

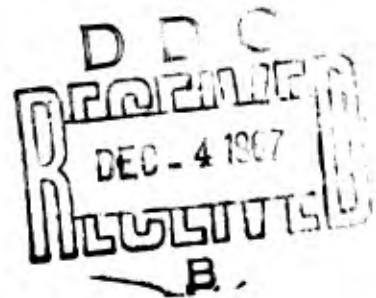
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Development and Standardization of Airman Qualifying Examination-66

By
Bart M. Vitola
Howard L. Madden



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PERSONNEL RESEARCH LABORATORY
AEROSPACE MEDICAL DIVISION
AIR FORCE SYSTEMS COMMAND
Lackland Air Force Base, Texas

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FOREWORD

This report describes the methods used to develop and standardize the 1966 form of the Airman Qualifying Examination. AQE-66 will function as an instrument in the Air Force's selective recruiting and high school testing programs.

Work was accomplished in-house under Project 7717, Selection, Classification, and Evaluation Procedures for Air Force Personnel; Task 771705, Selection and Classification Instruments for Airman Personnel Programs.

This report has been reviewed and is approved.

James H. Ritter, Colonel USAF
Commander

J.W. Bowles
Technical Director

ABSTRACT

This report describes the development and standardization of the 1966 form of the Airman Qualifying Examination. Descriptive data and statistical characteristics of AQE items and subtests are presented, as well as intercorrelations among Project TALENT tests and AQE variables. The report was designed as a reference source to be used in the Air Force's selective recruiting program and to provide information to guidance counselors in the high school testing program.

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DEVELOPMENT AND STANDARDIZATION OF AIRMAN QUALIFYING EXAMINATION-66

I. INTRODUCTION

The Air Force Recruiting Service uses the Airman Qualifying Examination (AQE) in the selection and classification of non-prior-service applicants to determine their enlistment qualifications and aptitudes. The AQE is revised every two years in order to incorporate the latest research information and data processing techniques. The test requires approximately two hours to administer and yields four aptitude composites designated as General, Administrative, Mechanical, and Electronics. Aptitude indexes for the composites are expressed in terms of a 20-interval percentile scale (01, 05, 10, . . . , 95) with 5 per cent of the normative base in each interval. This report is concerned with the development of AQE-66 which became operational in the selective recruiting program in September of 1966.

After the implementation of AQE-64, it became evident that the next revision should include some format changes in both the answer sheet and the test booklet. Examiners in the high school testing program had found that AQE-64 could be more easily administered to large groups if the Arithmetic Computation subtest were given first instead of last as it appeared in the test booklet. This change in administration procedure was adopted early in the testing program for all examinees, and plans were made to incorporate a compatible format change in AQE-66 test booklets. In the development of AQE-64, the arithmetic computation items had been changed from types which involved basic operations to those which required more emphasis on reasoning abilities. Although these latter items proved to be highly selective, they created an undesirable effect in that there was an increased correlation between the Administrative and General aptitude indexes. To offset this increase in correlation, the items in the Arithmetic Computation subtest in AQE-66 were designed to be more like those which had been previously used in AQE-F.

Prior to 1962, Recruiting Service used the AQE within the confines of a selective recruiting program for Air Force enlistees. During that time, however, local high school counselors were being contacted, and the merits of establishing a high school testing program were being explained. High school guidance counselors were made aware of the direct relationship between many Air Force specialties and civilian job areas. Then in 1962, a high school testing program designed to benefit both the recruiter and the school was inaugurated.

One of the first requirements placed upon Recruiting Service was to provide normative data which would enhance utilization of AQE scores in counselor decision-making. The calibration of Air Force selection tests to Project TALENT norms provided one data source which enabled Recruiting Service to meet this primary requirement (Dailey, Shaycoft, & Orr, 1962). The Project TALENT study, with 400,000 twelfth graders as a base, derived norms for high school performance from a "live" population rather than from the World War II mobilization population which had formerly been used.

During 1964 and 1965, Recruiting Service was able to offer guidance counselors two additional sources from which they could draw to make more valid decisions. Tupes and Shaycoft (1964) published percentile distribution data by geographic area based on the performance of twelfth grade boys on the AQE. Later Tupes (1965) published normative data for nationwide groups of twelfth grade boys and girls, describing performance in terms of type

of high school, curriculum, region of the country, and size of the city within each region. Since its inception, the high school testing program has grown considerably and has provided aptitude data on large populations of students eligible for the Air Force's selective recruiting program.

II. TEST DEVELOPMENT

Development of AQE-66 was influenced by several factors, primarily the necessary changes in test administration and scoring procedures. In contrast to the 200 items in AQE-64, AQE-66 contains 210 separate items. The Arithmetic Computation subtest includes ten additional items, and the time limit has been reduced from 15 minutes to 8 minutes. The test format is divided into two parts: Part 1 containing the 60 arithmetic computation items and Part 2 containing 150 items from all subtests other than Arithmetic Computation, presented in a spiral omnibus arrangement in an order of increasing difficulty. Part 1 items, the speeded items, are numbered 151 through 210 and are administered first. Part 2 items are numbered 1 through 150 and are administered last with a single overall time limit. (This procedure is a reversal of the administration procedure used for AQE-64.) All subtests are discrete so that no two subtests share a common item. The subtests which make up the four aptitude composites in AQE-66 are shown in Table 1. A brief description of the ten subtests is presented in Appendix I.

Table 1. Subtest Components of AQE-66 Aptitude Composites

Subtest	No. Of Items	Aptitude Index			
		General	Administrative	Mechanical	Electronics
Arithmetic Computation	60		X		
Arithmetic Reasoning	16	X	X		X
Data Interpretation	10				X
Electrical Information	15				X
General Mechanics	15			X	
Hidden Figures	16	X		X	
Mechanical Principles	15			X	
Pattern Comprehension	18				X
Shop Practices	15			X	
Word Knowledge	30	X	X		

Note.—Score=number right

The next consideration in the development of AQE-66 was the scoring procedure. Since Recruiting Service had established a central scoring unit for the high school testing program, it was necessary to design an answer sheet which would be compatible with the unit's electronic equipment and which would also serve the needs of testing personnel at examining centers.

The new answer sheet, AFPT 17, permits the recording of all pertinent scoring information on one side, thereby reducing the required number of scoring keys and the required number of passes through the optical scanner. The arrangement and numbering of the items on the new answer sheet is oriented to electronic scoring, but the AQE-64 answer sheet may be used if necessary.

The new answer sheet also provides for the recording of information on successful completion of five specific high school courses. This course completion information is weighted into raw score composites as a part of the regular scoring procedure. (The information may either be incorporated or disregarded in the case of high school examinees.)

III. ITEM SELECTION AND ASSEMBLY

There were two primary considerations in the construction and selection of items for the Arithmetic Computation subtest. First, the items should require basic arithmetic operations rather than reasoning ability. Second, they should be of a kind and number which will function to reduce the correlation between the General and Administrative indexes. Thus, the number of items was increased from 50 to 60, and the content was modified to provide slightly less difficult and time-consuming items than those included on AQE-64. Items selected within these guidelines were administered to groups of airmen and were then revised on the basis of response counts to answers and distractors.

The nine power subtests were developed from items selected from Air Force test item files; the criteria for selection closely followed the guidelines used for item selection in AQE-64 (Madden & Lecznar, 1965). Three criteria were used as a basis for item selection: mean difficulty level (i.e., proportion of examinees responding correctly), a lowest limit of acceptance in terms of percentage of maximum *phi* coefficient, and face validity. The items, excluding arithmetic computation items, were assembled in spiral omnibus format. This kind of item arrangement assures that each examinee will be exposed to a proper proportion of all types of items. Presumably, the first items in each subtest will be passed by approximately 85 per cent of the examinees, and the passing percentage will decrease to about 25 per cent near the end of each item type. Further, the arrangement eliminates the need for a rigid, separate timing of each subtest.

