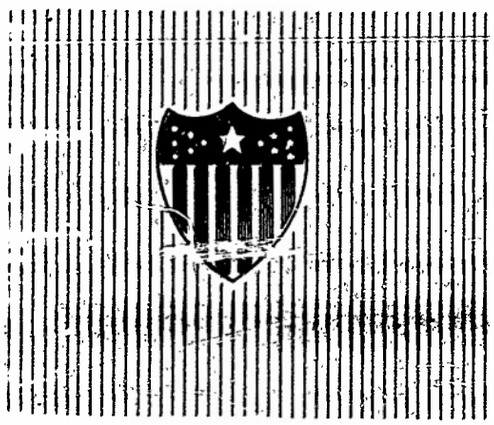
PRS Report 686



PERSONNEL RESEARCH SECTION

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THE VALIDATION OF TWO FORMS OF THE ELECTRICAL INFORMATION TEST AND TWO FORMS OF THE RADIO INFORMATION TEST AMONG TRAINEES AT THE RADIO REPAIR COURSE, CENTRAL SIGNAL CORPS SCHOOL, CAMP CROWDER, MISSOURI JANUARY 1944

I. GENERAL.

1. In the development of a battery of tests for general classification purposes both information and non-information tests were constructed. Included in this battery were four forms each of a Radio Information Test and an Electrical Information Test. It was discovered, however, that these two sets of tests were much too difficult for general reception center use. In view of the very poor performance of new inductees on these tests, and considering the pains that had been taken, during construction, to obtain an appropriate level of difficulty, it was concluded that nothing could be gained, through revision or item selection, toward obtaining the necessary reduction in difficulty. Hence analysis of the tests so far constructed was discontinued. One further attempt was made to construct a single test, Electrical and Radio Information for Reception Center use. However, on trial, this test also appeared to be too difficult.

2. At a later date it was decided that information-type tests would be employed primarily at the training center level. With this shift in the population the objection to the difficulty level of the tests was no longer so important. It was decided, consequently, to complete the several validity studies which had been projected. The present report concerns one such study: the Validation of Forms 3 and 4 of both the Electrical Information Test and the Radio Information Test.

II. POPULATION.

1. In all, data sufficiently complete for processing was obtained on 222 Radio Repair Trainees. These were divided into two comparable sub-populations so that Form 3 of the Electrical and of the Radio Information Test could be administered to one population and Form 4 to the second.

2. Pre-requisites of the Radio Repair course are (1) an ACCT score of 110 or (2) an ACCT score of 95 plus one year of high school education and/or experience in the manufacture and repair of radios.

III. VARIABLES.

A. Variables obtained from Army records:

1. Years of schooling
2. AGCT standard score
3. Mechanical Aptitude
   a. Total standard score
   b. MA Part I Army Grade
   c. MA Part II Army Grade
   d. MA Part III Army Grade
4. General Electrical Information

A signal corp test - no full description available. It will be seen in considering the results , that the test correlates highly with the experimental Electrical Information Tests.

5. Signal Corps - Code Aptitude Test

A Signal Corps test presented on phonograph record set XC-209 requiring various auditory discriminations of pitch, pattern, etc. There are 77 items. Score is number right. Total score from this record presented twice constitutes Radio-telegraph Operator Aptitude Test, ROA-1, X-1.

B. Experimental Measuring Instruments.

1. Radio Experience Check List

This consists of an indication of experience with various types of radio jobs. It was intended to include not only professional or semi-professional experience, but also informal experiences of an "odd job" nature such as may have been accumulated by individuals not directly working in the radio or electrical fields. The subject is required to make one mark for all jobs or operations performed at least once within the last year and check twice those performed five or more times. The score is the total number of checks.

2. Radio Information Test, Form 3

The content of this information type test is similar to that of most information type tests except that the items were constructed for a functional rather than a theoretical level. As a means of achieving this end, subject matter experts teaching at the functional level were employed to write items for the test. There are 148 four choice items in the test. The score is R-1/3 W.

3. Radio Information Test, Form 4

This is an experimental test intended to be equivalent to Radio Information, Form 3. The scoring formula is R-1/3 W.

4. Radio Check List Score on the Radio and Electricity Experience Check List

This variable is obtained by rescoring the above described check list on those items pertaining particularly to radio experience.

5. Electrical Information, Form 3

This is a test of 123 items of the same type as Radio Information, Form 3. Again the items were intended to measure at the functional

rather than the theoretical level.

