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A PARAMETRIC STUDY OF LANGUAGE TRAINING IN THE PEACE CORPS. FINAL REPORT.

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A STUDY WAS UNDERTAKEN TO INVESTIGATE FOREIGN LANGUAGE LEARNING IN BOTH INTRAINING AND FIELD PROGRAMS OF THE PEACE CORPS, AND TO DETERMINE INDIVIDUAL AND EXPERIENCE FACTORS AFFECTING THE RATE OF LANGUAGE LEARNING. THE OBJECTIVE WAS TO DEVELOP A PROTOTYPE FOR A PARAMETRIC STUDY INVOLVING SUCH FACTORS AS LANGUAGE APTITUDE AND PRIOR LANGUAGE TRAINING. A TOTAL OF 444 TRAINEES IN SPANISH AND 51 TRAINEES IN PORTUGUESE AT THE UNIVERSITY OF NEW MEXICO WERE GIVEN PLACEMENT TESTS AND LANGUAGE APTITUDE AND PROFICIENCY TESTS AT VARIOUS STAGES OF THE TRAINING PROGRAM. RESULTS SHOWED THAT PRIOR KNOWLEDGE, NOT APTITUDE, DETERMINED THE DEGREE OF FLUENCY. A FOLLOWUP STUDY WAS DONE IN THE FIELD WITH SIMILAR RESULTS. RECOMMENDATIONS WERE MADE RESPECTING (1) LENGTH OF COURSE, (2) FURTHER TRAINING IN THE FIELD, (3) THE IMPORTANCE OF VARIABLES SUCH AS APTITUDE AND PRIOR KNOWLEDGE IN TRAINEE SELECTION, AND (4) DEVELOPMENT OF A PROGRAM OF LANGUAGE PROFICIENCY MEASUREMENT. (KL)

A PARAMETRIC STUDY OF LANGUAGE TRAINING IN THE PEACE CORPS

FINAL REPORT

for

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Peace Corps

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A C K N O W L E D G M E N T S

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Also, thanks are expressed to the several hundred Peace Corps trainees and Volunteers who, often under trying conditions, took our tests and answered our questionnaires, both during the University of New Mexico training period and in various countries of Latin America at mid-tour gatherings. We hope that their efforts in behalf of our research can contribute to the further improvement of language training programs both in the Peace Corps and in other settings.

Finally, we are grateful to the personnel in the Research Division of the Peace Corps, Dr. Joseph Colmen, Dr. Robert Krug, and Miss Mitzi Mallins, for their advice, help, and general support.

The writing of this report was the joint effort of the staff. Parts of the report were drafted by John L. D. Clark, Thomas M. Edwards, and Fannie M. Hendrick. The principal investigator, however, did further drafting of sections and the final editing of the report; he takes sole responsibility for the statements and opinions expressed herein.

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John B. Carroll

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ABSTRACT AND RECOMMENDATIONS

Background and Purpose of the Study (Chapter 1)

It was the basic purpose of this study to investigate the course of foreign language learning in both the training and field-duty aspects of Peace Corps programs, and to determine some of the individual background and experience factors affecting the rate of language learning under the conditions observed in these Peace Corps programs. The study was designed to be a prototype of a parametric study that would answer a question of the following type: Given a (a level of language aptitude), p (an amount of prior language training), and possibly other data on an individual, how much s (achievement) could one expect the student to attain after t (a specified number of hours of foreign language instruction or exposure to the foreign language milieu)?

At the time the study was initiated, Peace Corps language programs typically involved about 12 weeks of language instruction, with a particularly intensive period of instruction for the first 8 weeks amounting to about 200 hours. A practical purpose for this study was therefore to answer the question of whether this amount of instruction was sufficient to equip the Peace Corps trainee with an amount of language competence that would enable to perform his job effectively when he reached his field duty assignment in a host country. A secondary question concerned how rapidly a Peace Corps Volunteer could be expected to improve his foreign language competence to a satisfactory level after reaching his field duty assignment in the foreign language milieu.

Overview of the Study Design (Chapter 2)

Data were collected on seven contingents of trainees in Spanish (total enrolment = 472) and one contingent of trainees in Portuguese (N = 51), all at the University of New Mexico. Information was gathered relative to three benchmarks in the career of the individual Peace Corps trainee or Volunteer:

(1) The start of the formal language training course.

(2) The end of the 12-week language training course, and in the case of those selected for field duty, the first month in the field.

(3) A "mid-tour follow-up" that occurred some five to ten months after the PCV arrived in the field.

Analysis consisted of studying the relationships among the measures taken at these three benchmarks in order to plot and assess the course of language learning and to study the relevance of the various predictive measures that became available.

The Peace Corps Language Training Programs at the University of New Mexico (Chapter 3)

The primary objective of the University of New Mexico Peace Corps training program was to train candidates for duty in Spanish- and Portuguese-speaking countries and select those who were able to qualify themselves for such duty. Language training played a very large part in this process. The objective of the language training was chiefly "audio-lingual"; that is, the major objective was to insure that at the end of the training program the trainees had enough competence in speaking and comprehending Spanish or Portuguese to enable them to perform their jobs effectively upon arrival in the field, or at least to give trainees a very good start in this direction. There was at the same time substantial emphasis on reading the foreign language, but very little emphasis on writing it.

The methods of instruction were also chiefly "audio-lingual." Students were divided into sections of 10 to 13 depending upon their level of competence or demonstrated aptitude; a large part of class time was devoted to learning to speak and understand spoken language. Instruction was based on standard textbooks designed to

teach by the audio-lingual method, with some reading selections as well. Language laboratory facilities were used to some extent, and there were frequent opportunities afforded for the students to converse with their instructors outside of class. During the first 8 weeks of instruction, there were anywhere from 3 to 6 50-minute periods of instruction, six days a week, with a total of about 200 hours of instruction. The last four weeks were devoted largely to physical fitness training, with language training being continued but at a sharply reduced rate.

Samples Studied (Chapter 4)

The original rosters for the 7 Spanish contingents contained 472 names, and for the one Portuguese contingent, 51 names. Some loss of cases occurred in the Spanish contingents early in training, so that data were available for only about 444 trainees. In the Spanish contingents, men outnumbered women about 2 to 1, while in the Portuguese contingent, the sex distribution was more nearly equal. The age distribution was highly concentrated around 20 to 23, although there was a sprinkling of older persons.

All had been selected by the initial screening procedures of the Peace Corps. However, it would appear that the samples were not highly selected with respect to foreign language aptitude.

Nature of the Data Collected (Chapter 5)

Measures of foreign language aptitude were obtained for the start of training either from Peace Corps files or from actual administration of the test used for this purpose, the "short form" of the Modern Language Aptitude Test. These measures were supplemented with data from the remainder of the MLAT by administering the remaining two parts at the University of New Mexico.

Students claiming some prior knowledge of the language they were about to study were given placement tests by the language training department, scores on which were collected. For all students, information was collected as to which section the student was assigned, the sections varying in level of advancement.

At the end of training, a series of objective proficiency tests in Spanish or Portuguese, both in spoken and written forms of the language, were given to the trainees, as well as a questionnaire designed to elicit information about previous foreign language study and about attitudes and interests that would concern foreign language study. Four factor scores were derived from the questionnaire: Interest in Foreign Languages; Compulsivity (about school work); Preference for Audio-Lingual Instruction; and Home Exposure (to the foreign language). Instructors' assessments of various aspects of language training progress were also collected at this point; they pertained to two points in the 12-week course--the half-way mark and the final assessment.

Project staff members visited the various host countries involved and collected data of the following types at a "mid-tour follow-up" that occurred some five to ten months after the PCVs arrived in the host countries: scores on objective language proficiency tests in listening and reading comprehension; self-ratings of language competence both at the time of first arrival in the host country and at the midtour follow-up; reports concerning the effects of language problems on job performance at these two points of time; and various other information such as an account of the job assignment, recommendations concerning possible changes in the Peace Corps language training program, etc.

Parameters of Language Learning in Formal Training (Chapter 6)

Most of the detailed analyses were based upon the Spanish contingents because of the small number in the one Portuguese contingent studied. In any case, information and analysis derived from the Portuguese contingent were not essentially different from those derived from the Spanish contingents.

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The analyses of data from the Spanish contingents were based on an initial group of 432 cases which were sufficiently complete in having language aptitude scores and other essential start-of-training data. However, only 336 of these cases were found to have all essential data at the end of training, many of the original sample having been "deselected" for one reason or another during the course of the training.

An overall assessment of the language proficiency of the 336 Spanish cases was made at the end of training in terms of scores on objective tests. On one of the listening tests, it was found that only 24% of the cases attained a score level that was set on the basis of midtour data as being sufficiently high to indicate that the PCV would have little or no trouble with language problems upon arriving in the field. On the other hand, when objective proficiency scores obtained at the end of training were compared with norms for college language courses, the average trainee attained percentiles from 64 (in Speaking) to 79 (in Listening) for second-year college Spanish norms.

It is estimated that the Spanish group as a whole attained, on the average, the S-1+ level in speaking, and the R-2 level in reading, in terms of FSI absolute language ratings (see Appendix G). The mid-tour data indicates that the trainee must attain at least an S-2 rating in speaking and listening if he is to be ready to deal with his field job assignment with minimal interference from language problems.

The overall assessment of the group as a whole, however, ignores the fact that the group varied widely in the amount of prior knowledge of Spanish. Among the 336 cases studied at the end of training were 218 who had taken the Spanish placement test given by the language training department at the University of New Mexico. Although scores on this test varied widely, it may be assumed that those who took the Spanish test had some prior knowledge of Spanish acquired either through formal training or self-study. When studies were made of the pattern of relationships between predictor and criterion variables for this group as compared with those for the remaining 118 cases who did not take the placement test, the relationships were found to be quite different.

In the case of those 218 students who had taken the placement test, the best predictor of eventual proficiency at the end of training was the score on the placement test. The language aptitude test scores and the section placement scores also made significant contributions to the predictions, but were of secondary importance. The multiple correlations from these three variables ranged from .71 (for predicting performance on the Speaking test) to .85 (for predicting performance on a combination of elementary and advanced Reading tests). Certain factor scores from the Foreign Language Questionnaire---Interest in Foreign Languages, and Audiolingual Preference---enhanced the prediction still further to a small but significant degree. In considering the overall end-of-training performance of this group with varying amount of prior knowledge of Spanish, we note that 78, or 35.8%, attained or exceeded the score on listening test that had been set as defining a level that would qualify for job performance that would be relatively free of any adverse effects of language problems -- a level which is approximately equivalent to a S-2 rating on the FSI scale.

In contrast, only 2 (1.7%) of the 118 students that did not take a Spanish placement test made the qualifying score on the listening test at the end of training. For these students, language aptitude was the strongest predictor of end-of-training performance, with Section Placement Score (reflecting the level of advancement of the sections in which they were placed) also making a substantial contribution. Multiple correlations from these two variables ranged from .46 (for predicting the Speaking score) to .68 (for predicting scores on the two listening comprehension tests). None of the questionnaire factor scores made any significant contribution to such predictions.

It is to be noted, incidentally, that Age made no significant contribution to any prediction; in fact, the correlations of Age with criterion variables were generally non-significant.

It may be concluded from these analyses that for individuals who enter a 12-week[1] language training program with some prior knowledge of the language they are to study, chances of attaining a comfortable degree of fluency in that language by the end of the training are related chiefly to the amount of prior knowledge they possess and secondarily to their aptitude for foreign language learning. In general, only persons with a considerable amount of prior knowledge of the language can be expected to attain a level of language competence in 12 weeks that will immediately qualify them for effective performance in a foreign country where use of the foreign language is critical.

For individuals who enter a 12-week[1] language training program with no (or minimal) prior knowledge of the language they are to study, chances of attaining a comfortable degree of fluency in that language by the end of the training are extremely small. The amount of progress that they make toward that goal is chiefly a function of their measured language aptitude. It is estimated that such an individual, with an average amount of language aptitude, would need about 24 weeks of intensive training to attain a level of language competence that would immediately qualify him for performance in the field.