After the power subtests were assembled, mean difficulty levels and mean *phi* coefficients for AQE-64 and AQE-66 subtests were compared. Table 2 presents these comparisons.

Table 2. Mean Difficulty Levels and Item-Subtest Correlations for AQE-64 and AQE-66 Subtests

Subtest	Mean Difficulty Level		Mean Phi Coefficients	
	AQE-64	AQE-66	AQE-64	AQE-66
Arithmetic Reasoning	52	54	56	64
Data Interpretation	54	58	47	44
Electrical Information	54	45	56	46
General Mechanics	54	58	62	66
Hidden Figures	59	59	71	71
Mechanical Principles	53	50	53	55
Pattern Comprehension	57	58	61	61
Shop Practices	53	55	54	58
Word Knowledge	51	60	57	74
All Subtests Combined	54	55	58	60

IV. NORMING AND STANDARDIZATION

The subtests included in the Project TALENT battery have been combined to provide composites comparable in content to the AQE aptitude composites. Each of these Project TALENT composites was administered, along with AQE-66, to a different population of approximately 1,000 basic airmen. To accommodate for possible practice effects, testing was performed in a counterbalanced fashion; that is, one half of each group took the Project TALENT composite first, and the other half took the AQE first. The result was eight subsamples, or two for each Project TALENT composite. In Table 3, means of the Project TALENT composites are compared with means of the AQE composites and the Air Force Qualifying Test (AFQT) scores.

It had been demonstrated in an earlier study that information concerning completion of certain high school courses can be used to increase the validity of AQE aptitude indexes and to predict achievement in technical training courses (Judy, 1960). Therefore, provision was made to incorporate this information in AQE analysis and scoring procedures. Two separate sets of tables for converting raw composite scores to the 20-point percentile scale were constructed. One set was based on raw composite scores which included credit for completion of the five high school courses. This set is intended for use with applicants for enlistment. The second set was based solely on raw composite scores with no course completion credit. This set of conversions is intended for use in the high school testing program.

In the present norming procedures, AQE-66 was scored to provide raw aptitude composite scores with and without inclusion of weighted high school course variables. The course variable weights used in standardization of AQE-66 were derived by multiple regression analyses of AQE-64 test results.

To equate the aptitude indexes from AQE-66 with the appropriate Project TALENT composites, the same equipercentile process was used as was used by Madden and Lecznar (1965). Intercorrelations of operationally derived AQE-64 test scores, Project TALENT test scores, and AQE-66 variables were computed for each of the Project TALENT composite samples. These correlations are presented in Tables 5 through 8 in Appendix II. Comparisons of the average correlations between pairs of aptitude indexes for AQE-64 and AQE-66 are shown in Table 4. These averages were derived from each of the four norming samples identified in terms of the Project TALENT composites.

Although the original Project TALENT calibration study had involved the use of a standard IBM answer sheets, mark-sense cards were used to record responses for the Project TALENT Administrative sample during standardization of AQE-64. Because this Project TALENT composite included the speeded Arithmetic Computation subtest, it was necessary to consider possible differences in the time required to mark answers. An investigation of the two methods of answer marking indicated that an additional 2 seconds per item was required by examinees using the mark-sense cards. Thus, a proportional adjustment equivalent to the 2-seconds-per-item time difference was made to the scores of examinees using the mark-sense cards. Since a Digitek answer sheet¹ is used for AQE-66, a recurrence of this problem is not anticipated.

¹ The Digitek answer sheet has a combination of 210 mark-sense options and is read by an optical scanner.

Table 3. Descriptive Statistics for the Aptitude Index Groups on Air Force Tests and Project TALENT Composites

Project TALENT Aptitude Composite	Project TALENT Composite	Airman Qualifying Examination-66											
		Project TALENT Composite		Gen AJ		Admin AJ		Mech AJ		Elect AJ		AFQT	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
G 1	494	127.03	29.98	65.92	18.45	63.81	20.46	63.76	19.21	67.27	20.05	66.17	20.63
G 2	528	122.10	30.73	62.38	20.11	60.29	20.82	62.50	18.73	63.36	20.24	63.33	21.01
A 3	498	168.28	35.49	62.36	19.82	60.69	21.36	61.19	19.06	63.27	21.24	62.82	21.35
A 4	499	154.15	32.09	63.51	19.80	61.51	20.14	63.15	18.26	64.93	19.85	66.29	20.55
M 5	500	97.77	20.47	64.08	19.23	61.76	20.56	63.92	18.04	65.59	19.95	65.78	21.12
M 6	502	97.12	21.98	63.41	19.88	60.90	20.17	63.08	17.81	64.50	20.05	64.88	21.17
E 7	503	91.75	24.47	64.35	19.35	61.03	21.33	62.71	19.37	64.10	20.90	64.42	21.99
E 8	514	91.27	25.20	62.53	20.35	63.38	19.97	63.71	18.91	65.47	19.59	64.27	20.86

After AQE-66 had been standardized, data were retrieved to obtain reliability coefficients. Using the Kuder-Richardson Formula 21, the following reliabilities were obtained for the four aptitude composite scores: General AI .88, Administrative AI .93, Mechanical AI .84, and Electronics AI .94. Validation studies currently in progress should yield information which will increase the predictive validity of aptitude indexes with regard to success in Air Force Technical training programs.

Table 4. Average Correlations between Pairs of Aptitude Indexes for AQE-64 and AQE-66

Aptitude Indexes	AQE-64	AQE-66
General-Administrative	.91	.82
General-Mechanical	.79	.79
General-Electronics	.85	.83
Administrative-Mechanical	.65	.59
Administrative-Electronics	.82	.79
Mechanical-Electronics	.81	.82

V. SUMMARY

The AQE-66 replaced AQE-64 which was used by the Air Force in a program of selective enlistment to classify non-prior-service applicants and to provide information to guidance counselors in a high school testing program. The following major administration and format changes were incorporated in AQE-66.

1. Rearrangement of answer sheets with the speeded Arithmetic Computation subtest at the beginning rather than the end of the form.
2. Rearrangement of test item order to accommodate the limitations of an optical scanner.
3. Development of two conversion tables, one for enlistees and one for high school examinees.
4. Addition of more items to the speeded Arithmetic Computation subtest, with reduction of the testing time.
5. Increase in total number of test items to 210.

Reliability coefficients for the AQE-66 composite scores based on standardization population are General AI .88, Administrative AI .93, Mechanical AI .84, and Electronics AI .94.

APPENDIX I

AQE-66 SUBTESTS

Arithmetic Computation consists of simple arithmetic items involving addition, subtraction, multiplication, and division of whole numbers. Administered as a separately timed test, it is designed to measure the ability to manipulate numbers rapidly and accurately.

Arithmetic Reasoning evaluates the examinee's ability to think through mathematical problems presented in verbal form. It involves the discovery and application of the general mathematical principles required to arrive at a correct solution to each problem, as well as performance of the necessary calculations to attain that solution.

Data Interpretation is designed to measure the ability to draw conclusions or make interpretations from data presented in the form of graphs, charts, and tables. Two or three items are based on each presentation.

Electrical Information involves the ability to apply previously acquired knowledge in the areas of electricity and electronics toward the solution of problems in practical situations.