6. Electrical Information, Form 4

This test is a form roughly equivalent to Electrical Information, Form 4. It contains 126 items.

C. The Criteria.

Since the Radio Repair Course included a number of subjects, some of which could be skipped entirely if the trainee passed qualifying exams, the grades obtained for these several subjects were handled separately in the analysis of the data. Inspection of the data revealed that the first two subjects - Principles of Electricity AC and Principles of Electricity DC - were skipped entirely by such a large percentage of the population and had in any event such small standard deviations that it seemed expedient to disregard these data entirely. Similary, incompleteness led to discarding of the grade in Test and Repair, FM, the final subject in the course. A further division with shopwork - the third subject - and Elements of Radio, and Tests and Repair, AM was made since the content of the first of these appeared to be quite different from that of the last two. Since variable amounts of time were involved in completing the subjects it seemed advisable to include the time required to complete each one as additional criterion variables. These time variables were combined in the same manner as the grades, that is, time scores on shopwork were processed separately from those on Principles of Electricity and Tests and Repair, AM. Grading was, so far as possible, of a performance character in all subjects. In addition to the DC grades several measures were obtained relating to various other aspects of the trainees proficiency. The criteria finally employed were then

1. Shopwork Grade
2. Elements of Radio Grade
3. Tests and Repair, AM, Grade
4. Degree of skill (a three category variable)
5. Soldier Efficiency (a general rating on military aspects of training)
6. Efficiency (a general rating on non-military aspects of training)
7. Failure (a dichotomous variable indicating merely whether the trainee graduated)
8. Total course grade as determined by the school (sum of variables 1, 2, and 3.)

IV. PROCEDURE.

A. In the field.

Tests were administered by qualified personnel from the Personnel Research Section.

B. In PRS.

1. Intercorrelations, means and standard deviations of all variables were computed for both populations. Correlation of scores were computed against selected criteria.

2. In order to select the more valid items the total validating population for each form was divided into four groups and the percentage of correct responses in each group was computed.

V. RESULTS.

1. The intercorrelations of all variables in the group administered Form 3 are given in Table I together with the means and standard deviations while corresponding calculations for those administered Form 4 are summarized in Table II.

TABLE I

MEANS, STANDARD DEVIATIONS AND INTERCORRELATIONS OF LISTED VARIABLES
FOR 100 TRAINEES ADMINISTERED FORMS 3 AND 4 OF EXPERIMENTAL TESTS
AT THE RADIO REPAIR COURSE, CAMP C. WER, MISSOURI

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
M	124.7	125.7	1.4	2.3	1.8	38.2	93.5	39.0	76.3	5.7	66.1	91.2	86.2	34.6	204.9	2.0	1.8	1.4
SD	9.3	10.7	.59	.78	.68	6.0	31.6	10.5	29.2	3.2	15.8	2.4	4.3	6.3	74.0	.17	.41	.49
1.AGCT-1		.346	-.206	-.309	-.112	.251	.134	-.029	.170	-.006	.290	.258	.273	-.013	-.101	-.100	.059	.279
2.MM Total			-.558	-.766	-.618	.320	.121	.323	.510	.227	.599	.289	.268	-.296	-.089	-.065	.144	.145
3.MM P/I				.143	.267	-.245	-.053	-.251	-.321	-.234	-.439	-.361	-.215	.034	-.092	.029	.019	-.111
4.MM P/II					.361	-.233	-.128	-.156	-.201	-.117	-.242	-.097	-.194	.115	.038	.066	-.081	-.016
5.MM P/III						-.193	-.027	-.300	-.190	-.193	-.313	-.271	-.200	.394	.046	.125	-.034	-.143
6.MMI							.053	.410	-.098	.465	.048	.218	.581	-.267	-.100	.006	.328	.297
7.SCCL								-.060	-.004	.051	.133	.075	.073	.035	.218	-.083	-.193	-.141
8.Radio Check List									.579	.747	.681	.009	.450	-.452	-.261	-.044	.211	.276
9.Radio Inf. Form 3										.700	.791	.230	.733	-.251	-.126	-.062	.336	.393
10.Radio Score on Check List											.435	.093	.522	-.424	-.185	-.071	.123	.305
11.Elect.Inf. Form 3												.425	.641	-.235	-.131	-.068	.254	.312
12.Grade Shopwork													.341	-.155	-.064	-.013	.099	.268
13.Grade Elements of Radio Radio & Repair														-.317	-.174	-.055	.528	.617
14.Time Shopwork															.045	-.067	-.198	-.234
15.Time Radio & Repair																.050	-.278	-.189
16.Degree of Skill																	-.093	-.096
17.Soldier Efficiency																		-.384
18.Efficiency																		