These conclusions are based on our analyses of students being trained for duty in Spanish-speaking countries. The data for the Portuguese-trained students lead to generally similar conclusions. Whether they would also apply to languages that are much more different from English than Spanish and Portuguese are is a question that cannot be answered from the present study.

Parameters of Foreign Language Learning in the Field (Chapter 7)

Out of the 336 students of Spanish and 48 students of Portuguese who were studied at the end of training, 176 PCVs assigned to Spanish-speaking countries and 31 assigned to a Portuguese-speaking country were followed up and tested in the field, some five to ten months after they had arrived in the host country.

In the In-Field Questionnaire, they were asked to assess their competence in the foreign language and the effect of language problems on job performance when they first arrived in the field. About two-thirds of the group reported that at that time language problems had at least some adverse effect on their job performance. Their responses were used to set a "qualifying level" on the language proficiency tests that had been administered at the end of training, such that the qualifying level optimally differentiated those who reported some or considerable adverse effects of language problems from those who reported that their competence was equal or superior to the demand. This level is approximately equivalent to an S-2 rating on the FSI scale (see Appendix G).

During the course of the field experience, however, considerable progress in overcoming language problems was reported by the group. Those who were already competent in Spanish at the outset of the field tour took only a month or so, on the average, to adjust completely to the linguistic demands of their jobs in the host country. Those who had not reached the qualifying level on the proficiency tests at the end of training took on the average five months to overcome the difficulty of being noticeably halting and non-fluent in speaking Spanish.

At the time of the midtour follow-up, the majority of the PCVs, even of those who had not initially reached the qualifying level on the end-of-training proficiency tests, rated their abilities in spoken Spanish as quite high. Only 10% of the initially "qualified" group reported any adverse effects of language problems on job performance, and only 50% (as compared with 94% at the time of arrival in the field) of the init-

[1]A 12-week course, with something more than 200 hours of instruction as in the University of New Mexico course studied here, is meant here, as distinguished from more recent Peace Corps courses with about 300 hours in 12 weeks.

ially "non-qualified" group reported such problems at all. Still, there were a few PCVs even at the time of the midtour follow-up who apparently were not using Spanish in their work at all, and 9% of the initially "non-qualified" group were still reporting "considerable" adverse effects of language problems on job performance.

At the time of the midtour inquiry, the majority of the PCVs--about 73% of them--thought the length of the training program had been proper; 23%, however, thought it should have been longer, and 4% thought it should have been shorter. A very large number of the respondents thought that regardless of the length of the training program, there should have been even more emphasis than there was on speaking and listening training, as well as on the development of vocabulary.

Language competence at the midtour point was tested objectively by means of alternate forms of tests that had also been given at the end of training. On these tests, those who were already at qualifying levels at the end of training showed little or no progress, except in reading levels. The remainder, i.e., those who had not met qualifying levels by the end of training, made considerable gains, although progress did not appear to be as rapid as it had been during the period of formal training. Whereas 1.6% of the initially "non-qualified" group were technically above the qualifying level on one of the tests at the end of training, 28.7% were above this level at the midtour testing, and the majority of the remainder were not far behind. Nevertheless, progress was very good when compared with norms for the performance of college students studying Spanish. Ninety-six per cent of the initially "non-qualified" PCVs had scores on the advanced ("M") form of the Cooperative Listening Test that were above the median for second year college norms. Even if not all the "non-qualified" group attained the rather high qualifying levels set on the proficiency tests, most of them were clearly far ahead of the performance of the typical graduate of a two-year college course in Spanish.

It was shown that even though objective proficiency tests did not do a particularly good job of identifying those who would report adverse effects of language deficiencies on job performance at the midtour point, scores on the test were associated with the probability of making such reports.

It was found that language proficiency at the midtour testing could be predicted quite well--with multiple correlations ranging up to .72--from data available at the start of training. The patterns of relationships were highly similar to those found for the prediction of language proficiency at the end of the formal training period. For persons who already had some knowledge of Spanish, language proficiency at the midtour testing was primarily dependent upon the level of proficiency measured at the start of training, and only secondarily upon language aptitude and other variables. For persons who had no knowledge of Spanish at the outset of training, language aptitude as measured by the Modern Language Aptitude Test was a strong predictor. Certain questionnaire factor scores made small but significant contributions for certain groups. Aside from the initial level of language proficiency, there were no good predictors of the amount of gain in language competence the PCV would make during the field experience.

Statistical data are also given to show how midtour language competence could be predicted from combinations of data from the start of training and the end of training, and from data from the end of training alone.

Studies of Attrition (Chapter 8)

Peace Corps trainees and Volunteers leave the Corps for a number of reasons; some withdraw voluntarily, and others are terminated from service for such causes as "language ineptitude", lack of motivation, and personality unsuitability. Language aptitude, as measured by the Modern Language Aptitude Test, and prior proficiency in

Spanish (or Portuguese) were studied in relation to reasons for withdrawal. Both of these variables are related to the probability of withdrawal: trainees with lower aptitude scores or with no prior proficiency in the language are more likely to leave the Corps than those with higher aptitude scores or with prior proficiency.

There is a highly significant relationship between language aptitude and termination for reason of "language ineptitude." Nearly all of those few who were separated for this reason had quite low aptitude scores.

None of these relationships, however, is strong enough to justify using low aptitude or lack of prior knowledge of the language as absolute criteria for rejection of candidates from the Peace Corps.

Recommendations

1. Unless the Peace Corps trainee already has considerable knowledge of the relevant foreign language before he begins training, an approximately 200-hour, 12-week course of training similar to the one in effect at the University of New Mexico in 1963-64 is not sufficiently long to give the trainee a degree of foreign language competence that is sufficient to equip him to do his job in the field without substantial adverse effects of language problems. It is estimated that for the trainee with "average" language aptitude and with no prior knowledge of the language, a course of approximately 24 weeks would be necessary to bring him to the required level of competence. For the trainee with higher than average language aptitude, however, the course could be shorter than 24 weeks. Also, the course could be shortened for those with prior knowledge of the foreign language; for some of these, it could even be shorter than 12 weeks.

2. If the trainee is assigned to the field before he has reached the required level of foreign language competence, further formal language training should if possible be organized in the host country, to assist him in reaching that level in the shortest possible time.

3. Language aptitude, prior knowledge of the foreign language, and other variables can play an important role in selecting individuals for Peace Corps training.

4. It is suggested that the Peace Corps organize a formal program of language proficiency measurement, based largely on objective tests, to be applied at the start of training, at the end of training, and at some point in the course of the tour of duty in the host country. Informal measures and ratings of language proficiency rendered by language training staffs are not adequate in terms of reliability, validity, and standardization. A set of tests having a wide range of measurement and having equivalent alternate forms should be used. At the start of training, the tests should be given not only to those who claim some prior knowledge of the foreign language but also to all others, in order to establish baselines or chance-score levels of performance. In this way the Peace Corps would be able to trace the development of language competence in a much more objective and reliable way and utilize the resulting measures in selection and assignment processes.

A PARAMETRIC STUDY OF LANGUAGE TRAINING IN THE PEACE CORPS

Chapter 1

Background and purpose of the study

The need for adequate research to aid in the formulation of policies concerning the teaching of foreign languages has received increased attention in recent years (Carroll, 1960, 1963b). One type of study that can be of much use, not only in formulating language teaching policies but also in guiding individuals, is what may be called the "parametric" study or "baseline" study that simply seeks to chart as accurately as possible the course of foreign language learning under specified training conditions for persons of different degrees of aptitude, prior training, and interest. The "parameters" of such studies have to do with measured degrees of aptitude, prior training, and interest in relation to the amount of time spent in learning and the degree of achievement after various stages of training. From such studies it should be possible to predict how much training is necessary to produce desired degrees of achievement in persons of known characteristics.

Despite the fact that language courses are conducted by the thousands every year, little reliable information, which could be compiled to serve as a basis for the desired predictions, has been collected. Most of the available information is of a judgmental, subjective nature. One of the best sources of information is a chart issued by the foreign language training department of the Foreign Service Institute, U. S. Department of State. This chart contains estimates of the amounts of time that would be required by individuals to reach a series of subjectively defined standards of proficiency. The charted time requirements vary with the language studied as well as with the language aptitude of the student. Data of this character have been the basis upon which governmental agencies and other institutions concerned with foreign language training have formulated policies regarding the duration of training programs and the standard for selecting trainees.

It is the basic purpose of this study to provide more accurate parametric data on foreign language learning in a particular setting—the Spanish and Portuguese language training programs of the Peace Corps. More generally, the purpose is to indicate what kinds of variables must be taken into account in parametric studies and to present a prototype of a parametric study.

Ideally, a parametric study should answer a question of the following type: Given a (a level of language aptitude), p (an amount of prior language training), and possibly other data on an individual, how much s (achievement) could one expect the student to attain after t (a specified number of hours of foreign language instruction)? To answer this question, it would be necessary to take precise measurements of language aptitude and amount of prior training, and then to plot a family of learning curves based on rather frequent measurements of progress during the training program. It was not possible to take frequent measures of progress in this study, but the data nevertheless give certain indications of the parameters of the language learning curves.

The special nature of the Peace Corps training program and field experience made it possible also to investigate a further question: What is the course of foreign language learning after formal instruction has ceased and the learner is assigned to a country where he must use the foreign language every day in his work? There has been much speculation concerning the rate at which an individual can "pick up" a language when placed in an environment in which the foreign language is used, but we are not familiar with any studies of this matter.

The Peace Corps Language Training Program. At the initiation of the present study, the Peace Corps had made the policy decision to concentrate all formal language study for trainees within an initial period of ten to fifteen weeks, depending partly on the language to be studied and partly on the nature of the eventual duty assignment. The following quotation from an article by Landgraf (1963) gives further details:

"Before they become Volunteers overseas all trainees are given ten to fifteen weeks intensive training courses in American universities and like institutions, and both before and during this period intensive selection procedures are applied to them. Although the ages of Volunteers average in the twenties, some range up into the seventies from the bottom legal minimum of eighteen. Sixty-six per cent are men.

"During the training period a large proportion of the time is now taken up with the development of a minimum oral facility in a selected language for overseas use. Time is also spent in specialized work training, in skills in teaching English as a foreign language, for example, for the large number who are to teach English overseas.

"In a number of countries in Latin America more than a minimum facility in Spanish or Portuguese is a virtual necessity for service to Peace Corps standards. With many African programs French is likewise a requirement ....

"In some of the Romance language work areas, as well as those where English is more generally understood, some other more exotic language is often the selected language of minimum facility acquired during initial training. In collaboration with the Training Division at Peace Corps, contracting institutions have thus far developed intensive training programs for minimal oral facility in thirty-three languages:

AFRICA		
Amharic	Ibo	Somali
French	Krio [Sierra Leone]	Swahili
Ewe	Mende	Temne
Hausa	Nyanja	Twi
		Yoruba
NEAR EAST		
Greek [Cyprus]	Persian	Turkish
SOUTH ASIA		
Bengali	Nepali	Singhalese
Gujarati	Panjabi	Tamil
Hindi	Pashto	Urdu
Kannada	Sindhi	
SOUTHEAST ASIA		
Malay	Tagalog	Thai
LATIN AMERICA		
Portuguese	Spanish	Quechua

Topping and Cammack (1965) have described the University of Hawaii Peace Corps Language Training Program, involving eight different languages up to December 1964: Indonesian, Bazaar and standard Malay, Thai, Ilocano, Tagalog, Cebuano, Hiligayuon, and Gujarati. Certain parametric data are available from their study. For example they show that after 200 hours of instruction in Thai in their program, students made the following Foreign Service Institute levels:

FSI level	No. of students
S-0	3
S-0+	25
S-1	16
S-1+	4
	48

Their data can also be analyzed to show that the MLAT (Modern Language Aptitude Test) score is a fairly good predictor of success:

MLAT Score *	No. of students attaining: S-0 and S-0+	S-1 and S-1+
Less than 40	1	0
40 to 60	22	6
Above 60	5	14
	28	20

* This is evidently the T-score used by the Peace Corps, labeled PCMLAT in our own study (see p. 20)

It should be noted, however, that even a level of S-1+ is not very high on the FSI scale, which ranges from S-0 (no ability) to S-5 (ability of a native speaker). "S-1+" is a rating in between S-1 "ability to use limited social expressions, numbers, and language for travel requirements" and S-2 "ability to satisfy routine social and limited office requirements."

