeared likely that the test will, if introduced, be employed at the training center level so that the high difficulty level of the test is not so important a consideration as in evaluating its usefulness for a Reception Center population.

7. Table IV gives the frequency distributions of the total test scores within the several training populations. It is encouraging that the distributions are positively skewed in both populations.

8. In Tables V and VI the item analysis results are summarized. Asterisks indicate the items tentatively selected for final use. In selecting items the validities within the Radio Repair course were weighted more heavily than were those for the Enlisted Communication Course. In judging difficulty, however, consideration was given all populations including that on a random group of basic trainees which was intended originally to provide the basis for item selection (see PFS Report #568). While it was desired to select items with low total score correlation in the original item analysis sample, this consideration affected the selection very little since nearly all items had low total score correlation. Item content was, of course, an

TABLE IV

FREQUENCY DISTRIBUTIONS OF RADIO INFORMATION FORMS 1 AND 2  
 IN THE ENLISTED COMMUNICATIONS TRAINEES AND THE RADIO  
 REPAIR TRAINEES COMPRISING THE ITTM ANALYSIS SAMPLES  
 CAMP HOOD, TEXAS, FEBRUARY, 1944

	FORM 1		FORM 2	
	RR	EC	RR	EC
100-104	8	2	3	11
95-99	15	28	12	35
90-94	12	12	14	24
85-89	7	10	6	21
80-84	9	10	7	7
75-79	11	7	4	13
70-74	5	7	4	8
65-69	4	6	3	4
60-64	5	2	3	3
55-59	2	4	1	3
50-54		1	1	
45-49		1	1	
40-44		1		1
35-39	1			1
30-34				
	<hr/>	<hr/>	<hr/>	<hr/>
	79	91	59	131

TABLE V

ITEM DIFFICULTIES AND BISERIAL VALIDITIES FOR FORM 1 OF THE  
 RADIO INFORMATION TEST WITH 91 TRAINEES OF THE ENLISTED  
 COMMUNICATIONS COURSE AND 79 TRAINEES OF THE RADIO  
 REPAIR COURSE CAMP HOOD, TEXAS, FEBRUARY, 1944

	RADIO REPAIR		ENLISTED COMMUNICATIONS	
	Percent Correct	Validity	Percent Correct	Validity
4*	47	.67	21	-.25
5*	57	.73	16	-.02
6*	59	.76	19	-.06
7*	66	.64	15	.17
8*	81	.62	21	-.05
9*	81	.55	16	.07
10	34	.25	13	-.20
11*	72	.67	19	.15
12*	37	.56	8	.09
13	38	.15	6	.17
14*	51	.52	20	-.12
15*	62	.57	16	.23
16*	67	.58	27	.02
17	33	.05	33	.02
18	80	.27	35	.24
19	9	.26	16	-.27
20	23	.23	10	-.06
21	8	.44	12	-.31
22	49	.37	24	-.09
23*	35	.43	21	-.50
24	71	.20	74	.01
25	84	.11	68	.15
26*	77	.82	76	.30
27*	97	.99	79	.23
28	84	.35	54	.27
29	87	.28	46	.18
30	64	.46	41	.19
31	76	.33	50	.07
32	77	.11	44	.28
33	24	.17	28	.02
34	82	.29	85	.46
35*	28	.53	15	.27
36	30	.33	36	.53
37*	32	.66	35	.47
38*	85	.61	68	-.00
39	30	.20	37	-.25
40*	84	.39	60	.43
41*	32	.50	50	.58
42*	70	.50	23	.46
43	39	.08	13	.33
44	34	-.27	30	-.15
45*	50	.45	38	-.14
46*	66	.61	34	.24
47*	62	.54	35	-.20

TABLE V (Cont'd)

	RADIO REPAIR		ENLISTED COMMUNICATIONS	
	Percent Correct	Validity	Percent Correct	Validity
48	24	-.05	11	-.34
49	34	.14	18	-.31
50*	87	.65	50	.10
51	22	-.01	4	.10
52	19	-.10	18	-.06
53	18	.19	12	-.01
54	14	.19	6	.02
55	20	.23	12	-.29
56	26	.12	9	-.16
57*	53	.41	13	.11
58	24	.14	9	-.16
59	59	.32	19	-.08
60	32	.03	12	-.27
61	11	-.24	5	-.28
62	25	.23	12	-.31
63*	86	.46	82	.57
64	38	.10	24	-.17
65	44	.25	53	.14
66*	57	.42	16	-.10
67	44	.55	27	.44
68	26	-.25	23	-.19
69	19	.04	18	-.01
70	43	.35	19	.19
71	15	.19	15	-.13
72	61	.31	58	.28
73*	39	.40	12	.01
74*	71	.43	10	.17
75*	67	.58	46	.03
76*	53	.57	24	-.08
77*	64	.54	24	.28
78	34	.25	12	-.07
79*	64	.67	18	-.20
80	19	.18	9	-.21
81	30	.16	21	.21
82	14	.11	8	-.22
83*	51	.52	31	.05
84*	54	.50	16	.15
85*	24	.40	10	-.18
86	1	-.10	12	-.18
87	32	.22	30	.18
88	10	-.10	06	-.16
89*	35	.69	14	.01
90*	59	.46	23	.20
91	64	.24	60	-.07
92	15	.21	9	-.38
93	30	.11	22	-.17
94*	29	.59	3	-.20
95	22	.02	11	.12
96*	29	.48	12	-.11
97*	19	.43	4	.06
98*	23	.63	4	.06