TABLE II

MEANS, STANDARD DEVIATIONS AND INTERCORRELATIONS OF SELECTED VARIABLES
FOR 122 TRAINEES ADMINISTERED FORM 4 OF THE PSYCHOMOTOR TESTS
AT THE RADIO REPAIR COURSE, CAMP CROWDER, MISSOURI

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
M	126.2	125.1	1.1	2.2	2.0	36.7	83.1	36.7	75.5	.7	56.0	91.2	85.1	35.9	194.0	1.9	1.8	1.4
SD	10.3	10.5	.56	.78	.77	6.5	29.4	12.1	25.8	3.2	17.1	2.1	.43	6.5	69.1	.33	.34	.51
1. MCT-1		.141	.035	.283	.141	.036	.008	.285	.017	.241	.132	.149	.036	.048	.138	.215	.067	.029
2. MA-Total			.137	.805	.872	.375	.057	.344	.369	.265	.459	.396	.375	.366	.067	.055	.288	.188
3. MA P/I				.217	.428	.425	.131	.515	.467	.393	.503	.292	.304	.353	.188	.178	.221	.263
4. MA P/II					.446	.289	.039	.151	.225	.112	.290	.183	.302	.307	.079	.116	.167	.127
5. MA P/III						.467	.158	.335	.403	.235	.519	.317	.390	.347	.033	.008	.206	.157
6. GCI							.033	.501	.758	.445	.784	.360	.632	.299	.108	.276	.314	.378
7. SCCA								.000	.124	.012	.240	.216	.050	.023	.165	.080	.083	.123
8. Radio Check List									.506	.822	.479	.323	.415	.296	.155	.193	.181	.288
9. Radio Inf. Form 4										.589	.709	.293	.687	.349	.191	.174	.187	.369
10. Radio Score on Check List											.406	.189	.443	.331	.194	.124	.160	.227
11. Elect. Inf. Form 4												.221	.583	.334	.150	.084	.291	.319
12. Grade Shopwork													.390	.066	.032	.051	.313	.318
13. Grade Elements of Radio plus Radio & Repair														.279	.111	.270	.350	.640
14. Time Shopwork															.132	.132	.115	.090
15. Time Radio & Repair																.008	.301	.132
16. Degree of Skill																	.143	.235
17. Soldier Efficiency																		.273
18. Efficiency																		

2. In predicting grades in Shopwork Electrical Information seems to be the more accurate instrument. Validities of Radio Information GEI and MA are also quite high. While the validity of AGCT is low, the restriction in range, through selection on this variable has been considerable so that the two coefficients presented do not provide too definite information as to the valifity of AGCT in an unselected population.

3. Grades in Elements of Radio, and Tests and Repair, AM, are predicted with considerable accuracy by the Radio Information Tests. While it is doubtful that anything appreciable would be added to the prediction by the Electrical Information Tests or by GEI, it should be noted that the validities of these tests are quite high. Note also that the Check List scores have quite appreciable validity even though they correlated quite low with Shopwork scores.

4. Neither of the time scores is predictable with high degree of accuracy. The second, that for Radio Elements and Tests and Repair, shows almost no relation to any of the predictors. It is interesting, however, that the Check List rakes a relatively better showing in predicting the time scores than in predicting the actual grades. It is unfortunate that time scores cannot be more accurately predicted since on an a priori basis it seems much more definite that a saving of time and money is effected if time for training is shortened than if average grade is raised.

5. Of the three remaining criteria, only the general efficiency rating is predictable. The"correlation with this follow" that in prediction of Shopwork with the three information tests having the highest validity.

6. While the choice of criteria that might be made as a result of this analysis would depend largely upon apriori considerations or what it is desired to predict, it is fairly evident, in general, that our first criterion is best predicted by the Electrical Information Test and that the second is best predicted by the Radio Information Test. MA might help somewhat in prediction of Shopwork Grades and the Electrical Information Tests might help in prediction of Radio Elements and Tests and Repair AM. The realtion of AGCT to either or both of these selectors is difficult to determine from the data of the present study. While the coefficients reported here are sufficiently low to suggest that this measure can profitably be ignored entirely a perusal of the PRS statistical manual will reveal a number of validities in courses of this kind of quite respectable magnitude. Probably it will be considered advisable to employ AGCT as a screen prior to testing with any Electrical or Radio Information Test which may be developed as a result of this project. This problem will be discussed in more detail in the final technical report covering validation work on a number of the newer information and non-information tests.