The decision to study training programs in Spanish and Portuguese for the present investigation was dictated partly by the fact that these languages, particularly Spanish, are of prime importance in Peace Corps operations and must be learned to a fairly high degree of proficiency if the Volunteer is to perform to satisfactory standards in his Latin American duty assignment, and partly by the fact that large numbers of trainees in Spanish and Portuguese were expected to be available for study at the University of New Mexico where a large training program was in operation. In this training program, language learning was concentrated mainly in the first eight weeks of a twelve week period. The final four weeks were devoted chiefly to physical conditioning under simulated field conditions. From a purely practical standpoint, the question of whether this amount of language training in Spanish and Portuguese was sufficient to equip a Peace Corps Volunteer for work in the field was the main focus of interest in this study.

According to data furnished by the Foreign Service Institute, if a well-motivated student takes full-time language training in Spanish or Portuguese involving 4-6 hours of classroom work and 2 to 4 hours of drill and study daily, it should take him the following number of months to attain the S-2 level of proficiency "able to satisfy routine social demands and limited office requirements":

Aptitude[1]	No. of months
High (65-80)	2
Average (50-64	4
Low (below 50)	7

[1] The aptitude scores are based on the FSI scoring of the Modern Language Aptitude Test. These are T-scores based on the total score for 5 subtests. Approximate equivalents in terms of the Peace Corps T-score system are: High (59-79); Average (40-58); Low (23-45). Approximate equivalents in terms of MLAT scores used in this study are: High (76-119); Average (49-75); Low (0-48).

one of the purposes of this study was to secure more accurate and well-validated information as to the time requirements to attain various levels of proficiency.

Chapter 2

Overview of the Study Design

This study was made feasible by the excellent opportunity for data collection offered by the continuing Peace Corps language training programs in Spanish and Portuguese at the University of New Mexico in Albuquerque, and by the fact that the Peace Corps made it possible to test groups of graduates of these programs after they had been in field-duty assignments in Latin America for a number of months.

Data were collected on seven contingents of trainees in Spanish (with a total enrolment of 472 before the start of training) and on one contingent of trainees in Portuguese (with an enrolment of 51 before the start of training). In addition, certain data were collected on one contingent of trainees in Portuguese (with an enrolment of 37 before the start of training) at the University of Wisconsin (Milwaukee branch).

Information was gathered relative to three benchmarks in the career of the individual Peace Corps trainee or Volunteer.[1]

The first benchmarkmay be considered to be the trainee's entry into the Peace Corps training program--in this case a 12-week training program. Information obtained at this point, or relative to it, included the following:

a) Personal data such as age, sex, marital status, etc.
b) Part and/or total scores on the Modern Language Aptitude Test.
c) Information concerning prior training in, or other exposure to, the language to be studied. (For the most part, this information was summarized in a "section placement score", reflecting the fact that the language training staff sectioned the students on the basis of their measured or judged prior knowledge of the language.)
d) Questionnaire questions covering a wide range of matters such as self-ratings of interest in foreign language study, prior experience with foreign languages, self-rated aptitude for language study.

The second benchmark for the study came at the trainee's completion of the 12-week training period. Measures of individual trainees taken at that point consisted primarily of tests of foreign language achievement.

The third benchmark occurred after the Peace Corps Volunteer had completed some five to ten months service in the host country to which he or she had been assigned. Once again tests of language achievement were given, as well as questionnaires covering the Volunteers' experiences with language problems in this setting. In the present report, this point will be referred to as the mid-tour follow-up.

Various other types of information were collected, including detailed logs of classroom activities during the training period, reasons for termination or separation of trainees from the training program (where applicable), and various assessments of the trainees by staff personnel. Many types of data were incomplete, or defective in some respects, and are hence ignored in the present report.

Analysis consisted of studying the relationships among the measures taken at the three benchmarks in order to plot and assess the course of learning and to study the relevance of the various predictive measures that became available.

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[1] Trainees are not officially designated as Volunteers until they have successfully completed the training program and been assigned to field-duty stations.

Chapter 3

The Peace Corps Language Training Programs at the University of New Mexico

Although language instruction constitutes a large part of the overall Peace Corps training program at the University of New Mexico, the program also includes instruction in the geography, history, and political and economic organization of the host country, as well as the study of world affairs and United States institutions. Further, each trainee is involved in a rigorous program of physical conditioning, including practice in survival techniques, horsemanship, "jeepmanship," and hiking and climbing. Lectures and demonstrations are also given in medical and first aid procedures of importance in the host country environment.

The project staff was concerned exclusively with the language training procedures employed, and the present report deals only with that aspect of the overall training program. It is, however, important to a proper understanding of the conditions under which the volunteers undertake the study of a foreign language to realize that many demands are made on their time and energy in addition to the rigorous language program itself.

The Spanish Training Program

During the period when the language program was studied (approximately June 15, 1963 to January 1964), the Spanish training staff at the Albuquerque center included a director, Mrs. Laura D. Calvert, an assistant director, Mr. Enrique Cortés, and a teaching staff of about fifteen instructors. The instructors were mostly experienced teachers at the secondary school level who had completed a one-year course in language teaching methodology at the University of New Mexico. Most of these teachers either held M.A. degrees in the teaching of foreign languages or had completed residence and course requirements for that degree. A number of the instructors were native speakers of Spanish. Informal visits made by the project staff to several classes suggested that both native and non-native instructors were fluent in Spanish and well trained in the audio-visual methods employed in the program.

The total training period for which the University of New Mexico was responsible was divided into two phases. First, approximately eight weeks of language training were provided in Albuquerque for each contingent.[1] Individual class sections consisting generally of ten to thirteen students who met with a single instructor for a number of daily 50-minute sessions, Monday through Saturday. Usually, 4 or 5 were scheduled per day, although on occasion the number varied from 3 to 6, apparently reflecting necessary and temporary irregularities in scheduling. During this eight-week period, there were thus approximately 200 hours of language instruction.

Each training contingent was divided into from 6 to 13 class sections, numbered consecutively; lower-numbered sections were made up of students having no or little prior training in Spanish, while higher-numbered sections included students of greater proficiency as judged by the training staff. Section placement assignments of a few trainees were changed in the first few days of training if it appeared that a slightly higher- or lower-numbered group was more suitable for the trainee. A weekly system of rotation among instructors at each of three levels (beginning, intermediate, and advanced) provided the opportunity for students in the various sections to work with

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[1] A "contingent" is a group of trainees being prepared for service in a particular country. The "Honduras II" contingent, for example, denotes a group of trainees who will serve in Honduras following the training period. The numeral indicates that this is the second group which the Peace Corps has prepared for service in that country.

two or three different instructors in the course of the eight-week period. Occasionally, instructors particularly skilled in certain areas (such as teaching the use of the subjunctive mode) would be asked to teach a combined class of two or three sections for a day or two. With relatively few exceptions, such as the teaching recesses required by four-day hikes (usually scheduled to include Sunday) and other Outward Bound training activities, the rigorous daily schedule outlined above was continued throughout the first training phase.

In the second phase of training, the last four weeks, the program was devoted in large part to rigorous physical training and work projects in the Taos, New Mexico area, where the Peace Corps has established an auxiliary training center in the ski valley a few miles from the town itself. Since much of the trainees' time during the Taos program was spent in rough "non-academic" activities, the language training procedures followed during this period were usually of a more informal nature. The number of hours devoted to language training during these four weeks was considerably less than 100. (More recently, the Peace Corps has instituted programs with approximately 300 hours of language training in a 12-week period.)

The teaching method in the eight-week program in Albuquerque can be described as "audio-lingual", although the term might be more properly "audio-visual-lingual"[1] since the student was exposed from the beginning to written material in Spanish, and considerable use was made of pictorial material as well. Written material was introduced not only for the sake of developing reading and writing facility, but also to serve as a memory aid in listening and speaking situations. The standard textbook for all but the most advanced sections was the MLA-produced Modern Spanish (Bolinger et al., 1960), consisting of separate teaching units based on the reading and memorization of dialogues, followed by pattern practice and other exercises involving material presented in the dialogues. Considerable use was also made of staff-produced flannelboard materials, particularly for the teaching of verb forms, where visual presentations were made showing an entire paradigm (subject pronoun--verb stem-tense/mode suffix--person/number suffix, for each of the six persons) whose constituent elements were successively "vanished" during oral practice until the students were responding entirely from memory. Other staff-produced materials included English-to-Spanish translation exercises designed to reinforce previously presented grammatical principles and oral practice and to introduce additional items of vocabulary.

Grammatical concepts were not taught inductively but were instead presented in "lecture" form (and in English) by the instructor. These presentations often made use of the Visual Grammar series of instructional posters (Bull, 1961). Using sequences of real-life scenes, these posters depict the proper use of certain verb tenses and modes, prepositions (e.g., por vs. para), adverbs, conjunctions, use of certain idioms, and so forth.

In addition to the classroom language training, each student was required to sit at a language table with one of the instructors and converse exclusively in Spanish during the evening meal. These periods presented an opportunity for informally introducing a number of topics--nomenclature for types of food, social customs and etiquette--and to discuss other areas of interest to the trainees.

A library containing host country books, magazines, and newspapers was maintained for trainee use on an individual basis, and a shortwave receiver was available

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[1] A term provided by Mrs. Calvert in an article describing the UNM Peace Corps language training program (Calvert, 1963). See also her "Role of Written Exercises in an Audio-Lingual Program" (Calvert, 1965).

for listening to broadcasts from Latin American countries. A certain number of formal lectures were given in Spanish, and Spanish-speaking films were also shown from time to time.

Some instruction was done via a language laboratory. Below, data are presented to indicate the approximate proportion of the scheduled time that was devoted to its use. The language laboratory was also available after hours, but it was the impression of the research staff that students did not have much time to use it. Unfortunately, no information bearing on this point was collected from the students.

Use of Class Logs to Analyze Classroom Content

Although a reasonable acquaintance with teaching goals and methodology could be obtained from classroom visits and informal conversation with the language staff, it was felt desirable to obtain more specific day-to-day information about actual classroom procedures throughout the training period. For each Spanish contingent involved in the study, information of this type was obtained through the use of special class logs which each instructor was asked to fill out for each of the daily class periods taught. These logs (see Appendix A for a copy of the form used) allowed the instructor to summarize in five minutes or so following each class period the major activities in which the class had been involved. With minor exceptions, instructors filled out the logs conscientiously and in sufficient detail to permit the later coding of this information according to the type of activity to which each class period had been primarily devoted.

A description of the coding categories is given below:

1. Textbook Oriented Activities. This category includes both the use of the Modern Spanish textbook (together with flannelboard presentations) and the Visual Grammar poster series. Class periods falling into this category would thus be characterized by morphological and syntactical exposition on the part of the instructor, student participation in dialogues, pattern practice, and other textbook-based exercises.

2. Use of Language Laboratory Materials. For the most part, this category includes only those class periods devoted to the language laboratory use of the commercially recorded tapes accompanying each unit of the Modern Spanish text. To a very limited extent, other taped materials, such as recorded lectures in Spanish, were used in addition to the regular Modern Spanish tapes; any instances of such use are also included in this category.

3. Use of Staff-Produced Teaching Materials. The Albuquerque training staff had, at the time of the study, produced an "Instructor's Handbook" keyed to the Modern Spanish text and the Visual Grammar materials. These materials included a number of supplementary written exercises, amplification of idiomatic expressions, and special word lists. All such materials were being constantly reviewed, revised, and expanded by the Albuquerque staff. In determining those class periods to be included in this category, the criterion established was that of any reference to the use of the supplementary materials during the class period. Use of these materials did not usually occupy the entire class period, but rather served as an adjunct to textbook material covered in the same period. Thus, class periods designated as using "staff-produced materials" also included, for the most part, regular textbook-based activities, and the two categories should be considered essentially congruent in this respect.