TABLE V (Cont'd)

	RADIO REPAIR		ENLISTED COMMUNICATIONS	
	Percent Correct	Validity	Percent Correct	Validity
99	26	-.06	14	-.41
100*	54	.50	27	.09
101	20	.29	03	.15
102	47	.38	9	-.01
103	34	.38	6	.50
104	16	-.26	6	.32
105	34	.39	13	-.17
106	11	.17	4	.31
107	23	.06	18	.33
108	23	.35	11	.04
109	39	-.11	27	.09
110	10	-.04	4	-.57
111	0	-	3	-.60
112	6	-.05	5	-.11
113	15	.35	12	.03
114	39	.31	43	.44
115	20	-.04	13	.04
116	22	.31	13	.30
117	16	.41	5	.38
118	25	.28	8	.22
119	11	-.19	10	-.02
120	14	.23	14	-.03
121	20	.05	21	-.05
122	13	.01	6	.20
123	18	.14	10	-.11
124	33	-.02	30	-.01
125	18	.12	11	-.15
126	5	.37	4	-.11
127	18	.23	11	.04
128	18	.12	18	.22
129	9	.40	5	-.11
130	14	.04	12	-.05
131	10	-.04	4	.06
132	13	.12	9	-.01
133	20	.16	23	.26
134	8	.21	5	.07
135	13	.37	31	.31
136	11	.07	4	-.20
137	10	.25	12	.26
138	10	-.19	12	-.13
139	6	.03	6	-.23
140	4	-.02	3	-.81
141	8	.24	12	.21
142	5	-.20	5	-.21
143	2	.01	8	.00
144	4	.32	4	-.15
145	1	.49	3	-.28
146	4	.44	2	-.29
147	4	.21	10	.21
148	2	-.45	2	-.44

\* Items tentatively selected for Final Form 1.

TABLE VI

ITEM DIFFICULTIES AND BISERIAL VALIDITIES FOR FORM 2 OF THE  
 RADIO INFORMATION TEST AMONG 59 ENLISTED RADIO REPAIRMEN  
 AND AMONG 131 ENLISTED COMMUNICATIONS COURSE TRAINEES  
 CAMP HOOD, TEXAS, FEBRUARY, 1944

	RADIO REPAIR		ENLISTED COMMUNICATIONS	
	Percent Correct	Validity	Percent Correct	Validity
4	73	-.15	50	.19
5*	90	.86	47	.31
6*	98	.58	62	.21
7*	71	.51	37	.27
8*	76	.61	47	.28
9*	59	.59	39	.34
10	29	.12	23	.29
11	83	.13	69	.30
12*	73	.48	38	.18
13	22	.33	19	-.16
14*	74	.45	46	.15
15	25	-.12	34	.21
16	32	.07	25	.03
17	49	.25	21	.10
18	32	-.05	32	.09
19	44	.07	46	-.02
20	54	.26	67	.11
21	88	.02	84	.09
22	56	.31	38	.20
23	32	-.14	18	.24
24	74	.14	52	.21
25	19	-.02	18	.13
26	59	.19	44	-.05
27	20	.15	16	-.03
28*	73	.44	72	.22
29*	46	.34	34	.36
30	30	.19	11	.28
31*	59	.46	37	.26
32	20	.15	18	.10
33	68	.22	34	.10
34	42	.00	37	.10
35	22	.24	25	.00
36*	46	.42	21	.28
37*	52	.35	16	.20
38	74	.26	31	.28
39	36	.00	21	.17
40	24	.25	17	.12
41	37	.23	21	.06
42*	47	.45	37	.33
43	42	.26	38	.23
44*	54	.60	21	.21
45	30	.08	14	.19
46	15	.39	8	-.61

TABLE VI (Cont'd)