General Mechanics consists of verbal items relating to the understanding and application of basic techniques required for the troubleshooting and repair of various mechanical devices.

Hidden Figures requires the examinee to determine which one of five simple line drawings is contained in a more complex arrangement of geometric figures. These items appear within the test in sets of four items per page with the five simple line drawings at the top of the page.

Mechanical Principles requires the examinee to determine from pictures of mechanical devices their operating characteristics.

Pattern Comprehension involves visualizing the folding of flat patterns into three-dimensional objects and subsequently determining the location of specific points which are common to both the pattern and the solid figure. These items appear within the test in groups of three items for each pattern.

Shop Practices is a pictorial test which requires the examinee to identify pictured tools and determine their proper use in a specific situation or the selection of the proper tool for use in a given task.

Word Knowledge is a test of verbal ability involving the definition of words; this is a classical vocabulary test of non-technical terms.

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APPENDIX II

ITEM ANALYSIS DATA

Table 5. Intercorrelations of Operational Test Scores, TALENT Test Scores, and AQE-66 Variables for Project TALENT General Sample

Variable	Intercorrelation of Variables																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1 Algebra		.48	.23	.20	.28	.13	.20	.32	.30	.21	.08	-.02	.12	.16	.17	-.07	.20	.07	.36
2 Geometry	.48		.44	.34	.47	.15	.29	.29	.44	.32	.17	.05	.25	.31	.30	.00	.32	.22	.44
3 Trigonometry	.23	.44		.48	.43	.11	.36	.27	.40	.28	.24	.09	.24	.32	.32	.08	.22	.25	.37
4 Physics	.20	.34	.48		.44	.11	.30	.17	.28	.21	.26	.09	.20	.25	.22	.07	.17	.21	.25
5 Chemistry	.28	.47	.43	.44		.14	.33	.23	.32	.26	.18	.05	.23	.28	.25	.01	.27	.20	.34
6 High Sch Grad	.13	.15	.11	.11	.14		.44	.17	.15	.14	.03	.00	.09	.07	.16	.02	.10	.07	.18
7 Educ (Years)	.20	.29	.36	.30	.33	.44		.25	.27	.22	.13	.03	.20	.24	.03	.22	.16	.32	.32
8 Arith Computat	.32	.30	.27	.17	.23	.17	.25		.39	.34	.01	-.08	.19	.11	.19	-.13	.28	.05	.81
9 Arith Reason	.30	.44	.40	.28	.32	.15	.27	.39		.57	.34	.25	.41	.56	.49	.18	.48	.48	.72
10 Data Interp	.21	.32	.28	.21	.26	.14	.22	.34	.57		.34	.22	.36	.45	.41	.17	.46	.41	.56
11 Elec Info	.08	.17	.24	.26	.18	.03	.13	.01	.34	.34		.67	.28	.54	.36	.52	.35	.65	.26
12 Gen Mechanics	-.02	.05	.09	.09	.05	.00	.03	-.08	.25	.22	.67		.24	.52	.31	.62	.30	.76	.16
13 Hidden Figures	.12	.24	.24	.24	.20	.23	.09	.20	.19	.41	.36	.28		.43	.56	.22	.31	.71	.36
14 Mech Principles	.16	.31	.32	.25	.28	.07	.20	.11	.56	.45	.54	.52	.43		.54	.46	.42	.78	.40
15 Pattern Comp	.17	.30	.32	.22	.25	.16	.24	.19	.49	.41	.36	.31	.56	.54		.31	.31	.60	.39
16 Shop Practices	-.07	.00	.08	.07	.01	.02	.03	-.13	.18	.17	.52	.62	.22	.46	.31		.26	.72	.09
17 Word Knowledge	.20	.32	.22	.17	.27	.10	.22	.28	.48	.46	.35	.30	.31	.42	.31	.26		.43	.74
18 Mech AI (Raw)	.07	.22	.25	.21	.20	.07	.16	.05	.48	.41	.65	.76	.71	.78	.60	.72	.43		.36
19 Admin AI (Raw)	.36	.44	.37	.25	.34	.18	.32	.81	.72	.56	.26	.16	.36	.40	.39	.09	.74	.36	
20 Gen AI (Raw)	.26	.42	.35	.27	.35	.14	.29	.36	.77	.59	.42	.34	.73	.59	.57	.29	.82	.69	.79
21 Elec AI (Raw)	.25	-.41	.42	.32	.34	.16	.29	.29	.80	.70	.68	.49	.55	.70	.80	.40	.52	.72	.63
22 Mech AI (Wgtd)	.26	.48	.49	.40	.42	.12	.28	.17	.58	.48	.64	.67	.71	.79	.63	.62	.48	.94	.48
23 Admin AI (Wgtd)	.46	.57	.49	.38	.43	.20	.37	.79	.74	.57	.28	.15	.38	.44	.42	.09	.71	.37	.98
24 Gen AI (Wgtd)	.33	.58	.55	.42	.50	.16	.37	.39	.78	.59	.43	.31	.69	.60	.58	.26	.78	.66	.79
25 Elec AI (Wgtd)	.33	.49	.57	.50	.43	.17	.35	.33	.80	.68	.65	.44	.54	.69	.77	.36	.51	.69	.64
26 AFQT	.21	.34	.31	.23	.28	.09	.21	.23	.63	.49	.52	.48	.47	.65	.57	.45	.54	.68	.55
27 Mech AI AQE-64	.19	.40	.41	.32	.33	.11	.24	.10	.50	.39	.60	.61	.51	.66	.56	.55	.40	.78	.38
28 Admin AI AQE-64	.43	.55	.47	.36	.42	.17	.36	.57	.67	.52	.27	.12	.35	.43	.39	.04	.58	.33	.77
29 Gen AI AQE-64	.36	.56	.49	.38	.45	.15	.35	.37	.66	.52	.35	.24	.53	.53	.48	.15	.65	.51	.69
30 Elec AI AQE-64	.29	.45	.46	.39	.39	.13	.29	.30	.66	.51	.50	.36	.44	.58	.57	.27	.49	.56	.58
31 Gen TALENT	.36	.51	.47	.34	.41	.16	.36	.45	.70	.57	.44	.30	.44	.57	.48	.20	.73	.51	.78
32 Vocabulary	.22	.35	.30	.23	.31	.12	.28	.25	.47	.44	.44	.35	.32	.47	.33	.26	.74	.46	.60
33 Disguised Words	.24	.30	.21	.15	.24	.08	.20	.37	.40	.35	.21	.12	.33	.33	.28	.06	.61	.30	.60
34 Arith Reason	.29	.42	.37	.25	.27	.14	.27	.41	.68	.53	.34	.25	.34	.48	.42	.15	.52	.42	.65
35 Intro Math	.40	.54	.61	.41	.46	.17	.37	.44	.65	.47	.34	.15	.41	.48	.48	.10	.41	.40	.61

Table 5 (Continued)