4. Staff Tests and Quizzes. The training staff had prepared a series of achievement tests, based on material included in each of the different units of Modern Spanish, to be administered at the end of the study of each unit. Typically, these tests consisted of an oral quiz (with both the questions and the answer options spoken in Spanish) followed by English-to-Spanish translation exercises, usually the

translation of sentences incorporating vocabulary and syntax employed in the unit. Other types of test items were also used depending on the nature of the material tested; for example, the changing of verb tenses throughout a connected script or the rewriting of sentences substituting pronouns for nouns. The unit tests usually occupied an entire class period, but in some cases there were short review periods before the test or the presentation of new material following the test. For coding purposes, any class period in which a unit test was administered was placed in this category.

From time to time, additional classroom quizzes were administered independently of the unit tests. For the most part, such additional quizzes were prepared and administered by individual instructors to suit a particular teaching situation. Quizzes of this type were included in the test category if they appeared to occupy a substantial proportion of the class period (as opposed to short warm-up quizzes sometimes given at the beginning of a class period).

5. Use of Native Informants and Other Sources of Cultural Information. During the Albuquerque period, considerable use was made of the services of native informants, who would typically be asked to speak to a class section in Spanish on some topic of potential interest and utility to the trainees: formulas of politeness and other protocol observed in the host country, industrial or agricultural organizations of the host country, aspects of the monetary and financial systems, or major health and educational problems. A common procedure was for the class to spend the period preceding the informant's visit preparing specific questions to be asked by the students in a discussion following the informant's presentation. Such preparation periods were also included in this category if they appeared to occupy a major portion of the class period.

In addition to activities involving native informants, a few other culturally oriented classroom procedures were considered to fall into this category. These included such activities as reading host country newspapers and magazines in class and the use of maps and other realia of the country in question.

An indication of the relative emphasis accorded to these various activities in the course of the Albuquerque training period may be obtained by comparing the proportion of class periods devoted to these activities, both for the training contingent as a whole and for the individual class sections. A representative analysis is provided in Table 1 for the daily log entries for the Colombia VIII-Peru RCA contingents (in training simultaneously near the beginning of the project period) and the Honduras II contingent (the last group studied during the project period).

Certain trends may be noted in Table 1. Referring first to the figures for the Colombia VIII-Peru RCA groups, we see a gradual decrease in textbook oriented activity across training sections, with the greatest proportion of textbook use concentrated in the lower-numbered (less advanced) sections. In section 12 and 20 for this group, class periods devoted to textbook, Visual Grammar or flannelboard materials form a very low percentage of the total. Conversely, the use of native informants is relatively restricted in the first 11 sections (mean proportion = .07), while in the more advanced sections, meetings with native informants (or extended Spanish conversations with the section instructor) comprised slightly more than half of the class periods.

The use of staff tests is relatively constant across the first eleven groups (mean proportion = .09); this probably reflects the fact that all of these groups were working through the Modern Spanish text and administering the uniform tests specified for each unit. Formal testing procedures dropped to insignificance with the last two sections, since these two groups were not using Modern Spanish and presumably were being tested informally through classroom conversations and oral reports.

For all sections, there appears to have been a fairly substantial use of special staff-produced materials, with a mean proportion of .14, or about once in every 7

Table 1

Spanish Training Programs: Proportions of Class Periods Spent in Different Activities[1]

Training Section Number	Activity: Textbook Oriented	Language Laboratory	Staff-Produced Materials	Staff Tests	Native Informants
Colombia VIII-Peru RCA Combined Classes July 1 - July 18, 1963[2]					
1	.60	.12	.14	.10	.04
2	.59	.11	.13	.03	.08
3	.68	.07	.10	.12	.03
4	.71	.07	.07	.10	.05
5	.63	.11	.09	.11	.06
6	.56	.16	.09	.09	.10
7	.54	.06	.21	.10	.08
8	.61	.10	.15	.08	.05
9	.63	.08	.15	.10	.03
10	.52	.13	.16	.06	.13
11	.56	.13	.11	.10	.10
12	.17	.00	.30	.02	.51
20	.27	.00	.18	.00	.55
Colombia VII Classes July 19 - August 15					
1	.69	.17	.05	.07	.02
2	.77	.09	.06	.07	.01
3	.80	.08	.03	.06	.02
4	.74	.12	.05	.07	.02
5	.54	.14	.20	.08	.04
6	.47	.15	.25	.12	.00
7	.65	.19	.05	.06	.05
8	.59	.10	.14	.05	.11
9	.45	.13	.14	.06	.22
10	.43	.07	.12	.00	.37
11	.44	.00	.05	.03	.48
Peru RCA Classes July 19 - August 15					
1	.55	.06	.28	.08	.03
2	.52	.08	.24	.08	.08
3	.55	.12	.23	.07	.03
4	.35	.02	.05	.02	.56
Honduras II Classes August 8 - November 10					
1	.74	.07	.12	.06	.00
2	.66	.06	.18	.05	.02
3	.73	.07	.12	.06	.01
4	.63	.14	.13	.07	.03
5	.74	.07	.07	.04	.08

[1] Values given in the table are proportions totaling to 1.00 in each row.
[2] Classes for this group began around June 15, but it was not possible to initiate the daily log procedure until July 1.

class meetings.

Language laboratory use for all but the two most advanced groups appears rather constant, at a mean level of .10. This would be expected in light of the fact all units of Modern Spanish are accompanied by laboratory tapes, with which each section apparently worked consistently during the period.

Following the separation of Colombia VIII and Peru RCA into different training groups on July 19, certain changes may be noted in the distribution of class periods. The use of native informants is reduced in the lower and intermediate sections, and some of the lower sections of Colombia VIII classes (Sections 2, 3, 4) appear to be devoting about 75% of the total class period to textbook and grammatical presentations. Some reduction is noted in the proportion of periods devoted to testing; this may be explained in part by a "doubling-up" in several cases, where tests for two units of work would be administered in one class period.

Proportions for the Honduras II group show a fairly uniformly high concentration of textbook-oriented work, consistent use of staff produced materials (mean proportion = .12), and a reduction in exposure to native informants or periods of extended conversation. One interpretation of such figures would be that a generally lower level of beginning-of-training proficiency for the Honduras group necessitated an approach more concentrated on fundamental, textbook study and allowing less time for the more informal, unstructured learning situations afforded by meetings with informants or participation in discussion sessions.

An Analysis of the Text, Modern Spanish

Because the text Modern Spanish (Belinger et al., 1960) was the basis for a large part of the instruction, as shown by the analysis of classroom activities, it seems useful to make an analysis of its content so as to gain an impression of what the student who completes its study can be expected to have learned.

This text was designed for elementary Spanish language instruction at the college level, but it has also been widely employed at the high school level. It is divided into 30 sections or "units," each intended to require about one week of classroom work in the usual college schedule. The first unit provides a detailed discussion of Spanish pronunciation and intonation. Units 2 through 24 deal primarily with grammar and lexicon, and units 25 through 30 provide reading selections based on various aspects of Spanish and Latin American history, literature, and culture.

Each of the twenty-three grammar-lexicon units presents initially a dialogue in Spanish based on such "real-life" situations as a telephone conversation, dinner in a restaurant, or a visit to the doctor. Each dialogue incorporates the grammatical constructions and vocabulary to be stressed in later pattern and substitution drills. Students are expected to memorize the dialogue for each unit as a basis for work with the exercises.

Some idea of the organization of the Modern Spanish text may be gained through an examination of the number of grammar "topics" introduced in each unit, together with a count of the items of "Active Vocabulary" presented in the unit. A "grammar topic" in this sense includes all material presented under the boldface sectionings following the dialogue for each unit. Examples of such topics are: "present tense of -ar verbs," "word order in questions," "possesive adjectives," "the -ndo form," "irregular preterits," etc. "Active Vocabulary" refers to any lexical item which appears in the dialogues, grammar discussions, or drills; acquisition of such items would presumably be necessary in order for the student to deal successfully with the dialogues and drills of each unit.

As shown in the lower curve in Figure 1, the rate of introduction of grammar topics is relatively constant throughout units 2-24. Although it certainly cannot be said that each of the topics is equivalent in the sense that the same amount of time would be required for mastery of the topic, the fact that a generally constant rate of introduction of these topics is maintained throughout the text does imply an attempt on the part of the authors to introduce grammatical concepts at a rather steady rate (as opposed, for example, to a gradually increasing rate of introduction).

The situation is slightly different with respect to the introduction of items of "active vocabulary" (Figure 1, upper curve). Here (and probably necessarily), the rate of introduction of lexical items is both high and increasing through unit 5; on the assumption that the student has no initial vocabulary in Spanish, it is necessary to introduce a relatively large vocabulary at the outset in order to reach a level at which the presentation of meaningful dialogues in colloquial language is feasible. The rate of introduction of lexical items appears then to decrease slightly through unit 21, at which point there is a substantial increase, possibly in anticipation of the reading units to follow. As may be seen from Figure 1, 492 lexical items are introduced by the end of unit 24.

Use of Modern Spanish Text by Sections

As indicated previously, the higher-numbered sections in any given group were the more advanced sections. Some of these sections were so advanced that they made very little use of the text Modern Spanish.

Students in the lower-numbered sections were in most cases started at or near the beginning of this text and carried through the successive units of it at an approximately constant rate. This rate, however, varied somewhat over the sections. To give an impression of this variation, Table 2 shows the unit number to which the several sections of the Colombia XI--Ecuador V group had progressed at the end of each of eight weeks of training (or the corresponding number of hours of instruction). It may be seen that at the end of 8 weeks of instruction some of the slower sections had completed only 22 units. Some of the faster sections, however, were able to reach unit 24, the last of the regular grammar and vocabulary units (units 25-30 are composed of reading selections).