7. The percentage for each of Electrical Information 3 and 4 in success ive fourths and the total of the two populations are given in Tables III and IV. The criterion is the total of the grades in Shopwork, Radio Elements and Tests and Repair, AM. This criterion was chosen as the

nearest approximation to total grade that was available on a large number of cases. Grades in the first two subjects, Principles of Electricity DC and Principles of Electricity AC, and that for the last subject, Test and Repair, AM were not available in large numbers of cases and had to be disregarded. The intercorrelations of the criteria were not available at the time when the item analysis was initiated and it did not seem feasible to delay until they were available. Very possibly it might be argued that the criterion for item analysis of the Electrical Information tests was unduly weighted by "radio" content. Because of this, the items selected were carefully examined to insure that there was no bias toward content directly related to operation of radios.

TABLE III

PERCENTAGE OF CORRECT RESPONSE FOR EACH ITEM OF ELECTRICAL INFORMATION 3 IN EACH FOUR EQUALLY SIZED GROUPS SUBDIVIDED ACCORDING TO CRITERION SCORE

ITEM	QUARTILES 1	2	3	4	TOTAL
4	91	97	91	97	94
5	88	88	97	100	93
6	100	100	100	100	100
7✓	88	100	100	100	97
8✓	76	97	100	100	93
9✓	36	76	88	97	74
10✓	76	91	100	100	92
11✓	94	94	97	100	96
12✓	79	85	82	100	86
13	91	91	85	91	90
14	31	31	67	39	57
15✓	91	100	100	100	98
16✓	76	91	85	94	86
17✓	76	76	85	97	84
18	79	82	94	97	88
19✓	64	94	97	100	89
20	52	30	58	39	45
21✓	33	67	79	85	66
22	67	67	76	85	74
23✓	48	55	61	67	58
24	45	79	79	97	75
25✓	58	61	73	94	72
26✓	27	67	85	97	69
27✓	94	94	97	100	96
28✓	64	61	73	91	72
29	3	6	15	6	8
30✓	91	91	100	100	96
31✓	70	88	97	97	88
32✓	61	91	97	100	87
33	64	61	64	76	66
34	33	79	64	88	66
35✓	76	94	100	100	92
36✓	33	36	42	55	42
37	9	30	55	82	44
38	21	33	36	45	34
39✓	58	82	85	82	77
40✓	82	85	100	100	92
41✓	94	91	100	100	96
42✓	76	94	97	97	91

✓ Items tentatively selected for inclusion in a final form of an Electrical Information Test.

TABLE III (cont'd)

ITEM	1	2	3	4	TOTAL
43✓	85	91	97	97	92
44	3	15	18	30	16
45	45	48	76	82	63
46	18	48	61	61	47
47	33	55	67	79	58
48	30	45	45	58	44
49	24	30	55	73	46
50✓	24	58	79	97	64
51	36	45	52	58	48
52	27	45	55	45	43
53	76	70	88	70	76
54	18	12	15	33	20
55	24	64	73	88	62
56	42	73	73	82	68
57	58	64	58	76	64
58	24	27	36	21	27
59	12	18	6	33	17
60	18	9	18	30	19
61	15	70	64	76	64
62	33	33	33	27	32
63	15	12	24	30	20
64	21	30	27	30	27
65	27	24	36	42	32
66	30	42	42	24	34
67	9	27	39	48	31
68	42	76	88	97	76
69	12	21	9	21	16
70✓	36	33	64	82	54
71	27	64	91	97	70
72✓	27	76	88	100	73
73	21	55	58	97	58
74✓	21	76	73	91	65
75	27	27	42	61	39
76	15	18	15	21	17
77✓	67	82	88	94	83
78	52	45	55	64	54
79✓	61	73	67	82	71
80	12	24	30	52	30
81	52	45	64	64	55
82✓	18	21	24	39	26
83	33	30	36	55	38
84	73	67	64	91	74
85	55	64	85	100	76
86✓	52	79	79	88	74
87	30	42	58	91	55
88	18	33	52	64	42
89	33	18	30	15	24
90✓	48	55	61	88	63

✓ Items tentatively selected for inclusion in a final form of an Electrical Information Test.

