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DEVELOPMENT OF ENGLISH LANGUAGE TEST - BASIC
FINAL REPORT

by
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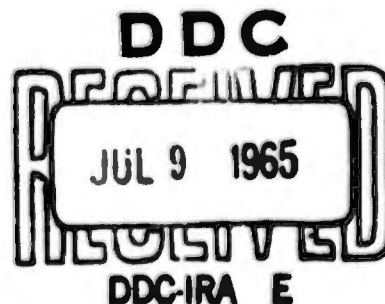
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ABSTRACT

An experimental form of the English Language Test - Basic, a test consisting of four sub-tests (Listening, Speaking, Reading and Writing) of 40 items each was administered to 671 randomly selected non-U. S. citizen Air Force employees in 15 countries within 19 language groups. Two forms of the ELT - Basic consisting of four sub-tests with four parallel forms of 20 items each were developed from the experimental form.

Analysis of the results indicated that the eight completed parallel forms of the ELT - Basic possessed good utility across cultures and was predictive of basic levels of English language skills of Listening, Speaking, Reading and Writing as well as overall effectiveness of English language communication on the job.

I. Introduction

A. Problem - The specific problem with which this study was concerned was the construction and development of a standard English language test for world-wide use in the determination and assessment of individual English language proficiency at the minimal level.

B. Background - The Air Force currently employs about 48,958 non-U. S. citizens in roughly 185 overseas areas within the boundaries of 58 countries. The linguistic diversity of the total group is represented by at least 35 separate languages and dialects in addition to English. In order to cope with the problem of communication in English, the Air Force introduced a system of English language bonus payments - in addition to English language job requirements - that were originally designed as an incentive to learn and/or use the English language in job situations. As a corollary of the English language bonus payments and the English language job requirements, diverse numbers and types of English language testing instruments were developed and/or adapted for use in the overseas areas. Little or no validity has been reported on the majority of the testing procedures nor have attempts to standardize the diverse procedures been accomplished. To meet the standardization problem, it was decided that, as a first step, the development of a standard basic English language test be undertaken by USAF.

II. Method

A. Development of Items - The experimental form of the English Language Test - Basic was made up of 160 items - 40 for each of the four sub-tests of Listening, Speaking, Reading and Writing. Each sub-test was constructed to test specifically for each of four skills involved. Each item was based upon the English sound system which was treated as a finite communication system. Universal concepts; such as, Hand or Woman, were used within the framework of the English communication system and presented in the form of picture items and picture plus word items. Since the items were designed to test the most basic levels of English language skills across culture, each item was restricted to the most commonly used sounds and universal concepts. Specific points of linguistic contrasts for each language area were minimized in the construction of the items. The main reason for this was the intended cross culture use of the items plus the fact that each language area is not specifically related to any one particular country. For example, Italian speaking employees are sometimes found in Libya, Spanish speaking employees include those who live in Panama and in the Philippines and Japanese speakers are found in Okinawa.

B. Data Collection - The experimental form of the English Language Test - Basic was administered to a sample population of 671 non-U. S. citizen Air Force employees in 15 separate geographic areas representing 19 different languages and the greatest employee group densities. Each employee sub-sample was representative of the English language level of each of the respective areas as selected on a random basis.

The entire English Language Test - Basic, consisting of the Reading, Writing, Speaking and Listening sub-tests, was administered - including a Reading - Writing and Speaking - Listening Warm-Up Exercise used to screen out employees with no discernible English language ability - to each of the 671 examinees. In addition, eight separate English language proficiency ratings were obtained for each examinee by their respective supervisors. (Also see Appendix A).

TABLE 1. SUPERVISOR RATING SCALES

- I. Listening Ability
- II. Pronunciation
- III. Grammar and Word Order
- IV. Speaking Vocabulary
- V. General Speed of Speech and Sentence Length
- VI. Reading Comprehension
- VII. Writing Ability
- Overall Effectiveness of English Communication

The supervisors also recorded whether or not communication typically occurred in English, what English language skills were required on the job and the length of time the employee was known by the supervisor.

C. Analysis - The sample of 671 was divided, on a random basis, into two groups for the purpose of item analysis (N = 335) and cross validation (N = 336). The item analysis was performed with the first group (N = 335). This procedure was designed to select significant items and to provide a basis for constructing parallel forms of 20 items each. The aim here was the development of eight - 20 item sub-tests, two for each of the English language skills of Listening, Speaking, Reading and Writing.

Cross-validation was performed with the remaining 336 cases. The cross-validation group served the purpose of a second study where the validity and utility of each of the eight - 20 item tests were determined with this separate and independent sample.

Since the test was designed specifically as an instrument for determining parameters of basic, or minimal, English language skills, the sample was further broken down into three sub-groups:

- a. English Only Group - Non-U. S. citizen employees who communicate with their supervisor only in English.
- b. Bi-Lingual Group - Non-U. S. citizen employees who communicate with their supervisor by way of an interpreter.
- c. The Overall Group - The total group comprised of a. and b.

Similar analysis was performed on each of the sub-groups.

III. Results - The item analysis (N = 335) results showed that the 40 item sub-tests of the ELT-Basic represented a relatively easy task for the overall sample; i.e., expected mean is 20 and the actual mean ranged from about 22 to 28.