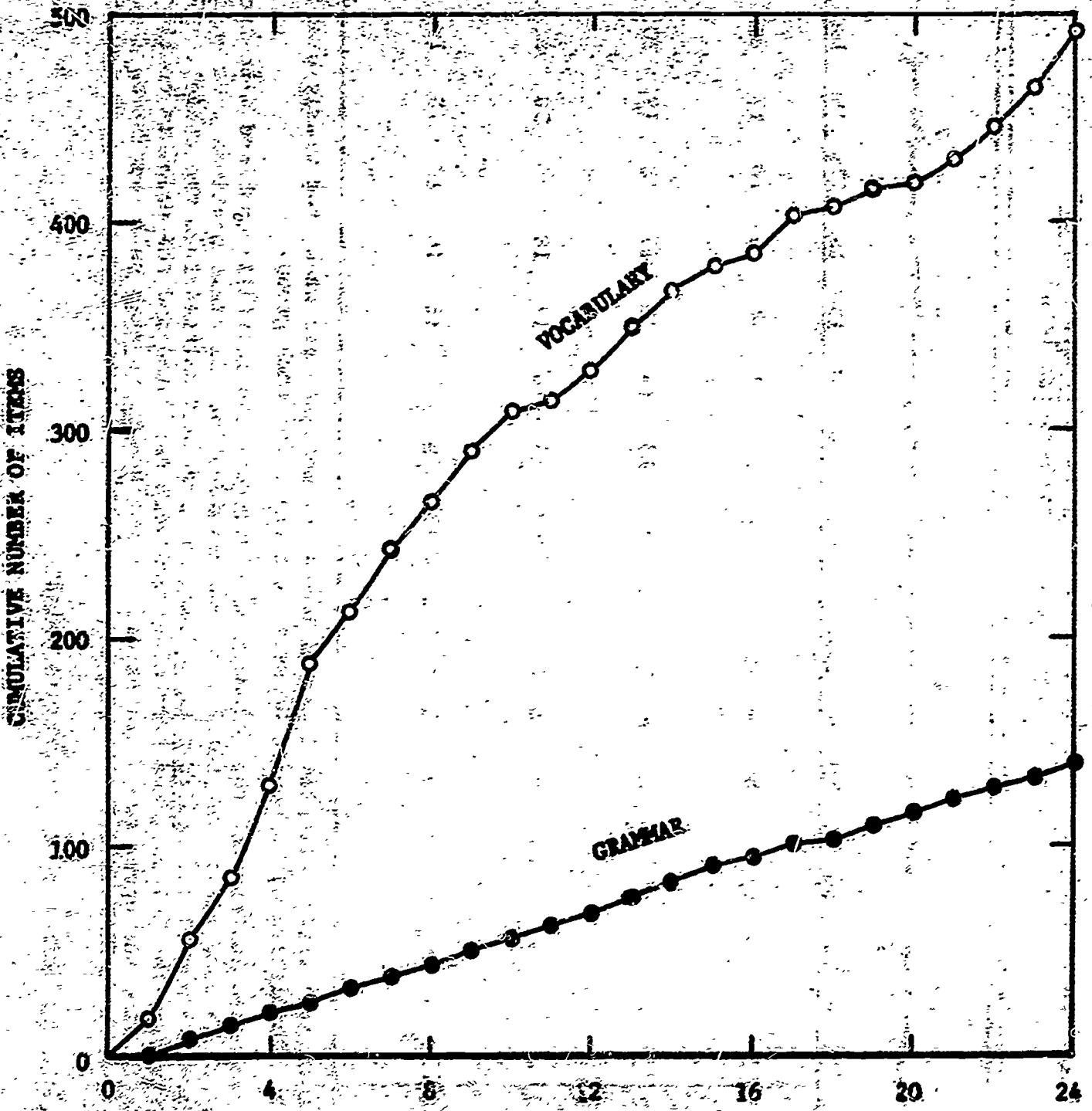

Figure 1. Rate of introduction of vocabulary and grammar points in Modern Spanish

Table 2

Progress of Colombia XI Sections through Units of Modern Spanish*
(Entries in cells are last unit numbers completed)

Week of Instruction →	1			2			3			4			5			6			7			8		
Cumulative Class Hours of Instruction →	10		20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210		
S 1	1	1																						
E 2	1	2	S 1	3	4	5	6	7	8	9	10	11	12	13	13	14	15	16	17	18***				
C 3	1	2	E																					
T 4	1	3	C 2	3	4	5	6	7	8	9	10	12	13	13	14	15	17	18	19	20	21	22		
I 5	1	3	T																					
O 6	1	3	I 3	4	5	6	7	8	9	10	11	12	13	15	16	17	18	19	20	21	22	23		
N 7	2	3	O																					
S 8	1	3	N 4**	4	5	5	6	7	9	10	11	12	13	14	15	16	16	17	18	19	21	23		
9	2	3																						

* Since the sections occasionally varied slightly in total number of meetings per week, the weekly brackets are necessarily approximate. Cumulative class hours, however, are exact for each group.

** Sectioning history: For Spanish instruction the Colombia XI contingent was initially combined with the Ecuador V contingent in training at the same time. The total group was divided into 11 class sections (the upper two sections did not make systematic use of the Modern Spanish text and are thus omitted from the table). After 27 classroom hours of instruction the Colombia and Ecuador groups were separated and the Colombia contingent was divided into 6 sections (again, the upper two sections did not use Modern Spanish on a regular basis and are omitted from the table).

*** Log sheets are unavailable for this section after this point.

The Portuguese Training Program

It was planned originally to collect the same types of data on Portuguese language instruction as were collected for Spanish. Various difficulties, however, interposed themselves; for example, it proved impossible to collect daily logs of classroom activities from Portuguese instructors. In any case, it turned out that the project was able to conduct end-of-training and in-field testing with only one contingent of trainees in Portuguese (Brazil VII). The remarks in this section will therefore be confined to a general description of the Portuguese training program.

The primary textbook was Introduction to Brazilian Portuguese (Riccio, 1957). The text consists of 26 lessons, plus review sections following every fifth lesson. For each lesson a reading selection of 200-250 words is provided, followed by a Portuguese-English vocabulary list of about 40-70 words. A grammar section discusses (in English) the particular grammatical topics exemplified in the reading section, and the lesson is concluded with a series of exercises such as completion ("fill-in-the-blanks"), translation of English sentences into Portuguese, changes of person or verb tense, and directed conversation based on printed questions ("A que horas chega a casa?").

In addition to the basic text, the Portuguese groups used two reading texts (Lopes, Bom Dia; Hamilton, Lopes, and Walsh, Conversas Sul-Americanas), as well as locally prepared supplementary materials providing additional exercise materials for each lesson of the Introduction text.

As with the Spanish contingents, trainees in Portuguese were divided into sections reflecting prior background and observed proficiency in Portuguese. The basic instructional procedure for each lesson involved a preliminary lecture by the director of Portuguese training (Dr. Albert R. Lopes), attended by all sections, followed by individual section meetings where a member of the Portuguese staff answered questions on the lecture and conducted drills using the lesson materials or supplementary sheets. Conversation in Portuguese was encouraged as a part of the section meetings, and additional opportunities for conversation were provided through required attendance at language tables during the evening meal. Language laboratory materials, such as recorded broadcasts from Brazilian radio stations, were used on occasion, and the trainees also had access to Brazilian magazines, newspapers, and other materials.

Chapter 4

Description of Samples Studied

In the original plan for this study, it was expected that by testing and observing successive contingents of Peace Corps trainees in Spanish or Portuguese at the University of New Mexico, it would be possible eventually to accumulate data on about 300 students of Spanish and about 150 students of Portuguese. As matters turned out, relatively few students of Portuguese were available for study. Therefore it was decided to prolong the period of data collection by several months in order to accumulate a larger number of cases in Spanish than originally planned.

Samples of Trainees in Spanish

Seven successive contingents of Peace Corps students of Spanish trained at the University of New Mexico were studied. The names of these groups, number of trainees initially enrolled, number of sections, and training dates, are as follows:

	N	No. of Sections	Dates
Colombia VIII	117	13	June 10 - September 15, 1963
Peru V	39	12	June 10 - September 15, 1963
Ecuador V	79	7	July 7 - October 11, 1963
Colombia XI	58	6	July 7 - October 11, 1963
Honduras II	55	6	August 8 - November 10, 1963
Colombia XIII	67	10	September 9 - December 21, 1963
Colombia XV	57	6	October 21 - January 10, 1964
Total	472		

Although the original rosters for these contingents supplied by the Peace Corps contained the names of 472 students, 28 students either failed to appear in Albuquerque or withdrew within the first few days of training. The sample was thus immediately reduced to 444.

Personal data on sex, date of birth and marital status were available for 447 of the original enrollees. For this group, men outnumbered women 1.7 to 1, age ranged from 19 to 60 with an average of 23.7 years, and a large majority were single at the time of enlistment in the Peace Corps and had never been married. A more detailed description of the sample is given in Table 3.

Samples of Trainees in Portuguese

During the data-collection period of this study, there were three contingents of students trained in Portuguese at the University of New Mexico. The names of these groups, the number of trainees initially enrolled, and the training dates are as follows:

	N	Dates
Brazil IV	35	May 9, 1963 - August 8, 1963
Brazil V	38	July 12, 1963 - October 12, 1963
Brazil VII	51	November 11, 1963 - February 3, 1964

For administrative and other reasons, it was possible to make detailed studies of only the Brazil VII contingent. Personal data are available for the 51 members of that contingent who actually entered training; these data are summarized in Table 4. In contrast to the Spanish-training contingents, this Portuguese contingent contained more women than men, but its age and marital status distributions are roughly comparable to those of the Spanish-training contingents.

Table 3

Personal Data for the Original Sample of Students of Spanish

(N = 447)

	N	%	
Sex			
Male	280	62.6	
Female	167	37.4	
Total	447	100.0	
Age			
56-60	4	0.9	Range 19-60
51-55	3	0.7	
46-50	3	0.7	$\bar{X}$ = 23.7
41-45	3	0.7	
36-40	6	1.3	
31-35	8	1.8	
26-30	19	4.3	
21-25	359	80.3	
19-20	41	9.2	
Unknown	1	0.2	
Total	447	100.1	
Marital Status			
Single (including 4 "engaged")	395	88.4	
Married	24	5.4	
Divorced	7	1.6	
Other	1	0.2	
Unknown	20	4.5	
Total	447	100.1	

Table 4

Personal Data for the Original Sample of Students of Portuguese

(N = 51)

	N	%	
Sex			
Male	21	41.2	
Female	29	56.9	
Unknown	1	2.0	
Total	51	100.1	
Age			
36-40	2	3.9	Range 20-39
31-35	1	2.0	
26-30	4	7.8	$\bar{X}$ = 22.7
21-25	35	68.6	
20	8	15.7	
Unknown	1	2.0	
Total	51	100.0	
Marital Status			
Single (including 2 "engaged")	38	74.5	
Married	10	19.6	
Divorced	0		
Other	0		
Unknown	3	5.9	
Total	51	100.0	

For comparative purposes, end-of-training data were collected on Brazil VI, a contingent trained at the University of Wisconsin (Milwaukee branch). Because it was not possible to obtain start-of-training and mid-tour data on this group, the only way in which the data from this contingent were used was in the derivation of factor scores from the Foreign Language Questionnaire (see Chapter 5). Thirty-six cases from Brazil VI were used in this way.

Chapter 5

Nature of the Data Collected

A wide variety of data on the trainees was available from Peace Corps records or from tests and other evaluations conducted by the Peace Corps Training Program at the University of New Mexico. Some of these data, however, were "spotty" in the sense that many of the scores for individual trainees were missing or otherwise unavailable. Therefore, this chapter will describe in detail only the sets of measurements from these sources that were found to be sufficiently complete to be usable in this study.

In addition, a series of evaluation instruments were selected or developed specifically to meet the requirements of this project. The selection and/or construction of these instruments will also be described in this chapter in detail.

Measures of Foreign Language Aptitude

Parts 3, 4, and 5 of the Modern Language Aptitude Test (Carroll and Sapon, 1958) are routinely given by the Peace Corps to applicants for training, at various testing centers throughout the country. The only difference from the commercial version of the test is that the answer sheet is in the format required for the SCRIBE scoring machine at the Educational Testing Service in Princeton, N. J. Parts 3, 4, and 5 of the MLAT are paper-and-pencil tests, constituting the "short form" of the test; the MLAT gives norms and other data for a total raw score, which is the sum of the raw scores on these three subtests. As used in the Peace Corps testing program, these three parts are given by a test administrator who reads the instructions aloud from the materials furnished and times the tests separately (this is in contrast to another procedure, usually employed for the total test, whereby the test is administered by playing a magnetic tape recording of all instructions, times, etc.).

Part 3 of the MLAT, entitled "Spelling Clues," requires the subject to recognize words "spelled approximately as they are pronounced", such as luv (love) and ernst (earnest) and choose a synonym for each word from five choices offered (affection and sincere are the correct responses for these examples). The test contains 50 items, for which a time-limit of 5 minutes is allowed, and is thus highly speeded. According to the test manual, "scores on this part depend to some extent on the student's English vocabulary knowledge"; however, it "also measures the same kind of sound-symbol association ability as measured by Part II, Phonetic Script, but to a lesser extent." [Part II is a test that must be administered by means of a tape recorder; in this test, the subject learns to associate particular English sounds with symbols in a special phonemic transcription.]

Part 4 of the MLAT, entitled "Words in Sentences," requires the subject to select elements of sentences that correspond in grammatical function to specified elements in other, "key" sentences. It can be characterized as a test of grammatical analogies. According to the test manual, "this part is thought to measure sensitivity to grammatical structure, and may be expected to have particular relevance to the student's ability to handle the grammatical aspects of a foreign language." Fifteen minutes are allowed for the 45 items of the test; for most students, the test is not highly speeded.

Part 5, entitled "Paired Associates," requires the subject to memorize the English meanings of 24 nonsense words labeled as "Kurdish" (they are not really Kurdish); 4 minutes are allowed for this memorization, after which there is a 4-minute, non-speeded multiple-choice test on the memorization. Maximum score is 24.