Variable	Intercorrelation of Variables															Mean	SD	
	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34			35
1 Algebra	.26	.25	.26	.46	.33	.33	.21	.19	.43	.36	.29	.36	.22	.24	.29	.40	.84	.36
2 Geometry	.42	.41	.48	.57	.58	.49	.34	.40	.55	.56	.45	.51	.35	.30	.42	.54	.58	.49
3 Trigonometry	.35	.42	.49	.49	.55	.57	.31	.41	.47	.49	.46	.47	.30	.21	.37	.61	.23	.42
4 Physics	.27	.32	.40	.38	.42	.50	.23	.32	.36	.38	.39	.34	.23	.15	.25	.41	.26	.44
5 Chemistry	.35	.34	.42	.43	.50	.43	.28	.33	.42	.45	.39	.41	.31	.24	.27	.46	.38	.49
6 High Sch Grad	.14	.16	.12	.20	.16	.17	.09	.11	.17	.15	.13	.16	.12	.08	.14	.17	.94	.23
7 Educ (Years)	.29	.29	.28	.37	.37	.35	.21	.24	.36	.35	.29	.36	.28	.20	.27	.37	12.28	.92
8 Arith Computat	.36	.29	.17	.79	.39	.33	.23	.10	.57	.37	.30	.45	.25	.37	.41	.44	25.57	8.01
9 Arith Reason	.77	.80	.48	.74	.78	.80	.63	.50	.67	.66	.66	.70	.47	.40	.65	.65	8.80	3.84
10 Data Interp	.59	.70	.48	.57	.59	.68	.49	.39	.52	.52	.51	.57	.44	.35	.53	.47	6.21	2.20
11 Elec Info	.42	.68	.64	.28	.43	.65	.52	.60	.27	.35	.50	.44	.44	.21	.34	.34	8.14	3.51
12 Gen Mechanics	.34	.49	.67	.15	.31	.44	.48	.61	.12	.24	.36	.30	.35	.12	.25	.15	9.27	3.67
13 Hidden Figures	.73	.55	.71	.38	.69	.54	.47	.51	.35	.53	.44	.44	.32	.33	.34	.41	7.74	4.91
14 Mech Principles	.59	.70	.79	.44	.60	.69	.65	.66	.43	.53	.58	.57	.47	.23	.48	.48	7.83	3.08
15 Pattern Comp	.57	.80	.63	.42	.58	.77	.57	.56	.39	.48	.57	.48	.33	.28	.42	.48	9.17	4.43
16 Shop Practices	.29	.40	.62	.09	.26	.36	.45	.55	.04	.15	.20	.20	.26	.06	.15	.10	9.62	3.08
17 Word Knowledge	.82	.52	.48	.71	.78	.51	.54	.40	.58	.65	.49	.73	.74	.61	.52	.41	23.67	6.14
18 Mech AI (Raw)	.69	.72	.94	.37	.66	.69	.68	.78	.33	.51	.56	.51	.46	.30	.42	.40	34.46	10.91
19 Admin AI (Raw)	.79	.63	.48	.98	.79	.64	.55	.38	.78	.69	.58	.78	.60	.60	.65	.61	58.05	13.81
20 Gen AI (Raw)	.78	.75	.75	.79	.96	.77	.69	.60	.68	.79	.67	.81	.68	.60	.64	.60	40.22	11.56
21 Elec AI (Raw)	.78	.79	.79	.65	.79	.97	.74	.69	.60	.67	.75	.72	.55	.40	.64	.64	32.32	10.57
22 Mech AI (Wgtd)	.75	.79	.54	.54	.80	.81	.71	.83	.50	.65	.67	.65	.53	.37	.52	.58	40.64	12.97
23 Admin AI (Wgtd)	.79	.65	.81	.71	.84	.71	.56	.43	.81	.74	.63	.81	.61	.59	.67	.69	63.77	15.98
24 Gen AI (Wgtd)	.96	.79	.80	.84	.84	.83	.69	.64	.74	.84	.72	.84	.68	.58	.67	.71	44.36	14.00
25 Elec AI (Wgtd)	.77	.97	.81	.71	.71	.83	.72	.70	.66	.71	.78	.75	.56	.41	.65	.72	35.95	12.35
26 AFQT	.69	.74	.71	.56	.69	.72	.71	.70	.56	.65	.69	.68	.58	.39	.58	.53	64.70	20.87
27 Mech AI AQE-64	.60	.69	.83	.43	.64	.71	.70	.47	.47	.66	.68	.55	.49	.29	.45	.47	64.09	19.41
28 Admin AI AQE-64	.68	.60	.50	.81	.74	.66	.56	.47	.47	.66	.68	.55	.55	.52	.64	.68	61.99	20.72
29 Gen AI AQE-64	.79	.67	.65	.74	.84	.71	.65	.66	.84	.71	.76	.78	.63	.55	.61	.65	63.11	18.97
30 Elec AI AQE-64	.67	.75	.67	.63	.72	.78	.69	.68	.71	.77	.77	.69	.54	.37	.60	.62	65.25	20.24
31 Gen TALENT	.81	.72	.65	.81	.84	.75	.68	.55	.76	.78	.69	.84	.84	.68	.81	.78	124.48	30.47
32 Vocabulary	.68	.55	.53	.61	.68	.56	.58	.49	.55	.63	.54	.84	.52	.52	.52	.47	14.36	3.12
33 Disguised Words	.60	.40	.37	.59	.58	.41	.39	.29	.52	.55	.37	.68	.52	.40	.40	.39	17.15	6.60
34 Arith Reason	.64	.64	.52	.67	.67	.65	.58	.45	.64	.61	.60	.81	.52	.40	.60	.60	9.49	3.33
35 Intro Math	.60	.64	.58	.69	.71	.72	.53	.47	.68	.65	.62	.78	.47	.39	.60	.60	10.71	4.68

Table 6. Intercorrelations of Operational Test Scores, TALENT Test Scores, and AQE-66 Variables for Project TALENT Administrative Sample