TABLE 2. ITEM ANALYSIS GROUP

ELT - Basic Test Scores

<u>Sub-Test</u>	<u>No. of Items</u>	<u>Group</u>	<u>N</u>	<u>\bar{X}</u>	<u>S. D.</u>
Listening	40	English Only	265	29.98	8.67
Listening	40	Bi-Lingual	70	20.16	12.44
Listening	40	Overall	335	27.93	10.38
Speaking	40	English Only	265	24.03	9.97
Speaking	40	Bi-Lingual	70	12.80	9.54
Speaking	40	Overall	335	21.68	10.89
Reading	40	English Only	265	29.25	11.26
Reading	40	Bi-Lingual	70	18.79	13.91
Reading	40	Overall	335	27.06	12.60
Writing	40	English Only	265	26.54	12.32
Writing	40	Bi-Lingual	70	14.73	14.47
Writing	40	Overall	335	24.07	13.67

For the overall group, the English only group and the Bi-Lingual group, the easiest sub-tests were Listening and Reading (the receptive skills) and the most difficult were Writing and Speaking (Emission).

Supervisors' ratings confirmed test difficulties by showing, on the whole, that level of English language proficiency on the job was somewhat below that of a native English speaker; i.e., native English speakers are expected to obtain ratings of seven, actual ratings for the overall group are between four and five.

TABLE 3. ITEM ANALYSIS GROUP (N = 335)

<u>Supervisor Rating</u>	<u>Sub-Group</u>	<u>Mean</u>	<u>Standard Deviation</u>
I. Listening Ability (Listening) -0-7 Scale -	English Only	5.41	1.54
	Bi-Lingual	2.77	2.10
	Overall Group	4.86	1.99
II. Pronunciation (Speaking) -0-7 Scale -	English Only	5.16	1.58
	Bi-Lingual	2.41	1.44
	Overall Group	4.59	2.00
III. Grammar & Word Order in Speaking (Speaking) -0-7 Scale -	English Only	5.24	1.64
	Bi-Lingual	2.64	2.13
	Overall Group	4.70	2.07
IV. Speaking Vocabulary (Speaking) -0-7 Scale -	English Only	4.98	1.45
	Bi-Lingual	2.48	1.87
	Overall Group	4.46	1.85
V. General Speed of Speech and Sentence Length (Speaking) -0-7 Scale -	English Only	5.13	1.63
	Bi-Lingual	2.43	1.99
	Overall Group	4.56	2.03
VI. Reading Comprehension (Reading) -0-7 Scale -	English Only	4.99	2.02
	Bi-Lingual	2.43	1.99
	Overall Group	4.41	2.36
VII. Writing Ability (Writing) -0-7 Scale -	English Only	4.77	2.07
	Bi-Lingual	1.98	2.23
	Overall Group	4.19	2.39
Overall Effectiveness of Communication 0-3 Scale	English Only	2.53	.66
	Bi-Lingual	2.00	.93
	Overall Group	2.63	.75

Supervisor's ratings also reflected that the receptive skills were easier than emission for the overall group but ranked Listening, Speaking, Reading, and Writing - in that order of difficulty for the bi-lingual group. Figures 1 and 2 show the rank orders of the ratings and the test scores of the English only and the bi-lingual groups.