	RADIO REPAIR		ENLISTED COMMUNICATIONS	
	Percent Correct	Validity	Percent Correct	Validity
47*	30	.52	14	.09
48	30	.39	9	.24
49	44	.35	24	.03
50	56	.11	64	.75
51*	63	.39	17	.25
52	34	.24	20	.17
53	14	.08	10	.03
54*	30	.39	28	.12
55*	71	.36	18	.21
56*	51	.38	30	.11
57	22	.18	14	.23
58	46	.16	22	-.14
59	52	.24	24	.19
60	29	.30	19	.22
61*	34	.38	21	.26
62	29	-.09	22	-.05
63	8	-.11	22	.02
64	73	.05	58	.19
65	71	.30	44	.47
66	63	.27	29	.23
67	64	.28	34	.13
68	25	.36	19	.05
69	74	.39	56	.08
70	61	-.12	38	.30
71	49	.19	30	.20
72*	29	.40	16	.22
73	32	.31	29	.17
74*	74	.43	53	.45
75	90	.30	67	.25
76	27	.30	27	.36
77*	61	.56	27	.19
78	25	.12	40	-.09
79*	51	.39	23	.17
80	86	-.11	82	-.07
81*	52	.48	21	.05
82*	78	.48	55	.18
83*	29	.40	16	-.08
84	29	.38	18	.16
85	59	.24	40	.17
86*	86	.50	72	.40
87	24	.37	14	.18
88	25	.06	22	.09
89	5	.03	4	.03
90	12	.11	14	-.09
91	64	.16	42	.16
92	44	.19	23	.14
93*	36	.45	24	.26
94	32	.11	20	.16
95*	41	.43	26	.11

TABLE VI (Cont'd)

	RADIO REPAIR		ENLISTED COMMUNICATIONS	
	Percent Correct	Validity	Percent Correct	Validity
96*	74	.51	27	.01
97*	39	.40	18	-.07
98*	12	.40	10	.19
99	24	.32	17	.13
100	17	-.19	14	.11
101*	41	.49	11	.12
102	41	.02	29	.28
103	61	.19	30	-.02
104	19	.37	19	.06
105	20	.20	17	-.03
106	17	.33	14	-.07
107	5	-.10	9	-.15
108	17	-.08	21	-.04
109	49	.19	43	-.09
110	37	.31	24	.21
111*	30	.43	21	.20
112*	20	.47	14	.04
113*	36	.56	22	.15
114	34	.29	13	.27
115*	10	.39	17	.06
116*	19	.39	24	.04
117	22	.09	25	.02
118	22	.42	11	.04
119*	30	.45	27	.18
120*	36	.63	27	.21
121*	15	.55	15	.10
122	42	.31	35	.14
123	19	.35	18	.09
124	17	.40	7	.16
125*	20	.45	9	.16
126	41	.29	46	.22
127	14	.47	8	.15
128	14	.17	14	.16
129*	27	.36	29	.17
130	25	.32	35	.27
131	17	.12	18	.07
132	27	.34	29	.14
133	24	.33	24	.07
134	20	.33	11	.13
135	3	.25	4	-.10
136*	10	.50	14	.08
137	7	-.40	5	-.28
138	24	-.01	18	.19
139*	8	.51	10	.22
140*	12	.50	10	.21
141*	17	.54	8	.02
142	5	.52	8	-.06

TABLE VI (Cont'd)

	RADIO REPAIR		ENLISTED COMMUNICATIONS	
	Percent Correct	Validity	Percent Correct	Validity
143	3	.42	2	-.39
144	5	.40	5	-.45
145	5	.46	7	-.14
146	-	-	3	.00
147	2	.55	6	-.08
148	5	.52	8	-.04

\* Items tentatively selected for Final Form 2.

additional consideration. All item analysis information had been summarized on item analysis cards, including the item content, before selection was made.

#### VI. CONCLUSIONS

1. The experimental tests add nothing to AGCT in predicting grades in the Enlisted Communications Course.
2. The Radio Information Tests predict grades in the Radio Repair Course with considerable accuracy.
3. No predictor other than Radio Information adds to the prediction obtained with this test alone.
4. Conclusions concerning prediction of two sub-criteria of Radio Theory grades and grades in practical work in tests and repair are almost identical both in absolute magnitude and with respect to relative size for the different predictors.

#### VII. TECHNICIANS

##### 1. Field Work

Data were obtained by mail.

##### 2. Preparation of Report

Hubert E. Brogden, PhD

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Personnel Res. Sect., The Adjutant General's Office

~~ATG- 207 152~~  
The Validity of the ~~ATI~~ Information Test Forms :  
1 and 2 in Predicting Success Among Trainees at the  
Radio Repair Course and in the Communications Course at the  
Tank Destroyer Training School, Camp Hood, Tex.

16 July 54

Job 1944

Performance Test  
Radio Operators  
7 July 54

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NTIS, Auth: ARI notice, 2 May 80