Variable	Intercorrelation of Variables																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
1 Algebra	.46																			
2 Geometry	.46	.46																		
3 Trigonometry	.23	.47	.46																	
4 Physics	.21	.37	.53	.44	.44															
5 Chemistry	.28	.49	.44	.44	.44	.18	.18	.18	.18	.18	.18	.18	.18	.18	.18	.18	.18	.18	.18	.18
6 High Sch Grad	.13	.21	.14	.14	.18	.18	.18	.18	.18	.18	.18	.18	.18	.18	.18	.18	.18	.18	.18	.18
7 Educ (Years)	.21	.32	.35	.29	.35	.59	.59	.59	.59	.59	.59	.59	.59	.59	.59	.59	.59	.59	.59	.59
8 Arith Computat	.25	.30	.29	.18	.20	.16	.27	.43	.30	.02	-.04	.14	.13	.16	-.05	.30	.07	.82	.74	.74
9 Arith Reason	.27	.42	.38	.29	.33	.18	.30	.43	.62	.42	.34	.45	.56	.51	.28	.52	.53	.74	.55	.55
10 Data Interp	.18	.36	.28	.20	.26	.17	.25	.30	.62	.37	.32	.38	.48	.42	.26	.48	.47	.55	.47	.47
11 Elec Info	.06	.17	.24	.20	.15	.09	.16	.02	.42	.37	.70	.30	.56	.41	.60	.36	.68	.28	.28	.28
12 Gen Mechanics	.00	.06	.10	.07	.03	.02	.08	-.04	.34	.32	.70	.27	.54	.35	.65	.29	.78	.20	.20	.20
13 Hidden Figures	.14	.24	.22	.15	.17	.10	.15	.14	.56	.38	.30	.27	.49	.57	.31	.32	.73	.34	.34	.34
14 Mech Principles	.16	.27	.28	.20	.24	.14	.21	.13	.56	.48	.56	.54	.49	.58	.51	.35	.80	.38	.38	.38
15 Pattern Comp	.16	.27	.27	.21	.21	.15	.20	.16	.51	.42	.41	.35	.57	.58	.38	.35	.62	.37	.37	.37
16 Shop Practices	-.01	.03	.08	.06	.02	.04	.06	-.05	.28	.26	.60	.65	.31	.51	.38	.29	.77	.17	.17	.17
17 Word Knowledge	.21	.31	.25	.20	.26	.19	.29	.30	.52	.48	.36	.29	.32	.35	.29	.41	.76	.41	.41	.41
18 Mech AI (Raw)	.10	.20	.22	.16	.15	.10	.16	.07	.53	.47	.68	.78	.73	.80	.62	.77	.41	.76	.36	.36
19 Admin AI (Raw)	.31	.42	.38	.27	.32	.23	.36	.82	.74	.55	.28	.20	.34	.38	.37	.17	.76	.36	.36	.36
20 Gen AI (Raw)	.26	.40	.35	.27	.32	.20	.31	.36	.79	.61	.45	.38	.72	.57	.57	.37	.84	.69	.79	.79
21 Elec AI (Raw)	.22	.39	.38	.29	.30	.19	.29	.29	.83	.72	.72	.55	.57	.71	.80	.50	.53	.76	.62	.62
22 Mech AI (Wgtd)	.27	.46	.46	.36	.37	.16	.29	.18	.62	.53	.67	.70	.72	.80	.64	.68	.47	.94	.48	.48
23 Admin AI (Wgtd)	.41	.55	.50	.40	.41	.25	.41	.79	.76	.56	.30	.19	.36	.40	.40	.16	.73	.37	.98	.98
24 Gen AI (Wgtd)	.33	.56	.54	.43	.47	.23	.39	.40	.80	.62	.45	.34	.68	.57	.57	.33	.80	.65	.79	.79
25 Elec AI (Wgtd)	.31	.48	.55	.48	.40	.21	.35	.33	.83	.70	.68	.50	.55	.69	.77	.45	.54	.72	.65	.65
26 AFQT	.20	.30	.29	.20	.24	.11	.21	.23	.64	.51	.55	.54	.50	.64	.59	.51	.52	.71	.53	.53
27 Mech AI AQE-64	.19	.37	.38	.28	.30	.14	.24	.09	.50	.41	.61	.63	.53	.63	.51	.58	.39	.77	.36	.36
28 Admin AI AQE-64	.40	.52	.48	.35	.41	.23	.40	.57	.64	.53	.28	.16	.31	.37	.35	.12	.60	.31	.76	.76
29 Gen AI AQE-64	.32	.53	.49	.37	.46	.21	.37	.37	.66	.55	.36	.25	.50	.48	.46	.21	.67	.48	.68	.68
30 Elec AI AQE-64	.32	.43	.44	.37	.35	.18	.32	.32	.68	.54	.51	.38	.43	.58	.54	.34	.71	.56	.60	.60
31 Admin TALENT	.32	.38	.36	.22	.31	.18	.33	.74	.53	.39	.11	.03	.21	.26	.25	.00	.19	.17	.73	.73
32 Sports	.25	.28	.29	.17	.25	.15	.27	.40	.35	.32	.09	.07	.19	.18	.15	.07	.45	.17	.52	.52
33 Punctuation	.23	.34	.31	.23	.31	.19	.31	.36	.50	.40	.22	.14	.31	.39	.32	.10	.46	.30	.54	.54
34 Arith Computat	.28	.32	.31	.18	.24	.14	.28	.74	.45	.31	.05	-.01	.14	.18	.19	-.04	.27	.09	.66	.66

Table 6 (Continued)

Variables	Intercorrelation of Variables																																	Mean	SD
	20	21	22	23	24	25	26	27	28	29	30	31	32	33																					
1 Algebra	.26	.22	.27	.41	.33	.31	.20	.19	.40	.32	.32	.32	.25	.23	.21	.83	.38																		
2 Geometry	.40	.39	.46	.55	.56	.48	.30	.37	.52	.53	.43	.38	.28	.34	.31	.54	.50																		
3 Trigonometry	.35	.38	.46	.50	.54	.55	.29	.38	.48	.49	.44	.36	.29	.31	.31	.21	.41																		
4 Physics	.27	.29	.36	.40	.43	.48	.20	.28	.35	.37	.37	.22	.17	.13	.18	.24	.43																		
5 Chemistry	.32	.30	.37	.41	.47	.40	.24	.30	.41	.46	.35	.31	.25	.11	.24	.37	.48																		
6 High Sch Grad	.20	.19	.16	.25	.23	.21	.11	.14	.23	.21	.18	.18	.15	.19	.14	.90	.30																		
7 Educ (Years)	.31	.29	.29	.41	.39	.35	.21	.24	.40	.37	.32	.33	.27	.31	.28	12.15	.99																		
8 Arith Computat	.36	.29	.18	.79	.40	.33	.23	.09	.57	.37	.32	.74	.40	.36	.73	24.94	8.12																		
9 Arith Reason	.79	.83	.62	.76	.80	.83	.64	.50	.64	.66	.68	.53	.35	.50	.45	8.77	3.83																		
10 Data Interp	.61	.72	.53	.56	.62	.70	.51	.41	.53	.55	.54	.39	.32	.40	.31	6.10	2.21																		
11 Elec Info	.45	.72	.67	.30	.45	.68	.55	.61	.28	.36	.51	.11	.09	.22	.05	8.35	3.46																		
12 Gen Mechanics	.38	.55	.70	.19	.34	.50	.54	.63	.16	.25	.5	.03	.07	.14	-.01	9.07	3.86																		
13 Hidden Figures	.72	.57	.72	.36	.68	.55	.50	.53	.31	.50	.33	.21	.19	.31	.14	7.48	4.78																		
14 Mech Principles	.57	.71	.80	.40	.57	.69	.64	.63	.37	.48	.53	.26	.18	.39	.18	7.69	3.11																		
15 Pattern Comp	.57	.80	.64	.40	.57	.77	.59	.51	.35	.46	.54	.25	.15	.32	.19	9.19	4.34																		
16 Shop Practices	.37	.50	.68	.16	.33	.45	.51	.58	.12	.21	.34	.00	.07	.10	-.04	9.30	3.27																		
17 Word Knowledge	.84	.53	.47	.73	.80	.54	.52	.39	.60	.66	.51	.39	.45	.46	.27	23.37	6.38																		
18 Mech AI (Raw)	.69	.76	.94	.37	.65	.72	.71	.77	.31	.48	.56	.17	.17	.30	.09	33.53	11.49																		
19 Admin AI (Raw)	.79	.62	.48	.98	.79	.65	.53	.36	.76	.68	.60	.73	.52	.54	.66	57.07	14.29																		
20 Gen AI (Raw)	.79	.75	.79	.96	.96	.78	.69	.59	.66	.77	.67	.47	.43	.53	.35	39.61	11.81																		
21 Elec AI (Raw)	.75	.81	.81	.64	.79	.97	.75	.67	.57	.65	.74	.40	.28	.46	.32	32.41	10.72																		
22 Mech AI (Wgtd)	.79	.64	.54	.78	.83	.73	.81	.48	.63	.66	.30	.27	.40	.21	.39	39.38	13.37																		
23 Admin AI (Wgtd)	.96	.79	.78	.84	.84	.76	.54	.41	.80	.71	.64	.74	.53	.56	.66	62.50	16.41																		
24 Gen AI (Wgtd)	.78	.97	.83	.70	.84	.68	.62	.72	.83	.70	.77	.45	.46	.56	.39	43.48	14.15																		
25 Elec AI (Wgtd)	.69	.75	.73	.54	.68	.73	.68	.63	.70	.77	.77	.45	.32	.49	.36	35.85	12.35																		
26 AFQT	.69	.67	.81	.41	.62	.68	.66	.66	.51	.60	.68	.35	.28	.42	.26	64.56	21.03																		
27 Mech AI AQE-64	.66	.57	.48	.80	.72	.63	.51	.42	.42	.63	.65	.21	.18	.33	.13	62.93	19.82																		
28 Admin AI AQE-64	.77	.65	.63	.73	.83	.70	.60	.63	.82	.82	.71	.65	.45	.51	.58	61.10	20.76																		
29 Gen AI AQE-64	.67	.74	.66	.64	.71	.77	.68	.65	.71	.77	.77	.51	.44	.53	.40	62.17	18.69																		
30 Elec AI AQE-64	.47	.40	.30	.74	.52	.45	.35	.21	.65	.51	.44	.44	.35	.46	.35	64.10	20.57																		
31 Admin TALENT	.43	.28	.27	.53	.46	.32	.28	.18	.45	.44	.45	.54	.61	.96	.16	161.21	34.56																		
32 Sports	.53	.46	.40	.56	.49	.42	.33	.51	.53	.46	.61	.61	.33	.39	.42	8.60	2.77																		
33 Punctuation	.35	.32	.21	.66	.39	.26	.13	.58	.39	.35	.46	.61	.33	.42	.33	16.55	3.87																		
34 Arith Computat																36.97	9.31																		