Fig. 1. Item Analysis Group - N = 335 Mean Test Scores

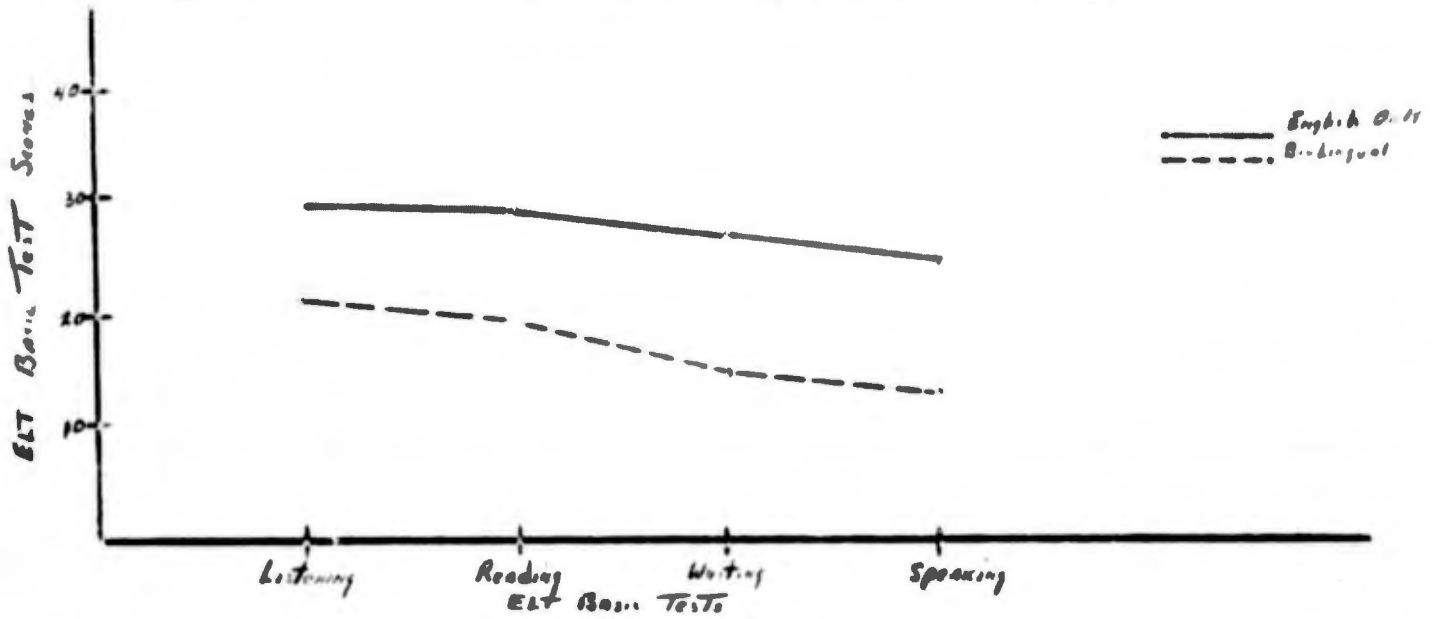
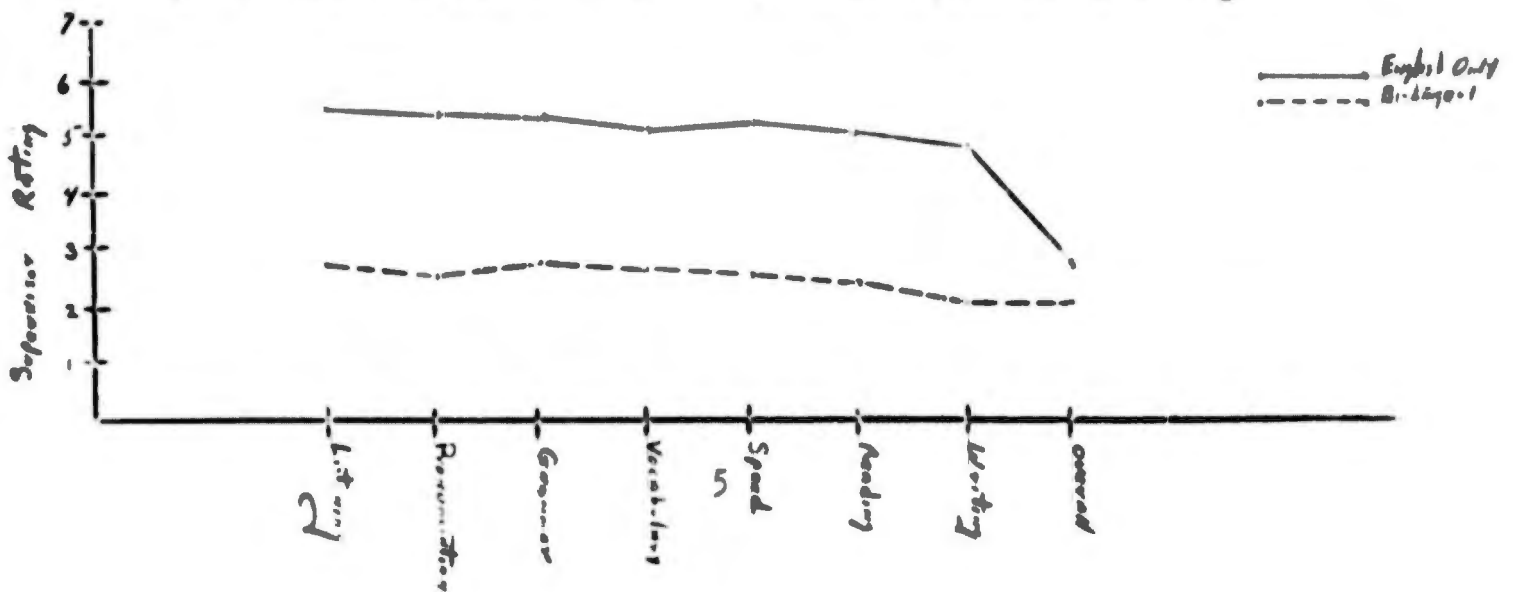
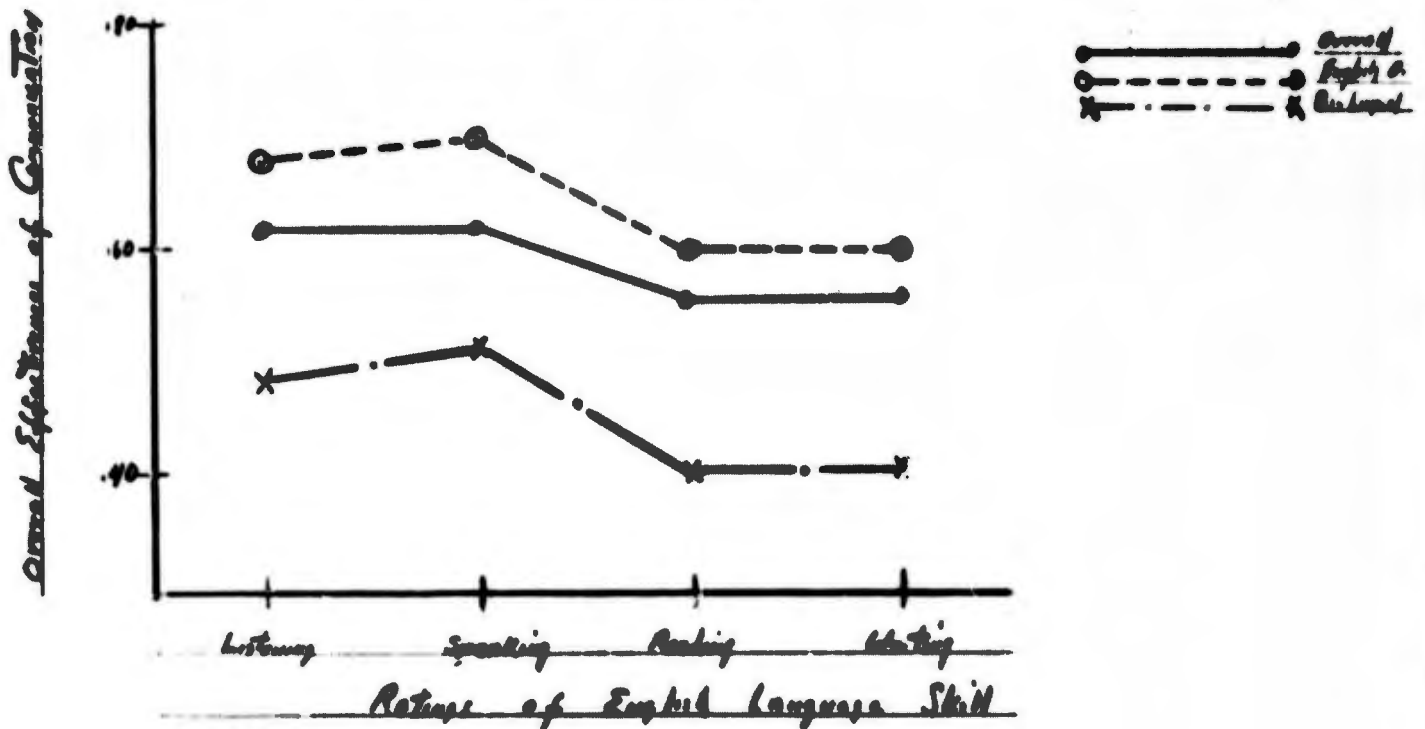