Scores on the Modern Language Aptitude Test have been shown to be highly predictive of success in foreign language study, particularly in intensive courses (Carroll, 1962). The Research Division of the Peace Corps has conducted or sponsored numerous studies showing a satisfactory validity for the test in predicting success in Peace Corps language training programs (Krug, 1962). Hobbs (1963, p. 51) points out that the validity of the test in predicting success in the field "holds up reasonably well not only for countries where a new language must be learned but for others as well, suggesting the importance of some general ability-to-learn factor." (Indeed, several parts of the MLAT are explicitly learning tasks, particularly parts 1, 2, and 5.)

As used by the Peace Corps, the total score for Parts 3, 4, and 5 of the MLAT (here designated ΣMLAT) is converted to a T-score, which we will identify by the symbols PCMLAT, by a conversion table that amounts to the equation

$$PCMLAT = .472(\Sigma MLAT) + 23.03$$

(Solving this equation for ΣMLAT we get $\Sigma MLAT = 2.12(PCMLAT) - 48.74$.) This conversion had been established by the Peace Corps on a large number of ΣMLAT scores obtained in the early days of its selection program.

Thus, PCMLAT scores should have been available for all trainees in our study. For various reasons, however, scores were not available for a substantial proportion of students. In any case, we desired to obtain the part scores themselves, and if possible also to secure scores on Parts 1 and 2. Wherever possible, scores on parts 3, 4, and 5 were obtained through a re-scoring of the original answer sheets resulting from the routine Peace Corps testing; these scores were obtained from Educational Testing Service. By plotting the resulting ΣMLAT scores against PCMLAT scores it was found that a small number of PCMLAT scores were in error, probably through clerical error (a number of PCMLAT scores were incorrect in the ten's digit); for all such cases the PCMLAT scores were corrected in project records, and the Peace Corps was informed of the errors.

Also, wherever possible, missing scores on Parts 3, 4, and 5 were obtained by testing at the University of New Mexico under project auspices, as close to the start of training as possible. Where this was not possible, ΣMLAT scores were obtained from PCMLAT scores by the conversion equation above. Parts 1 and 2 were administered to as many trainees as possible, whenever in the training program it was feasible to give these tests, but generally close to the starting date of the training for each group. Despite all efforts to obtain complete sets of sub-test scores on all trainees included in the sample, many scores were still unavailable, as will be seen in the next two chapters.

Because scores on Parts 1 and 2 became available for appreciable numbers of trainees, descriptions of those parts are given here.

Part 1 of the MLAT, entitled "Number Learning," requires the subject to learn the names of numbers (1, 2, 3, 4; 10, 20, 30, and 40; and 100, 200, 300, and 400) in an artificial language. The learning is done by auditory presentation of appropriate practice materials from a magnetic tape, after which a series of two- and three-digit numbers in the artificial language are presented in fairly rapid succession (again auditorily from the tape). The subject is required to write down these numbers in Arabic numberals from dictation (later transcribing the answers to appropriate answer sheet scoring positions). The maximum score is 43; the total duration of the test is approximately 19 minutes. According to the test manual, the test "seems to measure one aspect of the memory component of foreign language aptitude, but the part also has a fairly large specific variance, which one might guess to be a special 'auditory alertness' factor which would play a role in auditory comprehension of a foreign language."

Part 2, entitled "Phonetic Script," requires the subject to learn to associate particular English sounds with symbols in a special phonemic transcription. Learning is demonstrated by the correct choice from among four possible transcriptions for a given syllable. The test must be presented by tape recording; pacing of the presentation is of course determined by the recording, which lasts about 12 minutes. Maximum score is 30.

During the period when the trainees in our sample are likely to have been selected for Peace Corps training, the cutting score on PCMLAT was quite low. Nevertheless there appears to have been some selectivity, reflected in the fact that the distribution of PCMLAT scores for 372 trainees for whom data were available both from Peace Corps records and from the rescoring of the answer sheets at ETS has a mean of 54.5 and a standard deviation of 8.2 (as compared with theoretical values of 50 and 10, respectively, for a non-selected group). The total distribution of earned and converted EMLAT scores, based on 437 cases (the largest number on which it was possible to obtain EMLAT scores from any source), had a mean of 66.3 and a standard deviation of 17.4 (corresponding to 54.3 and 8.2, respectively, on the PCMLAT scale). This mean has a value between the 55th and 60th percentiles on published norms in the Manual of the MLAT for "Men in Intensive Language Training at the Department of State". The sample may thus be concluded to have been somewhat selected in terms of language aptitude.

The above data are for cases found among the Spanish-trained contingents. For 48 students of Portuguese the mean and standard deviation of the PCMLAT distribution were 57.5 and 6.9 respectively, corresponding to values of 73.2 and 14.6 on the EMLAT scale.

Measures of Prior Knowledge of the Language Studied

In its selection procedures, the Peace Corps offers the candidate the opportunity to demonstrate his knowledge of a foreign language by taking a written examination in it. The examinations offered include one in Spanish. However, none of the trainees in our sample took this examination.

When students destined for Spanish training arrived at the University of New Mexico training center, they were given the opportunity to demonstrate their knowledge of Spanish by taking a placement test on the basis of which they would be assigned to one of the more advanced sections. The placement test consisted of two parts. Part One was given to trainees who reported having studied Spanish previously, and it consisted of an aural comprehension section worth 80 points and a reading comprehension section worth 20 points. Part Two was given only to the trainee who scored 85 or better on the first part; it consisted of a taped conversation test in which the student was given a certain period of time to talk about pictures flashed on a movie screen.

Because only a certain proportion of all Spanish trainees took any part of the placement test (according to our records, only 276 out of a total of 452 Spanish training entrants, or 61.1% [1]), and because the placement test itself was not uniform for all who took it, the problem that presented itself was how to represent initial proficiency in Spanish on a scale with a common meaning for all trainees. One way in which this was done was to derive a scale from a correlated variable, namely, the section placement number. As each contingent arrived at the University of New Mexico training center, the Spanish training staff assigned students to sections on the basis of not only placement scores, but also any other information they had as to the trainee's prior exposure to Spanish or related languages. The section placement

[1] We have no assurance that all students with prior training in Spanish actually took the placement test or that our data concerning the placement tests are actually complete.

number was correlated with amount of prior knowledge of Spanish; that is, students with the greatest amount of Spanish competence (sometimes native speakers of Spanish) were assigned to the highest-numbered sections; students with the least exposure to Spanish or any other language were assigned to the lowest-numbered section (section 1.) Since contingents varied somewhat in size, there were varying numbers of sections. Therefore, a statistical procedure was employed to convert all section numbers to a common scale. For each contingent, section numbers were converted to T-scores corresponding to the mean standard scores for portions of a normal curve having the same proportions of cases as the sections arranged in numerical order. The resulting T-scores were then pooled into a single distribution and again scaled in T-score form.

The chief assumption underlying this procedure is that the resulting Section Placement Scores (SPS) carry at least some information about the student's prior knowledge of Spanish that is not reflected in the Spanish placement test scores alone. Table 5 shows the distribution of SPS scores for 171 cases without Spanish placement test scores and for 271 cases distributed according to Spanish placement test scores. The mean SPS for cases without Spanish placement test scores was 40.83 with a standard deviation of 8.61; for cases with Spanish placement test scores, the mean SPS was 53.80 with a standard deviation of 8.88; clearly these means are different. For the 271 cases with both SPS and Spanish placement test scores, the correlation between SPS and test score (the score being that resulting from part one of the test) was .68, a very substantial value. Nevertheless, it must be pointed out that in Table 5 there are a few outlying cases of trainees with fairly high Spanish placement test scores who were nevertheless placed in low-numbered sections. The reasons for this are unknown. Likewise, there are a few cases without Spanish placement test scores who were nevertheless placed in fairly advanced sections.

The Section Placement Scores also carry information as to how advanced the training for a student was. As we have seen in a previous section, the higher-numbered sections tended to get further along than the lower numbered sections in the text Modern Spanish.

No placement tests were given to students of Portuguese on their arrival at the training program in Albuquerque, but they were assigned to sections on the basis of staff interviews conducted to determine their stage of proficiency. The sections were numbered from high to low proficiency; i.e., the most proficient were assigned to section one and the least proficient to section six (there being six sections); consequently, these section scores correlate negatively with proficiency. (They also correlate negatively with EMLAT to the extent of $-.43$, $N = 48$, $P < .01$; this fact suggests perhaps that sectioning may have been based to some extent upon knowledge of MLAT scores.) In any case, the section placement numbers, ranging from 1 to 6, are regarded as measures of prior or initial knowledge of Portuguese for the purpose of this study.

Table 5

Frequency Distributions of Section Placement Scores for Those Without Spanish Placement Test Scores and for Different Levels of Score on the Spanish Placement Test

SECTION PLACEMENT SCORE (est.)	No Spanish Placement Test Score	SPANISH PLACEMENT TEST SCORE 0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100	Total	All Cases
75-79									1	2	1		4	4
70-74													0	0
65-69										4	12	2	18	18
60-64	1				1	3	2	6	6	11	16		45	46
55-59	4	2		5	9	9	11	11	8	6	3		64	68
50-54	26	2	3	11	11	12	8	4	2	5			58	84
45-49	17	4	18	17	7	4	1				1		52	69
40-44	61	5	5	3	1	1			1				16	77
35-39	24	1			1		1	2	1			1	7	31
30-34	27					3	1		1				5	32
25-29	0												0	0
20-24	2	2											2	4
15-19	9												0	9
Totals	171	16	26	36	30	32	24	23	20	28	33	3	271	442

Measures of Other Pre-Training Variables

For the purpose of obtaining data concerning trainees' background in foreign language study and degree of interest in such study prior to entry into Peace Corps training, the project staff prepared a Foreign Language Questionnaire (See Appendix B) that was to be administered to both Spanish and Portuguese language trainees at some convenient time during the training period, generally towards the end of training. The questionnaire was thus largely retrospective. Among the kinds of information sought were:

1) a characterization of the trainee's prior background in foreign languages aside from formal school contacts (e.g., opportunity to hear foreign languages spoken in the home, parents' interest in the foreign language achievement of the trainee.)

2) a detailed inventory of the trainee's formal course work in foreign languages, from grade school up to the time of entry into the Peace Corps program. For each formal course taken, the trainee was asked to fill out a separate sheet asking for information on type of school attended (public, private, parochial), class hours per week of foreign language, type of final examination, and so forth.

3) an estimate of the trainee's conception of and interest in foreign language study prior to his entry into the training program. Questions of this type covered the trainee's interest in foreign language study compared to other types of school work, the relative amount of time he had spent studying foreign languages, his interest in seeing foreign language films, or learning the rudiments of some "out-of-the-way" language, etc.

4) the trainee's self-appraisal of his relative ability in each of the skill areas of listening, speaking, reading, and writing in a foreign language, again prior to entry into the Peace Corps program.

This background and interest questionnaire was administered in a preliminary mimeographed form to approximately 40 Peace Corps trainees at Springfield College (Springfield, Massachusetts), and as a result of this pre-testing, a number of minor changes in format and phraseology were made before the questionnaire was printed in photo-offset form for use with the University of New Mexico contingents.

For the purpose of establishing a limited number of predictor variables, the data from the Foreign Language Questionnaire of from 332 to 368 trainees both in Spanish and in Portuguese were subjected to a series of special factor analyses. Items were classified logically into three sets: (a) items on attitudes towards foreign language study; (b) items concerned with preferred modes of foreign language study; and (c) items concerned with exposure to foreign language experiences in the home. Each of these sets of items was factor-analyzed in order to reveal the weighting of each response that would yield the maximum relative variance in a composite score based on these items. (Thus, a principal components analysis of the variance-covariance matrix of the item responses was employed in each case.) A detailed description of the rationale and computational procedures used will be found in Appendix C.