Table 7. Intercorrelations of Operational Test Scores, TALENT Test Scores, and AQE-66 Variables for Project TALENT Mechanical Sample

Variable	Intercorrelation of Variables																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
1 Algebra	.50																			
2 Geometry	.23	.45																		
3 Trigonometry	.21	.36	.51																	
4 Physics	.32	.48	.43	.42																
5 Chemistry	.17	.16	.12	.08	.15															
6 High Sch Grad	.19	.22	.23	.16	.25	.55														
7 Educ (Years)	.22	.26	.26	.13	.22	.11	.16													
8 Arith Computat	.30	.38	.38	.27	.28	.10	.18	.27												
9 Arith Reason	.21	.28	.23	.18	.20	.12	.19	.20	.59											
10 Data Interp	.14	.17	.21	.27	.17	.06	.09	-.02	.38	.36										
11 Elec Info	.08	.09	.07	.11	.06	.05	.05	-.02	.33	.32	.68									
12 Gen Mechanics	.18	.24	.20	.18	.21	.08	.15	.15	.41	.36	.26	.21								
13 Hidden Figures	.20	.25	.24	.25	.22	.06	.09	.07	.55	.48	.53	.55	.44							
14 Mech Principles	.20	.26	.26	.26	.25	.12	.16	.10	.55	.45	.40	.37	.55	.61						
15 Pattern Comp	.01	.06	.07	.08	.01	.06	.06	-.09	.28	.27	.58	.67	.23	.52	.37					
16 Shop Practices	.16	.29	.22	.19	.25	.06	.13	.17	.43	.47	.34	.32	.31	.38	.35	.24				
17 Word Knowledge	.16	.22	.20	.21	.18	.09	.12	.05	.52	.47	.66	.78	.69	.81	.64	.76	.42			
18 Mech AI (Raw)	.29	.39	.36	.24	.32	.13	.21	.84	.62	.48	.22	.19	.34	.34	.35	.11	.63	.34		
19 Admin AI (Raw)	.26	.39	.33	.27	.32	.10	.19	.25	.75	.61	.42	.37	.74	.58	.61	.32	.81	.70	.69	
20 Gen AI (Raw)	.28	.35	.36	.33	.30	.13	.20	.17	.82	.71	.69	.55	.53	.72	.83	.49	.50	.76	.53	
21 Elec AI (Raw)	.33	.48	.43	.40	.39	.14	.21	.15	.60	.51	.65	.70	.68	.79	.66	.67	.46	.94	.44	
22 Mech AI (Wgtd)	.40	.53	.49	.37	.41	.16	.25	.81	.65	.49	.25	.20	.36	.38	.38	.11	.62	.36	.98	
23 Admin AI (Wgtd)	.34	.56	.54	.43	.48	.14	.25	.30	.75	.59	.43	.34	.70	.58	.60	.29	.76	.66	.71	
24 Gen AI (Wgtd)	.36	.44	.52	.50	.39	.15	.23	.21	.82	.63	.67	.51	.52	.70	.79	.45	.50	.72	.56	
25 Elec AI (Wgtd)	.25	.31	.25	.22	.24	.08	.13	.17	.63	.52	.55	.49	.66	.64	.52	.53	.53	.73	.49	
26 AFQT	.29	.39	.33	.33	.29	.09	.15	.10	.52	.60	.53	.50	.66	.54	.64	.37	.79	.35	.70	
27 Mech AI AQE-64	.42	.52	.44	.38	.42	.16	.27	.42	.66	.55	.28	.20	.36	.41	.38	.13	.60	.35	.70	
28 Admin AI AQE-64	.35	.51	.45	.40	.44	.12	.25	.28	.64	.52	.35	.25	.53	.50	.49	.21	.65	.51	.62	
29 Gen AI AQE-64	.35	.43	.43	.42	.37	.10	.20	.21	.68	.56	.53	.42	.45	.60	.61	.37	.51	.61	.52	
30 Elec AI AQE-64	.16	.21	.22	.26	.20	.06	.11	.03	.52	.45	.68	.69	.12	.70	.58	.63	.45	.79	.37	
31 Mech TALENT	.14	.18	.26	.33	.22	.07	.12	-.04	.41	.34	.74	.56	.26	.51	.37	.48	.40	.58	.24	
32 Elec & Elec	.07	.10	.09	.15	.09	.04	.07	.02	.36	.33	.58	.55	.21	.50	.33	.57	.43	.61	.27	
33 Mechanics	.18	.22	.19	.21	.19	.04	.08	.05	.44	.40	.50	.57	.37	.65	.51	.50	.35	.67	.29	
34 Mech Reason	.14	.19	.22	.21	.17	.04	.08	.02	.46	.35	.39	.41	.48	.56	.63	.41	.23	.62	.23	
35 Viz 3 Dimen																				

Table 7 (Continued)