(TABLE III (cont'd.))

ITEM	1	2	3	4	TOTAL
91	81	67	64	73	66
92✓	79	82	91	97	87
93	58	79	88	85	78
94	37	15	27	15	21
95	45	79	70	55	62
96✓	33	70	73	97	68
97✓	27	42	73	80	53
98	12	12	33	42	25
99	45	58	70	64	59
100	55	64	88	91	74
101	33	18	15	9	19
102	39	27	33	21	28
103	15	27	27	36	26
104	33	21	30	39	31
105	30	48	58	45	45
106	70	85	97	97	87
107	51	45	55	67	49
108	39	39	55	48	45
109	24	30	59	73	44
110	24	42	58	82	52
111✓	55	70	73	91	72
112	33	73	85	94	71
113	21	36	45	61	41
114✓	18	58	61	91	57
115	24	48	48	48	42
116	18	39	24	58	35
117	12	27	33	45	29
118	24	30	33	27	28
119	21	27	24	33	26
120	15	12	21	18	16
121	21	21	55	64	40
122	33	58	70	85	62
123	21	42	27	48	34
124	45	67	76	88	69
125	18	33	42	61	38
126	48	76	85	91	75

✓ ITEMS TENTATIVELY SELECTED FOR INCLUSION IN A FINAL FORM OF ELECTRICAL INTERPRETATION.

TABLE IV

PERCENTAGE OF CORRECT RESPONSES FOR EACH ITEM OF ELECTRICAL INFORMATION 4 IN EACH OF FOUR EQUALLY SIZED GROUPS SUBDIVIDED ACCORDING TO CRITERION SCORE

4	92	100	100	95	97
5	97	100	97	97	98
6/	95	97	97	100	97
7/	51	86	84	92	78
8/	76	95	95	100	89
9/	68	89	100	97	88
10/	70	92	100	97	90
11/	51	78	89	89	77
12/	81	97	100	100	94
13/	78	84	97	86	86
14/	51	70	81	92	74
15/	59	89	95	97	85
16	27	46	65	84	56
17	92	100	97	100	97
18/	78	92	100	100	92
19/	73	97	97	97	91
20/	81	89	84	97	88
21/	73	86	95	100	88
22/	22	32	57	84	49
23	51	70	92	81	74
24/	68	81	92	100	85
25/	62	73	78	84	74
26	57	65	76	95	73
27/	92	95	95	92	94
28	73	76	78	78	76
29	49	57	57	76	60
30	43	65	49	54	53
31	32	19	24	46	30
32	51	49	41	70	53
33	32	59	43	54	47
34	84	70	86	95	84
35	30	57	35	76	50
36	46	49	51	65	54
37	46	54	57	73	58
38/	35	41	32	73	45
39	24	54	43	73	48
40	35	32	35	54	39
41	10	16	14	43	24
42	41	59	49	57	49
43/	81	95	97	100	93
44/	76	70	78	89	78
45	49	57	62	76	54

/ Items tentatively selected for inclusion in a final form of an Electrical Information Test.

TABLE IV (Cont'd.)

46	19	19	22	24	21
47	11	11	5	14	10
48✓	38	38	59	70	51
49	3	8	8	5	6
50	3	16	19	32	18
51	22	22	11	38	23
52	51	81	76	92	75
53	14	19	16	24	18
54✓	68	81	81	89	80
55✓	38	35	43	59	44
56	35	41	54	76	52
57✓	24	22	30	57	33
58✓	86	86	95	100	92
59	92	86	92	100	92
60	65	97	87	97	85
61✓	75	78	89	95	84
62✓	51	41	38	78	52
63✓	14	32	30	76	40
64	24	22	30	65	37
65	32	24	8	11	19
66✓	43	57	68	70	60
67	57	73	78	81	72
68✓	70	78	95	97	84
69✓	73	84	89	92	84
70	30	38	46	54	42
71	62	73	92	76	76
72	11	22	14	41	22
73	49	70	84	100	76
74	22	5	14	35	19
75✓	70	86	95	97	87
76	11	27	35	73	36
77✓	59	57	78	84	70
78	49	62	46	78	59
79	46	62	54	68	58
80	24	22	19	41	26
81	27	32	32	59	38
82	16	11	11	27	16
83	51	62	76	70	65
84	76	95	97	100	92
85	27	22	14	49	28
86	8	11	11	19	12
87	22	8	14	27	18
88	22	19	19	41	25
89	14	14	0	11	--
90	16	22	5	16	15
91	14	19	13	30	19
92	5	8	0	11	--
93	35	30	19	59	36
94	11	8	3	5	6

✓ Items tentatively selected for inclusion in a final form of an Electrical Information Test.