These analyses resulted eventually in four factor scores that were computed for each student. Two of the factors, called Interest in Foreign Languages and Compulsivity, were derived from the set of items on attitudes towards foreign language study. Each of the other factors, Preference for Audiolingual Instruction (briefly, Audiolingual Preference) and Exposure to Foreign Languages in the Home (briefly, Home Exposure) was derived from the corresponding set of items as classified logically above. The factor scores actually used in the study were arbitrary linear transforms of factor scores expressed in normal deviate form.

The items contributing to each factor, and their factor loadings, are indicated in Tables 6, 7, 8, and 9.

Table 6

Items Contributing to Factor I. Interest in Foreign Languages

Item Number	Item Statement	Factor Loading
6	I would have enjoyed joining a club whose main object was to make it possible for students to converse with one another in a foreign language, hear lectures in the language, and so forth.	.36
2	I voluntarily and on my own (not in connection with any class) picked up and attempted to read a foreign magazine or newspaper.	.34
8	If I had a foreign friend who was quite fluent in English and liked to speak English, I would still rather have had him talk to me in his native tongue.	.31
4	I voluntarily and entirely on my own attempted to read one or more plays, novels, or other serious works in a foreign language study.	.28
15	In comparison to my other courses, I was less interested in foreign language study.	-.28
17	In comparison to my other courses, I was very interested in foreign language study.	.28
42	If I had married a person whose native language was not English, I would definitely have learned his (her) language even if we both knew English.	.28
21	Outside of class, and when not doing homework, I used hardly ever to think of words, things, or ideas in a foreign language.	-.27

Table 7

Items Contributing to Factor II, Compulsivity

Item Number	Item Statement	Factor Loading
16	In comparison to my other courses, I was equally interested in foreign language study.	.39
25	Whenever foreign language homework was assigned, I usually did it more or less willingly along with other homework.	.31
31	After I had been working at foreign language homework for some time, I found that I was interested enough to get the assignments done.	.22

Table 8

Items Contributing to Factor III, Preferences for Audiolingual Instruction

Item Number	Item Statement	Factor Loading
23	Please rank the four language skills from 1 to 4. Write a "1" opposite the skill you were best at ...	
	Speaking (ranked 4th)	-.33
	Reading (ranked 1st)	-.31
	Listening (ranked 3rd)	-.29
17	With the knowledge of the foreign language which you had immediately before entering the Peace Corps, which of the following things could you have done most readily? Please write a "1" opposite the thing you could have done most readily, ...	
	A) Struck up a conversation with a fellow traveller .....(ranked 4th)	-.24
6	I would rather have;	
	A) studied a foreign language by listening to a recording	.22
	B) studied a foreign language by reading a book	-.22
5	I would rather have taken a foreign language test by:	
	A) having the teacher say the sentence	.21
	B) having the teacher write the sentences on the board.	-.21
23	(See Above)	
	Listening (ranked 1st)	.21

Table 9

Items Contributing to Factor IV, Exposure to Foreign Languages

Item Number	Item Statement		Factor Loading
6	I have had the opportunity to hear my father and/or mother conversing with friends in some language other than English	yes	.37
		no	-.37
2	My mother can carry on a reasonably fluent conversation in some language other than English	yes	.34
		no	-.34
	My father can carry on a reasonably fluent conversation in some language other than English	yes	.33
		no	-.33
3	My mother can read books and magazines in some language other than English	yes	.29
		no	-.29
	My father can read books and magazines in some language other than English	yes	.28
		no	-.28

Language Proficiency Evaluations by the Language Training Staff

Both at an "intermediate assessment" point about half-way through the 12-week training and also at the end of the training, a Peace Corps Language Evaluation Form (Appendix D) was filled out on each trainee by his language instructors. From this form the following scores were obtained:

Intermediate Assessment

Present Level of Fluency in Speaking
- 5 Exceptional fluency
- 4 More fluency than average
- 3 About average fluency
- 2 Below average fluency
- 1 Little or no fluency

Present Level of Comprehension
- 4 Exceptional comprehension
- 3 Better than average
- 2 About average
- 1 Little or no comprehension [N.B. the form contained only these four levels, perhaps by error]

Rate of Acquisition, Speaking
- 5 Outstanding
- 4 High average
- 3 Average
- 2 Low average
- 1 Deficient

Rate of Acquisition, Comprehension
- 5 Outstanding
- 4 High average
- 3 Average
- 2 Low average
- 1 Deficient

Estimate of Adequacy of Language Ability for the Overseas Job, Speaking
- 4 Strong
- 3 Satisfactory
- 2 Borderline
- 1 No

Estimate of Adequacy of Language Ability for the Overseas Job, Comprehension
- 4 Strong
- 3 Satsifactory
- 2 Borderline
- 1 No

Final Assessment

Same as for Intermediate Assessment

It would have been possible also to use data given on the Language Evaluation Form concerning intermediate and final examinations; these were not used, however, because the tests were constantly being revised and even completely changed, so that there was no meaningful common scale on which the analysis could be based. This being the case, it was decided to rely on standardized language proficiency tests that could be applied uniformly to all trainees in each of the language groups and that could also be given, in alternative forms, at the time of the mid-tour follow-up.

Objective Language Proficiency Tests

A series of objective language proficiency tests in Spanish or Portuguese was given to all trainees who were still in the program at the end of the 12-week training period, whether the trainee "passed" this program or not. These tests (generally, alternate forms of them) were also administered to the trainees studied at the time of the mid-tour follow-up.

Since it was anticipated that the levels of language proficiency possessed by the trainees at the end of the 12-week training period and at the time of the mid-tour follow-up would range over a wide spectrum, it was necessary to provide tests to cover a correspondingly wide range of proficiency. Unfortunately, the available proficiency tests in Spanish and Portuguese did not meet this requirement as well as might be desired. In the case of Spanish, the MLA-Cooperative Foreign Language Tests, which in 1963 were undergoing final norming prior to publication by Educational Testing Service, were made available to this project for research purposes. However, these tests have two separate levels, "L" level tests for students completing two years of high school or two semesters of college study, and "M" level tests for students completing four years of high school or two years of college study. Only by giving both levels to all students was it possible to insure that each student was tested with a test of the appropriate level. When this study was conducted there were no procedures available from Educational Testing Service for obtaining a single score derived from both tests.[1] There seemed to be no commercially available standardized tests in Portuguese, and thus it was necessary to create a series of tests parallel to the MLA Cooperative Tests.

The principal investigator had constructed several years previously a Pictorial Auditory Comprehension Test which could be adapted for measuring auditory comprehension in any language. Experience with this test (Carroll and Ho, 1959; Carton and Carroll, 1960) has indicated that it can measure a rather wide range of proficiency in aural comprehension--from none at all to the proficiency of a native speaker. Therefore, this test was adapted for use in both Spanish and Portuguese.

The MLACooperative tests are described in detail in a Handbook published by Educational Testing Service (1965a). (The Handbook also covers the tests available in French, German, Italian, and Russian.) They cover the four skill areas of Listening, Speaking, Reading, and Writing at the two levels of difficulty noted above: Form L tests (available in two forms, LA and LB) are planned for use with students completing two years of high school language study or two semesters of college study, and Form M tests (Form MA and MB) are designed for students completing four years of high school study or two years of college study. Short descriptions of the MLA Cooperative Tests and of the Pictorial Auditory Comprehension Test are given below, together with sample items.

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[1] In 1965 Educational Testing Service published a booklet of norms (1965b) in which "converted scores" on a common scale can be obtained from tests at either level. A single score derivable from the two tests could therefore be the average of the converted scores.

MLA-Cooperative Tests

Listening. The Listening tests are administered by means of a tape recording to which the student listens through earphones or by loudspeaker (in our administration, the tapes were played over a loudspeaker). With minor variations depending on the language and test level, the following types of passages are presented: simple utterances by a single speaker, conversations between two speakers, the reading of prose passages, simulated telephone conversations, and short dramatic scenes enacted among several people. Throughout the test, a number of different male and female voices are heard. After listening to each passage, the student responds to one or more spoken questions by choosing one of four printed alternatives. All questions and answer options are in the foreign language.

The student's score on the test is the number of items answered correctly. For Level L, the maximum score is 45; for Level M, it is 40.

Sample item: (Listening LA)

[Student hears following sentence and chooses appropriate alternative]

¿Están ustedes cansados? [Translation: Are you people tired?

A) No, en el centro.
B) Amigos, nada más.
C) Tenemos muchos.
D) Sí, un poco.

A) No, downtown.
B) We're just friends.
C) We have a lot.
D) Yes, a little.]

Speaking. The Speaking tests are administered either in a language laboratory situation which allows for the recording of student responses, or by using two separate tape recorders, one to play the test tape and the other to record the student responses (the latter procedure was used in our administration). The Speaking test is composed of four parts: in the first section, the student listens to short utterances that he repeats aloud, attempting to imitate the model voice as closely as possible. For each utterance, the student is rated on his pronunciation of certain "critical items" (individual sounds or sound sequences), which are judged as either "right" or "wrong". In this part, the intonation of certain utterances is also judged as right or wrong.

The second section of the Speaking test asks the student to read a short printed passage aloud; again, a number of critical items are judges as right or wrong, and at the end of this section a global rating of reading fluency is made along a six-point scale.

In the third section, the student looks at simple line drawings (for example, a book lying on a table) and answers a spoken question about each drawing ("Where is the book?"). Responses to these questions are rated according to a four-point scale based on verbal quality descriptions.

In the final part of the test, the student looks at and "tells a story about' both a single picture (for example, a wife bringing her husband a cake from the kitchen) and a series of four pictures (for example, a family visiting the zoo). One and two minutes respectively are allowed for the responses, which are rated for extent of vocabulary used, correctness of structure and pronunciation, and general fluency, each along a six-point scale.

The final score on the Speaking test is the sum of the ratings for all sections, with a maximum possible score of 82.

Sample item: (Speaking MA)

[Student sees a drawing of a girl washing her hands and is asked the following question]

Que hace la muchacha? [Translation: What is the girl doing?]

[Student's response is judged for fluency, appropriateness, grammatical correctness, etc.]

Reading. In the Reading tests, the student is presented a number of passages in the foreign language ranging from short and relatively simple statements to longer (100-150 word) passages drawn from newspaper and magazine sources or from more serious literature. For each item, the student either completes the passage by filling in a missing word or phrase, or chooses the correct answer to questions based on the passage. The reading passages, questions, and answer alternatives are all in the foreign language; all materials are printed in a test booklet, and the student marks his choices on a standard four-alternative scoring sheet.

The examinee's score on the test is the number of items answered correctly. Maximum score for Levels L and M is 50.

Sample item: (Reading LA)

[Student is asked to choose the alternative which appropriately completes the sentence]

Nos dijo mamá que era hora de comer y por eso ( ).

A) fuimos a nadar
B) tomamos asiento
C) comenzamos a fumar
D) nos acostamos pronto

[Translation: Mama told us it was time to eat, so we ( ).

A) went swimming
B) took our seats
C) began to smoke
D) went to bed

Writing. All stimulus materials for the Writing test are presented in the test booklet, where appropriate spaces are also provided for the student's responses. In the early sections of the test the student reads short incomplete sentences in the foreign language and fills in a single word which appropriately completes the sentence. In another section the student rewrites sentences in the foreign language, making required changes in person, number, or verb tense, or replacing nouns by pronouns, and so forth. A final section calls for a short "free" composition--usually in dialogue form--based on certain key words which the student is required to include in his composition. The test is scored subjectively, but according to fairly detailed judging rules. Intraclass correlations among judges, as reported in the Handbook, have been shown to be satisfactorily high (.983).

Highest possible score on all forms of the test is 100.

Sample item: (Writing MA)

[Student is asked to rewrite sentence, making necessary changes, but not changing the sense or content of the sentence]

La muchacha viene conmigo.

Las (muchachas vienen conmigo) .

[Translation: The girl is coming with me.

The (girls are coming with me) .]