Variable	Intercorrelation of Variables														Mean	SD		
	20	21	22	23	24	25	26	27	28	29	30	31	32	33			34	35
1 Algebra	.26	.28	.33	.40	.34	.36	.25	.29	.42	.35	.35	.16	.14	.17	.18	.14	.80	.40
2 Geometry	.39	.35	.48	.53	.56	.44	.31	.39	.52	.51	.43	.21	.18	.10	.22	.19	.54	.50
3 Trigonometry	.33	.36	.43	.49	.54	.52	.25	.33	.44	.45	.42	.22	.26	.09	.19	.22	.21	.41
4 Physics	.27	.33	.40	.37	.43	.50	.22	.33	.38	.40	.42	.26	.33	.15	.21	.21	.23	.42
5 Chemistry	.32	.30	.39	.41	.48	.39	.24	.29	.42	.44	.37	.20	.22	.10	.19	.17	.37	.48
6 High Sch Grad	.10	.13	.14	.16	.14	.15	.08	.09	.16	.12	.10	.06	.07	.04	.04	.04	.92	.27
7 Educ (Years)	.19	.20	.21	.25	.23	.23	.13	.15	.27	.25	.20	.11	.12	.07	.08	.08	12.12	1.01
8 Arith Computat	.25	.17	.15	.81	.30	.21	.17	.10	.42	.28	.21	.03	-.04	.02	.05	.02	27.45	10.38
9 Arith Reason	.75	.82	.60	.65	.75	.82	.61	.52	.66	.64	.68	.52	.41	.36	.44	.46	8.86	3.78
10 Data Interp	.61	.71	.51	.49	.59	.69	.54	.43	.53	.51	.56	.45	.34	.33	.40	.35	6.25	2.16
11 Elec Info	.42	.69	.65	.25	.43	.67	.52	.60	.28	.35	.53	.68	.74	.58	.50	.39	8.20	3.44
12 Gen Mechanics	.37	.55	.70	.20	.34	.51	.55	.63	.20	.25	.42	.69	.56	.65	.54	.41	9.19	3.90
13 Hidden Figures	.74	.53	.68	.36	.70	.52	.49	.50	.36	.53	.45	.42	.26	.21	.37	.48	7.70	4.87
14 Mech Principles	.58	.72	.79	.38	.58	.70	.66	.66	.41	.50	.60	.70	.51	.50	.65	.56	7.98	3.25
15 Pattern Comp	.61	.83	.66	.38	.60	.79	.64	.54	.36	.49	.41	.37	.33	.51	.63	.51	9.24	4.39
16 Shop Practices	.32	.49	.67	.11	.29	.45	.52	.64	.13	.21	.37	.63	.48	.57	.50	.41	7.55	3.21
17 Word Knowledge	.81	.50	.46	.62	.76	.50	.53	.37	.60	.65	.51	.45	.40	.43	.36	.23	23.83	5.88
18 Mech AI (Raw)	.70	.76	.94	.36	.66	.72	.73	.79	.38	.51	.61	.79	.58	.61	.67	.62	34.43	11.43
19 Admin AI (Raw)	.69	.53	.44	.98	.71	.56	.49	.35	.76	.62	.52	.33	.24	.27	.29	.23	60.14	14.79
20 Gen AI (Raw)	.77	.75	.70	.96	.76	.76	.71	.59	.73	.79	.70	.60	.46	.44	.50	.49	40.39	11.17
21 Elec AI (Raw)	.77	.80	.80	.57	.77	.97	.77	.69	.59	.65	.78	.73	.61	.52	.61	.62	32.54	10.66
22 Mech AI (Wgtd)	.70	.57	.52	.52	.79	.82	.75	.83	.53	.64	.71	.77	.60	.57	.62	.62	40.24	13.42
23 Admin AI (Wgtd)	.96	.77	.79	.77	.77	.63	.51	.41	.75	.67	.58	.36	.28	.27	.32	.26	65.47	16.81
24 Gen AI (Wgtd)	.76	.97	.82	.63	.82	.82	.69	.62	.53	.83	.74	.58	.48	.40	.50	.48	44.25	13.48
25 Elec AI (Wgtd)	.71	.77	.75	.51	.69	.74	.74	.70	.65	.69	.81	.71	.61	.48	.59	.60	35.89	12.34
26 AFQT	.59	.69	.83	.41	.62	.70	.70	.70	.54	.62	.70	.76	.55	.57	.65	.62	65.55	21.15
27 Mech AI AQE-64	.69	.59	.53	.75	.75	.65	.54	.48	.48	.62	.68	.72	.55	.55	.62	.54	63.74	19.57
28 Admin AI AQE-64	.79	.65	.64	.67	.83	.69	.62	.62	.84	.84	.70	.75	.50	.46	.34	.28	61.33	20.37
29 Gen AI AQE-64	.70	.78	.71	.58	.74	.81	.70	.68	.70	.75	.75	.50	.42	.35	.39	.39	63.50	17.93
30 Elec AI AQE-64	.60	.73	.77	.36	.58	.71	.76	.72	.40	.50	.65	.65	.50	.46	.54	.51	65.09	20.01
31 Mech TALENT	.46	.61	.60	.28	.48	.61	.55	.55	.35	.42	.56	.74	.74	.83	.83	.72	97.45	21.24
32 Elec & Elec	.44	.52	.57	.27	.40	.48	.57	.55	.31	.35	.46	.83	.58	.52	.39	.52	11.17	4.18
33 Mechanics	.50	.61	.67	.32	.50	.59	.65	.62	.34	.43	.54	.83	.52	.54	.54	.52	13.85	2.95
34 Mech Reason	.49	.62	.62	.26	.48	.60	.62	.54	.28	.39	.51	.72	.39	.52	.52	.52	12.82	3.72
35 Viz 3 Dimen																	9.55	3.20

Table 8. Intercorrelations of Operational Test Scores, TALENT Test Scores, and AQE-66 Variables for Project TALENT Electronics Sample

Variable	Intercorrelation of Variables																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
1 Algebra	.49																			
2 Geometry	.25	.45																		
3 Trigonometry	.19	.34	.51																	
4 Physics	.30	.46	.43	.44																
5 Chemistry	.18	.14	.13	.10	.16															
6 High Sch Grad	.24	.28	.28	.23	.28	.57														
7 Educ (Years)	.29	.29	.29	.21	.19	.13	.22													
8 Arith Computat	.31	.38	.37	.25	.30	.17	.27	.42												
9 Arith Reason	.22	.27	.31	.23	.26	.20	.29	.28	.59											
10 Data Interp	.12	.20	.24	.27	.19	.10	.17	.01	.38	.41										
11 Elec Info	.06	.14	.11	.11	.06	.08	.10	-.06	.35	.36	.67									
12 Gen Mechanics	.17	.26	.25	.14	.20	.13	.20	.19	.42	.41	.28	.21								
13 Hidden Figures	.21	.32	.27	.20	.23	.15	.19	.11	.55	.51	.56	.54	.45							
14 Mech Principles	.22	.29	.30	.18	.24	.18	.23	.17	.53	.46	.39	.34	.54	.55						
15 Pattern Comp	.05	.11	.13	.08	.04	.07	.05	-.05	.31	.32	.56	.64	.24	.51	.38					
16 Shop Practices	.26	.30	.26	.19	.26	.22	.28	.25	.50	.52	.41	.34	.33	.45	.37	.29				
17 Word Knowledge	.17	.28	.26	.18	.18	.15	.19	.08	.55	.53	.67	.76	.70	.81	.61	.74	.47			
18 Mech AI (Raw)	.37	.41	.39	.27	.31	.22	.33	.80	.74	.56	.30	.22	.38	.42	.41	.19	.75	.41		
19 Admin AI (Raw)	.31	.39	.36	.24	.32	.23	.32	.35	.76	.64	.46	.38	.72	.60	.59	.36	.84	.72	.80	
20 Gen AI (Raw)	.28	.37	.39	.30	.32	.21	.31	.28	.81	.74	.70	.56	.54	.70	.81	.51	.57	.77	.64	
21 Elec AI (Raw)	.34	.52	.49	.37	.40	.19	.28	.19	.61	.57	.65	.69	.69	.79	.63	.66	.51	.94	.52	
22 Mech AI (Wgrd)	.47	.54	.51	.40	.40	.24	.36	.77	.75	.57	.33	.23	.39	.44	.43	.20	.72	.45	.98	
23 Admin AI (Wgrd)	.38	.55	.56	.40	.47	.24	.37	.39	.77	.64	.47	.36	.69	.60	.59	.33	.80	.69	.80	
24 Gen AI (Wgrd)	.37	.46	.56	.48	.41	.22	.35	.32	.80	.72	.68	.51	.53	.68	.78	.47	.56	.73	.66	
25 Elec AI (Wgrd)	.26	.34	.31	.19	.23	.14	.23	.20	.64	.52	.56	.53	.45	.64	.60	.53	.58	.71	.56	
26 AFQT	.28	.45	.40	.29	.31	.14	.22	.12	.51	.47	.60	.60	.50	.63	.51	.60	.42	.77	.40	
27 Mech AI AQE-64	.44	.49	.48	.36	.41	.23	.34	.56	.66	.50	.29	.20	.35	.43	.38	.17	.63	.39	.79	
28 Admin AI AQE-64	.38	.52	.52	.38	.44	.19	.33	.39	.66	.55	.38	.27	.53	.53	.49	.25	.68	.54	.72	
29 Gen AI AQE-64	.35	.45	.45	.38	.37	.19	.29	.32	.69	.56	.53	.41	.43	.58	.57	.38	.53	.60	.61	
30 Elec AI AQE-64	.27	.38	.39	.35	.36	.16	.27	.21	.64	.57	.68	.55	.48	.69	.58	.53	.58	.74	.56	
31 Elec TALENT	.27	.39	.39	.37	.44	.15	.28	.22	.50	.48	.54	.38	.38	.51	.41	.35	.58	.54	.53	
32 Physical Sci	.15	.24	.26	.29	.22	.10	.18	.03	.37	.41	.76	.59	.28	.54	.37	.53	.45	.62	.33	
33 Elec & Elec	.30	.33	.37	.25	.28	.17	.25	.40	.68	.55	.36	.30	.36	.52	.39	.30	.51	.49	.65	
34 Arith Reason	.13	.24	.22	.18	.18	.08	.13	.05	.45	.35	.42	.40	.44	.54	.58	.44	.28	.61	.28	
35 Viz 3 Dimen																				