Fig. 2. Item Analysis Group - N = 335 Mean Supervisor's Ratings



The exception seemed to be in that fraction of the bi-lingual population that had known their respective supervisors for approximately two years or more. The ratings of overall effectiveness of communication in English showed a somewhat lower relationship to the ratings of specific skills in English than expected.

Fig. 3. Relationship Between Supervisor Rating of English Language Skills and Overall Effectiveness of Communication in English



In addition, the ratings of overall effectiveness of communication seemed to be more related to speaking and listening abilities than to reading and writing. This lines up with the supervisor's requirements that at least 85% of the work force be able to listen to and speak English. Based upon this sample, about 71% actually meet these requirements. On the other hand, the supervisors require only about 69% to be able to read and write English and about 70% meet that requirement.

Although the bi-lingual groups required an interpreter to communicate with the supervisor on the job, both the test scores and the ratings indicate that some minimal communication in English could be made with these employees.

Each of the 160 items - 40 items each sub-test - demonstrated a significant relationship (point bi-serial correlation) with the appropriate supervisory rating and with the rating of overall effectiveness of communication. The item correlation with the appropriate supervisory rating ranged from $r = .23$ to $r = .53$.

The cross-validation ($N = 336$) results showed that the mean score of the eight forms of the sub-tests remained proportionately constant, as compared to the item analyses results, as did the relationships between and among the ratings, tests and sub-groups.

TABLE 4. TEST SCORES OF CROSS

VALIDATION GROUP FOR BOTH FORMS OF THE ELT - BASIC

<u>ELT - Basic</u> <u>Sub-Test</u>	<u>Number</u> <u>Of Items</u>	<u>Sub-Group</u>	<u>N</u>	<u>\bar{X}</u>	<u>S.D.</u>	<u>r. With Overall</u> <u>Effectiveness of</u> <u>Communication</u>
Listening I	20	English Only	267	15.38	4.63	.34
Listening I	20	Bi-Lingual	69	10.68	5.75	.54
Listening I	20	Overall	336	14.41	5.24	.44
Listening II	20	English Only	267	14.77	5.01	.34
Listening II	20	Bi-Lingual	69	10.04	5.90	.51
Listening II	20	Overall	336	13.80	5.55	.43
Speaking I	20	English Only	267	15.41	4.94	.16
Speaking I	20	Bi-Lingual	69	10.67	6.62	.22
Speaking I	20	Overall	336	14.44	5.66	.23
Speaking II	20	English Only	267	15.62	5.00	.17
Speaking II	20	Bi-Lingual	69	10.82	6.45	.24
Speaking II	20	Overall	336	14.64	5.68	.25
Reading I	20	English Only	267	14.57	5.96	.31
Reading I	20	Bi-Lingual	69	10.19	6.63	.45
Reading I	20	Overall	336	13.67	5.96	.38
Reading II	20	English Only	267	14.93	5.61	.31
Reading II	20	Bi-Lingual	69	10.11	6.81	.47
Reading II	20	Overall	336	13.94	6.14	.40
Writing I	20	English Only	267	13.23	6.21	.40
Writing I	20	Bi-Lingual	69	7.20	6.18	.49
Writing I	20	Overall	336	11.99	6.67	.46
Writing II	20	English Only	267	12.85	12.85	.42
Writing II	20	Bi-Lingual	69	6.98	6.98	.49
Writing II	20	Overall	336	11.65	11.65	.45

The relationship between and among the eight completed forms of the ELT - Basic showed that the two forms of each pair of sub-tests for Listening, Speaking, Reading and Writing were homogeneous with respect to each other.

TABLE 5. DIFFERENCES BETWEEN MEANS AND STANDARD DEVIATIONS AND CORRELATIONS BETWEEN PARALLEL FORMS OF ELT-BASIC CROSS VALIDATION GROUP (N = 336)

	\bar{X} Dif	S.D. Dif	r.	
Listening Tests I and II	.61	.31	r. = .95	Overall Group (N = 336)
*Speaking Tests I and II	.24	.02	r. = .96	
Reading Tests I and II	.77	.17	r. = .97	
Writing Tests I and II	.34	.04	r. = .96	
	\bar{X} Dif	S.D. Dif		
Listening Tests I and II	.61	.38	r. = .94	English Only Group (N = 267)
*Speaking Tests I and II	.21	.06	r. = .95	
Reading Tests I and II	.36	.35	r. = .96	
Writing Tests I and II	.38	.02	r. = .96	
	\bar{X} Dif	S.D. Dif		
Listening Tests I and II	.64	.15	r. = .97	Bi-Lingual Group (N = 69)
*Speaking Tests I and II	.15	.17	r. = .95	
Reading Tests I and II	.08	.18	r. = .96	
Writing Tests I and II	.22	.46	r. = .96	

* Inter-rater reliability for the rated portion of the Speaking Test with two raters per examinee. N = 378 - r. = .97.