TABLE IV (Cont'd.)

95	41	49	54	54	50
96	11	19	24	41	24
97	11	8	16	59	24
98	14	16	30	24	21
99	57	68	76	89	71
100	16	41	35	62	38
101/	51	54	78	81	66
102	32	24	22	57	34
103	34	24	19	46	28
104	19	19	5	19	16
105	16	11	19	16	16
106	11	19	16	32	20
107	22	38	27	49	34
108	16	30	11	35	23
109	22	24	30	70	36
110	19	8	8	11	12
111	65	59	65	76	66
112	76	81	89	84	82
113/	65	70	86	95	79
114/	27	65	62	86	60
115	49	81	95	92	79
116	19	32	30	43	31
117	59	78	89	95	80
118	35	11	30	46	30
119	35	54	70	84	61
120	51	73	78	89	73
121/	78	92	100	100	92
122	16	8	5	16	11
123/	70	92	100	97	90
124	38	49	59	70	54
125	43	57	54	76	58
126	22	14	22	62	30

/ ITEMS TENTATIVELY SELECTED FOR INCLUSION IN A FINAL FORM OF AN ELECTRICAL INFORMATION TEST.

8. Selection of the items marked with an asterisk depended upon validities obtained at the New York Trade School as well as these here reported. While little use was made of the results of the total score item analysis made in the development of the test(PRS Report # 587), this information was also available. In the actual selection process cards were used on which all pertinent validity and difficulty information and content were listed.

9. The problem in the item selection was the way in which item difficulty information should be utilized. Apparently the population at Camp Crowder is more experienced than that at the New York Trade School, or both are considerably more experienced - as would be expected - than the Reception Center population. The distribution of item difficulties is given in Table V for all three populations. It can be seen that the distributions for both forms are probably appropriate for both of the training schools although definitely inappropriate for the Reception Center Population.

TABLE V

DISTRIBUTION OF ITEM DIFFICULTIES FOR ITEMS SELECTED FOR FINAL FORMS OF ELECTRICAL INFORMATION, FORMS 3 AND 4 FOR A RECEPTION CENTER POPULATION, TRAINEES AT THE N.Y. TRADE SCHOOL AND TRAINEES AT THE SIGNAL CORPS SCHOOL, CAMP CROWDER

Percentage Correct	Form 3			Form 4		
	Reception Center	NY Trade	Crowder	Reception Center	NY Trade	Crowder
0-9	2			1		
10-19	8	1		5	1	
20-29	11	3	1	12	8	
30-39	8	5		15	3	1
40-49	3	6	1	2	11	4
50-59	4	8	6	3	8	4
60-69	3	7	3	2	5	2
70-79	1	7	10		3	7
80-89		3	7		1	10
90-100			12			12
	40	40	40	40	40	40

10. Correlations of the rescores with total course grade are .824 and .797 respectively for Forms 3 and 4 as compared with the total score correlations of .675 and .628. These latter entries were computed by formula for correlation correlation of sums of raw scores from the entries of Tables I and II in order that the criterion would be the same as the above comparison.

11. The project authorizing the present study was discontinued before the validity of rescores on selected items could be computed or before item analysis of the Radio Information Tests administered could be undertaken.

VI. CONCLUSIONS.

1. Both Electrical Information and Radio Information Tests are highly valid in predicting grades for a Radio Repair Course

2. Definite superiority over GCT was not demonstrated.

3. A rescore of tentatively selected items indicated that final forms should show an appreciable improvement in validity over that shown by total score on the experimental test.

VII. RECOMMENDATIONS.

1. These will be left for consideration in the final technical report on the project under which this study was completed. In general the Radio and Electrical Information Tests analyzed in this and other studies completed under this project seem to offer promise. Further validation of items selected from

several sources would seem advisable before standardization.

VIII. TECHNICIANS.

1. In charge

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2. Field Work

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3. Preparation of Report

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

The Validation of two Forms of the Electrical Information Test and two Forms of the Radio Informat Test Among Trainees at the Radio Repair Course, Central Signal Corps School, Camp Crowder, Missouri Jan 44

3 July 46

* Performance Tests; Radio Operators

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7 July 54

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