Table 8 (Continued)

Variable	Intercorrelation of Variables														Mean	SD		
	20	21	22	23	24	25	26	27	28	29	30	31	32	33			34	35
1 Algebra	.31	.28	.34	.47	.38	.37	.26	.28	.44	.38	.35	.27	.27	.15	.30	.13	.82	.38
2 Geometry	.39	.37	.53	.54	.55	.46	.34	.45	.49	.52	.45	.38	.39	.24	.33	.24	.56	.50
3 Trigonometry	.36	.39	.49	.51	.56	.56	.31	.40	.48	.52	.45	.39	.39	.26	.37	.22	.23	.42
4 Physics	.24	.30	.37	.40	.40	.48	.19	.29	.36	.38	.38	.35	.37	.29	.25	.18	.27	.44
5 Chemistry	.32	.32	.40	.40	.47	.41	.23	.31	.41	.44	.37	.36	.44	.22	.28	.18	.40	.49
6 High Sch Grad	.23	.21	.19	.24	.24	.22	.14	.14	.23	.19	.19	.16	.15	.10	.17	.08	.93	.26
7 Educ (Years)	.32	.31	.28	.36	.37	.35	.23	.22	.34	.33	.29	.27	.28	.18	.25	.13	12.18	1.04
8 Arith Computat	.35	.28	.19	.77	.39	.32	.20	.12	.56	.39	.32	.21	.22	.03	.40	.05	25.68	7.87
9 Arith Reason	.76	.81	.61	.75	.77	.80	.64	.51	.66	.66	.69	.64	.50	.37	.68	.45	8.97	3.74
10 Data Interp	.64	.74	.57	.64	.72	.52	.47	.50	.55	.56	.57	.57	.48	.41	.55	.35	6.32	2.19
11 Elec Info	.46	.70	.65	.33	.47	.68	.56	.60	.29	.38	.53	.68	.54	.76	.36	.42	8.47	3.50
12 Gen Mechanics	.38	.56	.69	.23	.36	.51	.53	.60	.20	.27	.41	.55	.38	.59	.30	.40	9.16	3.78
13 Hidden Figures	.72	.54	.69	.39	.69	.53	.45	.50	.35	.53	.43	.48	.38	.28	.36	.44	7.86	4.87
14 Mech Principles	.60	.70	.79	.44	.60	.68	.64	.63	.43	.53	.58	.69	.51	.54	.52	.54	7.82	3.14
15 Pattern Comp	.59	.81	.63	.43	.59	.78	.60	.51	.38	.49	.3	.5	.41	.37	.39	.58	9.17	4.32
16 Shop Practices	.36	.51	.66	.20	.33	.47	.53	.60	.17	.25	.38	.53	.35	.53	.30	.44	9.48	3.10
17 Word Knowledge	.84	.57	.51	.72	.80	.56	.58	.42	.63	.68	.53	.58	.58	.45	.51	.28	23.50	6.50
18 Mech AI (Raw)	.72	.77	.94	.43	.69	.73	.71	.77	.39	.54	.60	.74	.54	.62	.49	.61	34.32	11.14
19 Admin AI (Raw)	.80	.64	.52	.98	.80	.66	.56	.40	.76	.72	.61	.56	.53	.33	.65	.28	58.16	13.88
20 Gen AI (Raw)	.79	.76	.76	.79	.96	.78	.71	.59	.76	.80	.68	.72	.63	.48	.64	.48	40.34	11.85
21 Elec AI (Raw)	.79	.81	.81	.66	.80	.97	.76	.68	.59	.67	.76	.80	.62	.62	.63	.60	32.94	10.64
22 Mech AI (Wgtd)	.76	.81	.59	.59	.81	.83	.72	.82	.54	.68	.69	.79	.63	.63	.56	.60	40.48	13.35
23 Admin AI (Wgtd)	.79	.66	.59	.59	.85	.72	.57	.46	.82	.76	.66	.60	.58	.36	.66	.30	63.81	16.12
24 Gen AI (Wgtd)	.96	.80	.81	.85	.85	.84	.70	.64	.78	.85	.73	.74	.68	.50	.66	.48	44.52	14.23
25 Elec AI (Wgtd)	.78	.97	.83	.72	.84	.73	.65	.72	.65	.72	.79	.81	.65	.62	.64	.58	36.58	12.41
26 AFQT	.71	.76	.72	.57	.70	.73	.70	.67	.55	.63	.57	.75	.55	.56	.58	.62	64.34	21.42
27 Mech AI AQE-64	.59	.68	.82	.46	.64	.70	.67	.48	.84	.66	.70	.70	.54	.59	.47	.33	63.43	19.88
28 Admin AI AQE-64	.70	.59	.54	.82	.75	.65	.55	.48	.84	.84	.69	.59	.56	.36	.64	.31	62.21	20.68
29 Gen AI AQE-64	.80	.67	.68	.76	.85	.72	.63	.66	.69	.76	.76	.68	.63	.45	.63	.41	63.22	19.14
30 Elec AI AQE-64	.68	.76	.69	.66	.73	.79	.67	.70	.69	.76	.76	.74	.61	.57	.60	.50	64.79	20.26
31 Elec TALENT	.72	.80	.79	.60	.74	.81	.75	.70	.59	.68	.74	.74	.82	.80	.71	.74	91.51	24.84
32 Physical Sci	.63	.62	.63	.58	.68	.65	.55	.54	.56	.63	.61	.82	.63	.63	.53	.40	10.21	3.95
33 Elec & Elec	.48	.62	.63	.36	.50	.62	.56	.59	.36	.45	.57	.80	.63	.63	.38	.43	11.40	4.21
34 Arith Reason	.64	.63	.56	.66	.66	.64	.58	.47	.64	.63	.60	.71	.53	.38	.37	.37	9.74	3.40
35 Viz 3 Dimen	.48	.60	.60	.30	.48	.58	.62	.53	.31	.41	.50	.74	.40	.43	.37	.37	9.60	3.06

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13 ABSTRACT
This report describes the development and standardization of the 1966 form of the Airman Qualifying Examination. Descriptive data and statistical characteristics of AQE items and subtests are presented, as well as intercorrelations among Project TALENT tests and AQE variables. The report was designed as a reference source to be used in the Air Force's selective recruiting program and to provide information to guidance counselors in the high school testing program.

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