The intercorrelation for each pair ranged from r. = .94 to r. = .97. In addition, no significant differences exist between the means and standard deviations of the parallel forms of the sub-tests. The items of each sub-test pair are similar in that the item represent their respective domains of Listening, Speaking, Reading and Writing. However, none of the items are identical and no repeat items occur on either of the sub-test pairs. The rated portion of the Speaking Test, with two raters (N = 378) per examinee yielded an inter-rater reliability of .97. Estimates of internal consistency of each of the eight sub-tests ranged from .90 to .94.

Although the sub-tests are significantly intercorrelated, inspection of Table 6 reveals specific quantitative differences among the relationships.

TABLE 6. INTERRELATIONSHIPS BETWEEN SUB-TESTS

(Cross Sample Group N = 336)

		Listening		Speaking		Reading		Writing	
		I	II	I	II	I	II	I	II
I. Listening (I)	-	-	.95	.48	.48	.79	.80	.81	.81
I. Listening (II)	-	-	-	.50	.50	.83	.83	.80	.80
II. Speaking (I)	-	-	-	-	.96	.41	.44	.44	.44
II. Speaking (II)	-	-	-	-	-	.41	.44	.45	.45
III. Reading (I)	-	-	-	-	-	-	.97	.87	.86
III. Reading (II)	-	-	-	-	-	-	-	.86	.86
IV. Writing (I)	-	-	-	-	-	-	-	-	.96
IV. Writing (II)	-	-	-	-	-	-	-	-	-

Listening, Reading and Writing abilities seem to be highly related to each other, while Speaking is relatively independent. This independence may be due to the manner in which the Speaking Test was scored. The Listening, Reading and Writing sub-tests were scored in the normal psychometric of pass - fail while the Speaking Test was scored on a continuum of 0 to 4 points and was generally considered to have more stringent criteria.

The supervisor's ratings demonstrated a high degree of generalization or carry over effect, from one rating to another; hence, a relatively high relationship existed between the ratings. (See Appendix B).

The ratings did indicate that the bi-lingual group was in possession of a minimal level of English language skill but not quite enough to communicate in English with the English speaking supervisor in most cases.

TABLE 7. SUPERVISOR'S RATING OF
CROSS-VALIDATION GROUP AND CORRELATION WITH APPROPRIATE TESTS

Ratings	Scale	Sub-Group	N.	\bar{X}	S.D.	r. With Test	
						Form I	Form II
I. Listening	0-7	English Only	267	5.27	1.65	.54	.54
I. Listening	0-7	Bi-Lingual	69	2.79	2.02	.52	.53
I. Listening	0-7	Overall	336	4.76	2.00	.61	.61
II. Pronunciation	0-7	English Only	267	5.01	1.64	.24	.27
II. Pronunciation	0-7	Bi-Lingual	69	2.59	2.00	.55	.53
II. Pronunciation	0-7	Overall	336	4.51	1.98	.44	.45
III. Grammar	0-7	English Only	267	5.08	1.75	.25	.27
III. Grammar	0-7	Bi-Lingual	69	2.48	1.99	.52	.49
III. Grammar	0-7	Overall	336	4.54	2.08	.44	.44
IV. Speaking	0-7	English Only	267	4.86	1.56	.25	.27
IV. Speaking	0-7	Bi-Lingual	69	2.40	1.94	.52	.49
IV. Speaking	0-7	Overall	336	4.36	1.92	.44	.44
V. General Speed	0-7	English Only	267	5.00	1.75	.25	.28
V. General Speed	0-7	Bi-Lingual	69	2.46	1.99	.48	.45
V. General Speed	0-7	Overall	336	4.48	2.07	.42	.44
VI. Reading	0-7	English Only	267	4.90	2.13	.64	.65
VI. Reading	0-7	Bi-Lingual	69	2.17	2.19	.68	.64
VI. Reading	0-7	Overall	336	4.34	2.41	.68	.69
VII. Writing	0-7	English Only	267	4.72	2.15	.70	.70
VII. Writing	0-7	Bi-Lingual	69	1.94	2.03	.73	.70
VII. Writing	0-7	Overall	336	4.15	2.40	.75	.75
Overall Effectiveness	0-3	English Only	267	2.56	.69	---	---
Overall Effectiveness	0-3	Bi-Lingual	69	1.94	1.05	---	---
Overall Effectiveness	0-3	Overall	336	2.64	.79	---	---
Months Known	---	English Only	267	12.1	21.3	---	---
Months Known	---	Bi-Lingual	69	28.7	40.2	---	---
Months Known	---	Overall	336	15.5	27.1	---	---

Table 8 and Figure 4 show the composite predictive validity of the English language tests and the summated supervisory ratings.

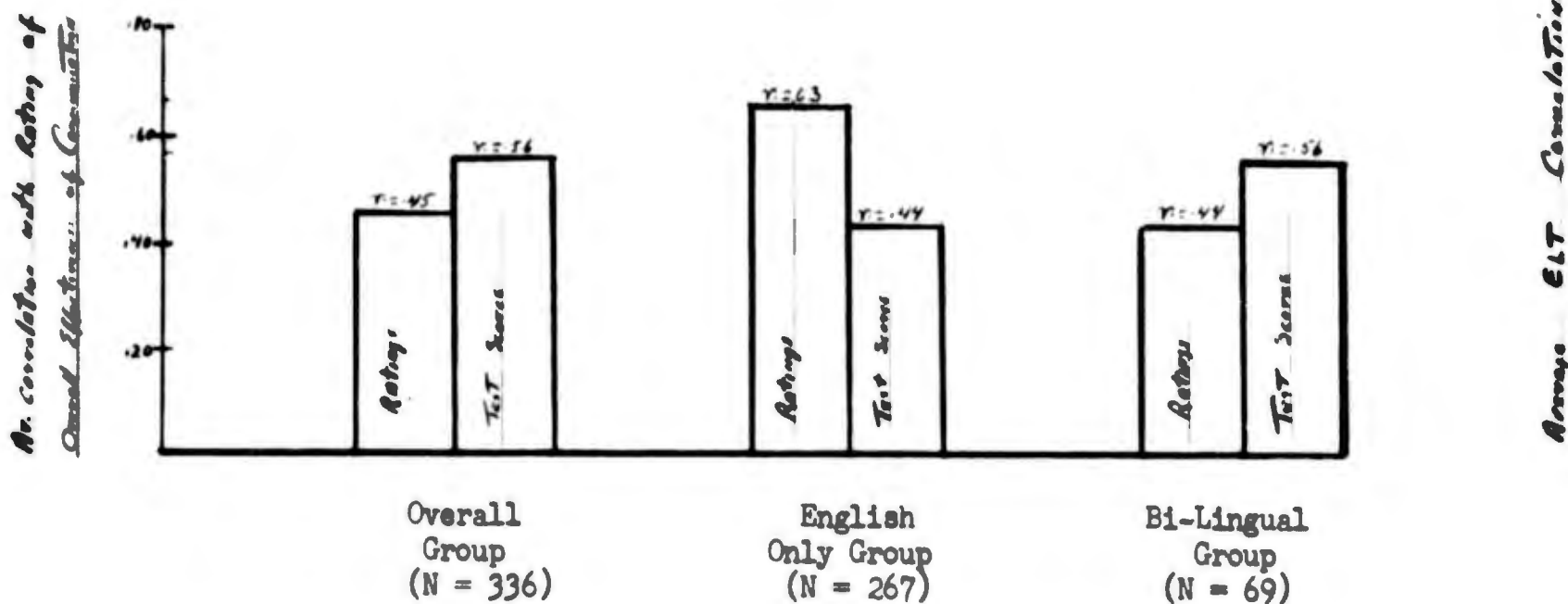
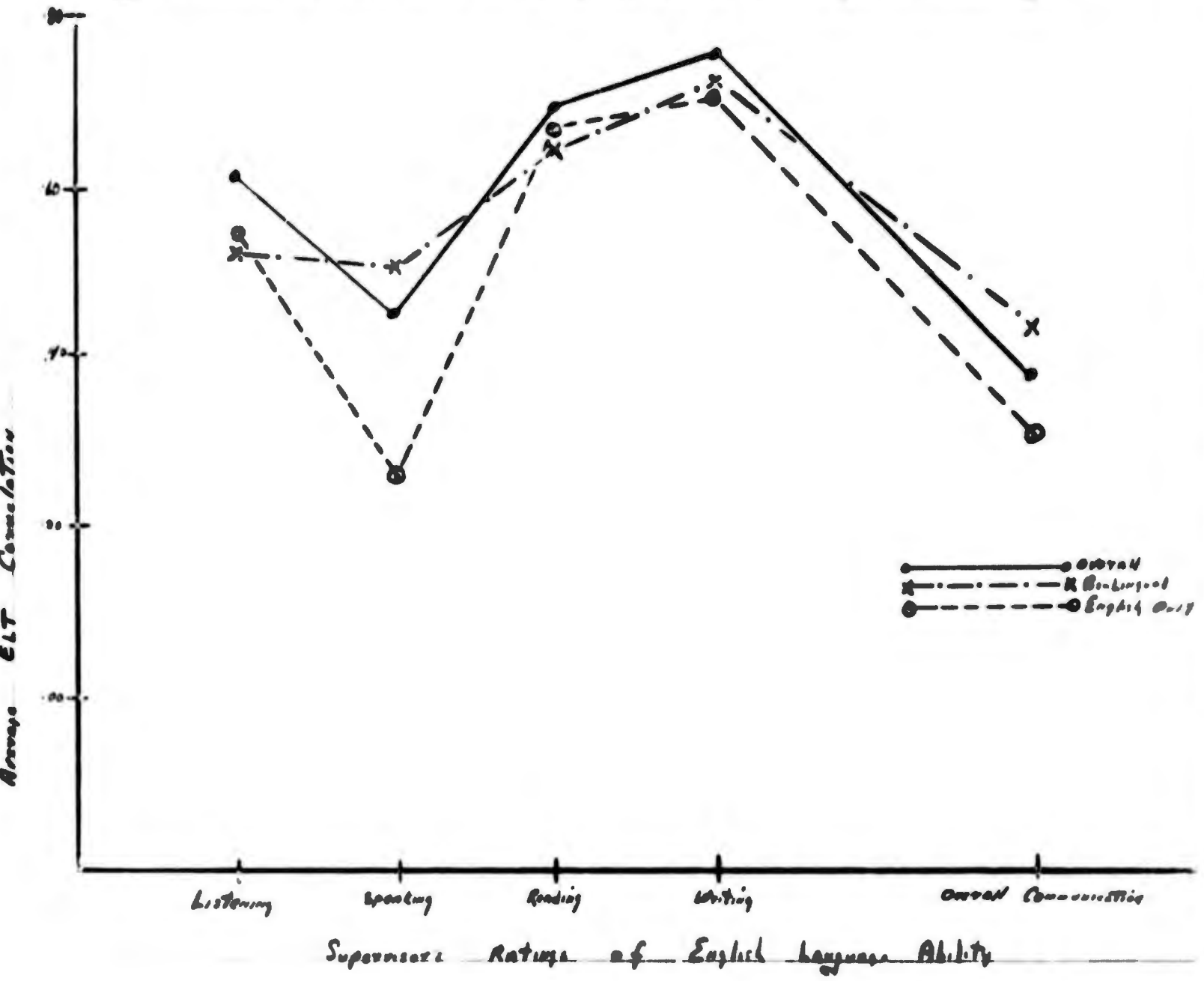


TABLE 8

ELT-Basic Scores Versus Supervisor Ratings of Listening, Speaking, Reading And Writing As Predictors of Overall Effectiveness Of Communication In English.

Fig. 4. Average Correlations of Basic-ELT Scores with Supervisor Ratings



The average predictive efficiency of the sub-tests of the ELT-Basic with supervisor's rating for each language skill for the overall group is, in rank order, Writing ($r = .75$), Reading ($r = .68$), Listening ($r = .61$) and Speaking ($r = .45$). The relationship for the overall group on the job effectiveness of communication in English and the total test score is $r = .38$.

IV. Summary

1. The experimental form of the ELT-Basic was administered to a randomly selected population of 671 non-U. S. citizen Air Force employees in 15 separate geographic areas and 19 language groups.
2. Results showed that the experimental test was relatively easy and discriminating for the overall sample population.
3. The ELT-Basic completed forms - actually eight sub-tests of 20 items each drawn from the experimental test - proved to be discriminating, especially for the minimal level group with a relatively high validity, reliability and internal consistency.
4. The parallel forms of the sub-tests of the completed ELT-Basic showed inter-correlations for each respective pair ranging from $r. = .94$ to $r. = .97$ with no significant differences between means or standard deviations.
5. The inter-rater reliability of the rated portion of the Speaking Test was $r. = .97$.
6. Average predictive efficiency of the ELT-Basic sub-tests was demonstrated to be good with $r.$'s ranging from $r. = .75$ (Writing), $r. = .68$ (Reading), $r. = .61$ (Listening) to $r. = .45$ (Speaking).
7. In general, the results indicated that the eight forms of the ELT-Basic possessed good utility and was predictive of levels of English language skills of Listening, Speaking, Reading and Writing as well as overall effectiveness of English language communication on the job.

Reference

Camm, W. B., Development of English Language Test - Basic, Directorate of Civilian Personnel, Hq USAF, Personnel Research Branch, Research Report 63-3, 1 August 1963.

APPENDIX A

SUPERVISOR'S RATING OF ENGLISH LANGUAGE PROFICIENCY

NAME AND NATIVE LANGUAGE OF SUPERVISOR _____

NAME AND NATIVE LANGUAGE OF EMPLOYEE _____

DATE _____ PLACE _____

The purpose of this rating is to find out how well the above named employee, who is under your supervision, is able to handle the English language.

If you feel that you do not know the employee's English language ability well enough to make this rating, do not attempt to rate him. Make the notation, "cannot rate the employee" at the top of this sheet and return the forms to the CPO.

Each of the seven (7) rating forms appear on a separate page. Simply check the space to the left of the statement that you feel most accurately describes the employee and go on to the next form. If you feel that you do not know the employee well enough to rate any particular form, simply make a notation at the bottom of the sheet and go on to the next form.

At the end of the series of rating forms, you will find four (4) questions. These are also quite important. Please check them as accurately as you can. However, do not answer them until you have completed all of the ratings.

I. LISTENING ABILITY

- _____ 7. Understands everything; no adjustments in speed are needed and repetition is not necessary.
- _____ 6. Understands nearly everything at normal speed, though occasional repetition may be necessary.
- _____ 5. Understands nearly everything at slower-than-normal speed with some repetition.
- _____ 4. Obviously has trouble understanding some things; frequent adjustments in speed and many repetitions are necessary.
- _____ 3. Understands only very simple conversational subjects at slow speeds with frequent repetition.
- _____ 2. Understands in a general way only simple English phrases. Cannot be said to understand simple conversational English.
- _____ 1. Understands only a few simple English words.
- _____ 0. Understands no spoken English

II. PRONUNCIATION

- _____ 7. Speaks with few (if any) traces of "foreign accent."
- _____ 6. Pronunciation understandable but one is always conscious of a definite "accent."
- _____ 5. "Foreign accent" necessitates concentrated listening and leads to occasional misunderstanding. Words and sentences must sometimes be repeated.
- _____ 4. Many serious errors in pronunciation (e.g. still sounds like steel, laws sound like loss), word accent (words are frequently accented on the wrong syllable), and sentence pitch (statements have the "melody" of questions, etc.). Frequent repetitions are required.
- _____ 3. Definitely hard to understand because of sound, accent, and pitch difficulties.
- _____ 2. Pronunciation would be virtually unintelligible to "the man on the street."
- _____ 1. Can pronounce only a few simple English words.
- _____ 0. Cannot pronounce English words.

III. GRAMMAR AND WORD-ORDER IN SPEAKING

- _____ 7. Speaks English with few (if any) noticeable errors of grammar or word-order.
- _____ 6. In general speaks "good English", but with occasional grammatical or word-order errors which do not, however, obscure meaning (e.g. "I am needing more English," "He gave to me the letter").
- _____ 5. Meaning occasionally obscured by grammatical and/or word-order errors.
- _____ 4. Grammatical usage and word order definitely unsatisfactory; frequently needs to rephrase constructions and/or restricts himself to basic structural patterns (e.g. used the simple present tense where he should use past and future.)
- _____ 3. Errors of grammar and word-order make comprehension quite difficult.
- _____ 2. Speech so full of grammatical and word-order errors as to be virtually unintelligible to "the man on the street".
- _____ 1. Speaks English only a word at a time.
- _____ 0. Does not speak English.

IV. SPEAKING VOCABULARY

- _____ 7. Use of vocabulary and "idioms" is virtually that of a native speaker of English.
- _____ 6. Rarely has trouble expressing himself with appropriate vocabulary and "idioms".
- _____ 5. Sometimes uses inappropriate terms and/or round-about language because of inadequate vocabulary.
- _____ 4. Frequently uses the wrong words; speech limited to simple vocabulary.
- _____ 3. Misuse of words and very limited vocabulary make comprehension quite difficult.
- _____ 2. Vocabulary is inadequate for even a simple conversation.
- _____ 1. Vocabulary is restricted to the names of a few objects.
- _____ 0. Does not speak English.

V. GENERAL SPEED OF SPEECH AND SENTENCE LENGTH

- _____ 7. Speech speed and sentence length are those of a native speaker.
- _____ 6. Speed of speech seems to be slightly affected by language problems.
- _____ 5. Both speed of speech and length of utterance are apparently affected by language difficulties and limitations.
- _____ 4. Speed of speech and length of utterance seem strongly affected by language difficulties and limitations.
- _____ 3. Speed of speech and length of utterance are so far below normal as to make conversation quite difficult.
- _____ 2. Speech is so halting and fragmentary as to make conversation with "the man on the street" almost impossible.
- _____ 1. Speech is restricted to single English words.
- _____ 0. Does not speak English.

VI. READING COMPREHENSION

- _____ 7. Understands everything of average difficulty (10th grade level) that he reads; normal sentence length and average word difficulty seem to present no problem.
- _____ 6. Understands nearly everything (of average difficulty) he reads, though occasionally re-reading of a passage is necessary.
- _____ 5. Understands most of the material (of average difficulty) he reads, but at a much slower-than-normal rate and with a good deal of re-reading.
- _____ 4. Understands nearly everything of easy reading materials (5th grade level) but reads slowly with some re-reading.
- _____ 3. Has obvious trouble reading and understanding even easy material (1st to 5th grade).
- _____ 2. Reads and understands many common English words when presented one at a time.
- _____ 1. Reads only a few common job related words.
- _____ 0. Cannot read English.

VII. WRITING ABILITY

- _____ 7. Writes (or prints) English with few (if any) noticeable errors in spelling, grammar or word-order.
- _____ 6. Writes (or prints) "good English" with occasional spelling, grammatical or word-order which do not obscure meaning.
- _____ 5. Meaning is occasionally obscured by various combinations of faulty spelling, faulty grammar and/or faulty word-order.
- _____ 4. Word-order, grammar, and spelling errors make the understanding of the written (or printed) product difficult.
- _____ 3. The writing (or printing) is so full of various combinations of spelling, grammatical and/or word-order errors that the finished product is virtually illegible.
- _____ 2. Writes (or prints) only simple English words.
- _____ 1. Writes (or prints) only a few simple English words; he has a great deal of difficulty forming English letters.
- _____ 0. Cannot write (or print) English words or letters.

The 4 questions:

1. Do you feel that you are able to effectively communicate with this employee?

Always Usually Seldom Never

2. If you do not use the English language, what methods do you usually employ in communications with this employee? (If you typically use English do not answer this question.)

3. Do you require (on the job) that the employee be able to:

- a. Listen and understand any English? Yes No
- b. Speak any English? Yes No
- c. Read any English? Yes No
- d. Write any English? Yes No

4. How long have you known this employee?

_____ Years _____ Months

Make any comment you may care to relating to the questions asked on this form.

APPENDIX C

LINGUISTIC COMPOSITION OF THE

ITEM ANALYSIS GROUP (I) AND CROSS-VALIDATION GROUP (II) N = 671

Item Analysis (I)			Cross-Validation (II)		
Language	N	%	Language	N	%
French	24	7.16	French	26	7.74
Maltese	1	.30	Visatan	1	.30
Greek	11	3.28	Greek	11	3.27
Arabic	10	2.99	Arabic	16	4.76
German	41	12.24	German	42	12.50
Urdu	4	1.19	Urdu	3	.89
Pushto	10	2.99	Pushto	6	1.78
Italian	24	7.16	Italian	24	7.14
Spanish	35	10.45	Spanish	31	9.23
Portuguese	31	9.25	Portuguese	32	9.52
Viet-Nameese	3	.90	Viet-Nameese	2	.60
Thai	3	.90	Thai	4	1.19
Tagalog	17	5.07	Tagalog	19	5.65
Pampango	26	7.76	Pampango	25	7.44
Bical	1	.30	Illacano	1	.30
Japanese	57	17.01	Japanese	44	13.09
Korean	37	11.04	Korean	49	14.58
	<u>335</u>	<u>99.99</u>		<u>336</u>	<u>99.99</u>

APPENDIX D

1/ Population Sample of Language Area (N = 671)

<u>Language</u>	<u>Sample Size</u>	<u>% of Sample</u>
1. French	50	7.45
2. Matlese	1	.15
3. Greek	22	3.28
4. Arabic	26	3.87
5. German	83	12.37
6. Urdu	7	1.04
7. Pushto	16	2.38
8. Italian	48	7.15
9. Spanish	66	9.84
10. Portuguese	63	9.39
11. Viet-Nameese	5	.75
12. Thai	7	1.04
13. Tagalog	36	5.36
14. Pampango	51	7.60
15. Bical	1	.15
16. Japanese	101	15.05
17. Korean	86	12.82
18. Ilacano	1	.15
19. Visayan	1	.15
TOTAL	671	99.99

1/ The 15 countries from which the population sample was drawn were Libya, Philippines, France, Germany, Greece, Pakistan, Italy, Japan, Korea, Azores, Spain, Thailand, Vietnam, Okinawa and Panama.