Pictorial Auditory Comprehension Test (PACT)

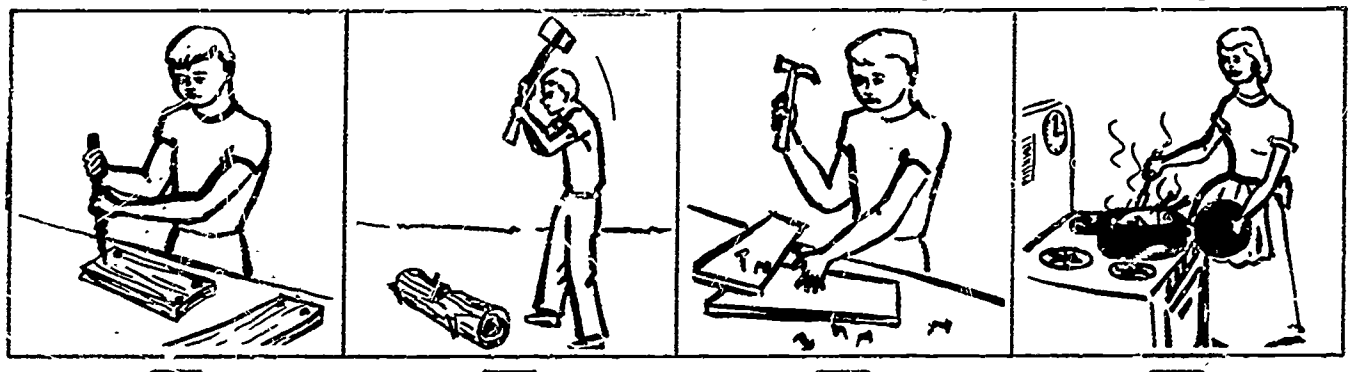
The Pictorial Auditory Comprehension Test makes use of a test tape containing 75 spoken sentences of varying length and complexity, and a test booklet showing 75 panels of four line drawings each. For each of the spoken sentences, the student chooses from among the four drawings the one which corresponds most closely to the material presented in the sentence. The first few sentences are quite short and use a simple syntax and vocabulary. As the test progresses, the sentences become longer, and incorporate more complicated syntactic patterns as well as a more difficult vocabulary. The change in difficulty will be apparent from the two example items below.

Sample items: (PACT Form A)

[Student hears spoken sentence and chooses appropriate picture]

No hace bien el trabajo. [Translation: He's not doing the work well.]

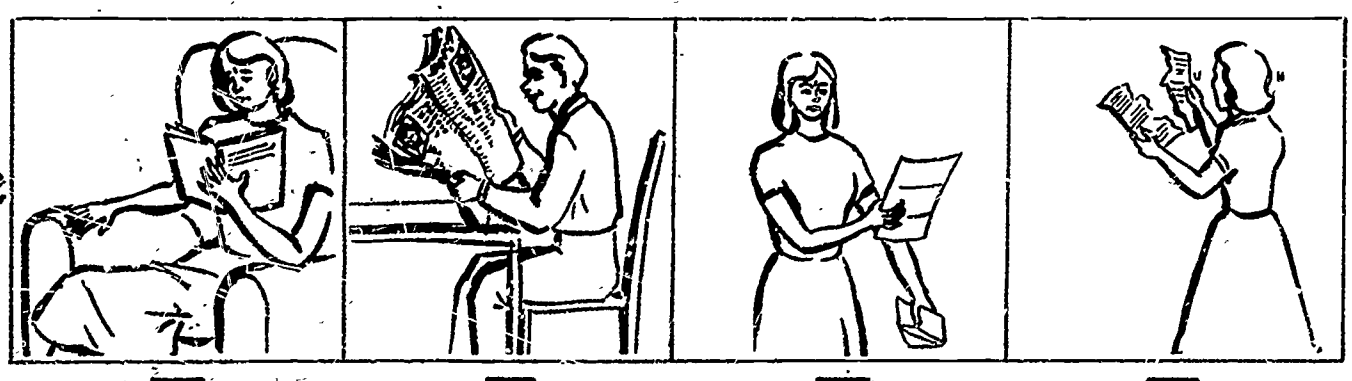
1



A ☐ B ☐ C ☐ D ☐

Lee en la novela que su desplacer, aunque muy grande, no iba hasta romper la carta. [Translation: He/she is reading in the novel that his/her displeasure, although very great, did not go so far as to tear up the letter.]

72



A ☐ B ☐ C ☐ D ☐

The tests given to our samples of Peace Corps trainees or Volunteers in Spanish were as follows:

At end of training:

MLA Cooperative FL Test in Spanish, Listening, Form LA
(45 items, 25 minutes, by tape recording)
MLA Cooperative FL Test in Spanish, Listening, Form MA
(40 items, 25 minutes, by tape recording)
MLA Cooperative FL Test in Spanish, Reading, Form LA
(50 items, 35 minutes)
MLA Cooperative FL Test in Spanish, Reading, Form MA
(50 items, 35 minutes)
MLA Cooperative FL Test in Spanish, Speaking, Form MA
(38 items, 10 minutes, by tape recording)
Pictorial Auditory Comprehension Test in Spanis' Form A
(75 items, 25 minutes, by tape recording)

At Mid-Tour Follow-up:

MLA Cooperative FL Test in Spanish, Listening, From MB[1]
(40 items, 25 minutes)
MLA Cooperative FL Test in Spanish, Reading, Form MB[1]
(50 items, 35 minutes)
Pictorial Auditory Comprehension Test in Spanish, Form B
(75 items, 25 minutes, by tape recording)

In many of the statistical analyses of end-of-training data, scores on the two levels of the Listening and Reading tests were combined by a procedure detailed in Appendix E to yield a single score for each type of test, designated, respectively, ΣListening and ΣReading.

Only the M level of the Speaking Test was given at the end of training, because the two levels appeared to be essentially similar in format and content; thus, testing time was conserved. No Speaking Test was given to the Spanish-trained Volunteers at the time of the mid-tour follow-up, because of the difficulties under field conditions of administering a test requiring the recording of examinees' spoken responses. The Speaking Test tapes collected from the end-of-training testing were scored by native speakers of Spanish employed by this project. Each test was scored independently by two judges: test tapes for contingents 103 through 106 were scored by raters "A" and "B", and tapes for contingents 107 through 109 were scored by raters "A" and "C". All raters were carefully instructed in the procedures to be followed in scoring the different items (the procedures recommended in the test booklet). Inter-rater reliability figures for the Speaking Test scoring are relatively high; .82 for raters A and B, and .76 for raters A and C.

None of the Writing tests included in the MLA-Cooperative Test series was utilized, partly because testing time was limited and partly because writing skill was not deemed an important objective of the Peace Corps language training program.

Achievement Tests in Portuguese

The adaptation of the MLA-Cooperative Foreign Language Tests in Spanish for use in Portuguese was accomplished through an essentially literal translation of the Spanish texts.[2]

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[1] Through error on the part of the shipper of the tests, Form MA was given to some of the mid-tour groups rather than Form MB.

[2] Further details on the adaptation of the Spanish tests into Portuguese are given in a paper by Clark (1965).

The translations were made in two stages: first, a translator familiar with both Spanish and Portuguese translated both the question stems and answer alternatives into Portuguese, keeping as close as possible to the Spanish original. Second, native speakers of Brazilian Portuguese proofread the translations, leaving unchanged all passages which they considered acceptable in Portuguese, and correcting only those words or phrases (usually accidental Hispanisms) which were not good idiomatic Portuguese.

The spoken texts for the Speaking and Listening Comprehension Tests were recorded by native speakers of Brazilian Portuguese, and printed materials were reproduced by photo-offset form using the same general format as the MLA Spanish versions.

By similar techniques, Brazilian Portugese versions of the Pictorial Auditory Comprehension Test were prepared and included in the test batteries.

A listing of the objective proficiency tests administered to the Peace Corps trainees or Volunteers in Portuguese is as follows:

At end of training:

Portuguese adaptations of MLA-Cooperative FL Tests in Spanish:
- Listening, Form LA (45 items, 25 minutes)
- Listening, Form Ma (40 items, 25 minutes)
- Reading, Form LA (50 items, 35 minutes)
- Reading, Form MA (50 items, 35 minutes)
- Speaking, Form MA (35 items, 10 minutes)

Pictorial Auditory Comprehension Test in Portuguese, Form A (PACT) (75 items, 25 minutes, by tape recording)

At Mid-Tour Follow-up:

Portuguese adaptations of MLA-Cooperative FL Tests in Spanish:
- Listening, Form MB (40 items, 25 minutes)
- Reading, Form MB (50 items, 35 minutes)
- Speaking, Form MB (38 items, 10 minutes)

Pictorial Auditory Comprehension Test in Portuguese, Form B (PACT) (75 items, 25 minutes, by tape recording)

Additional information collected at the mid-tour follow-up

Besides objective language proficiency tests, Peace Corps Volunteers at the mid-tour follow-up were given a special questionnaire, called the In-Field Questionnaire (See Appendix F). The same questionnaire was given to both the Spanish-trained and the Portuguese-trained Volunteers; since the questionnaire refers to the Spanish language at various places, the Portuguese-trained Volunteers were simply asked to read "Portuguese" for "Spanish" in those items in which the language was named.

The construction of this questionnaire was based on a series of open-ended interviews with a number of Volunteers who had already completed their tours of duty and returned to the United States. Names and addresses were obtained from lists of Volunteers who had completed their tours of duty and were then living in the Boston-Washington-New York area, and letters were sent to nine Volunteers who had served in Latin American countries. Individual meetings were arranged with five of these Volunteers, and a member of the project staff visited and interviewed each person for a period of about 1 1/2 hours. The conversations were tape recorded, and in addition to answering numbers of specific questions, each Volunteer was urged to discuss more generally his language experiences in the field, the relationship of language to his job performance, and his ideas for improvement of the language training procedure.

On the basis of these interviews, the In-Field Questionnaire was prepared in considerably more detail and with more specific applicability than would have otherwise been the case.

The first section of the questionnaire sought a description of the Volunteer's in-field job situation: whether large city, smaller town, or rural area; number of other Volunteers working at the same duty station; extent to which duty requirements involved listening, speaking, reading, and writing in the foreign language. A second section asked for a self-appraisal of the Volunteer's language competence during the first month of in-field experience: degree of difficulty encountered in the reading of materials required by the job; problems associated with speaking in a grammatically correct manner or with suitable choice of vocabulary; difficulties arising out of various differences at variance with the language as taught in the training center; and so forth. The third section of the questionnaire involved the Volunteer's estimates of how long it had taken him, after arriving in the field, to overcome various kinds of language difficulties, or whether he had still not overcome them.

Questions similar to the above were also asked about the Volunteer's language performance at the actual time the questionnaire was being administered. A concluding section asked for Volunteers' comments on the adequacy of the training program and any recommended changes in emphasis. The manner in which the responses to this questionnaire were coded for use in statistical analyses will be mentioned in connection with the results reported in Chapter 7.

Chapter 6

Parameters of Language Learning in Formal Training

Introduction

This chapter is concerned with three basic questions:

(1) What levels of competence in Spanish or Portuguese were attained by the students in the 12-week Peace Corps training program at the University of New Mexico?

(2) To what extent would it have been possible to predict each student's eventual level of competence from information available at the start of training? and

(3) In view of the results attained in these analyses, what suggestions might be made with regard to the desirable length of the training program and the selection and guidance of individual students through the program?

These questions are approached first through an analysis of the results of various measures of language competence administered either at the mid-point or at the end of the 12-week training programs, then through analyses of statistical predictions that could have been made from data available at the start of training, and finally through projections of these predictions in order to indicate the probable desirable length of training for different categories of individuals.

Because the bulk of the data collected in this study came from the contingents trained in Spanish, the major part of this chapter is devoted to the results of a rather detailed analysis of these data. A report on data from the one small contingent of persons trained in Portuguese is reserved until the end of the chapter.

For the most part, the method used in studying the data is that of linear multivariate analysis. It will be shown that this type of analysis enables one to make generalized predictions of the course of learning, taking into account those factors affecting learning that pertain to both characteristics of individuals and conditions common to groups of individuals. One of the advantages of multivariate analysis is that it does not necessitate that data be complete on all individuals studied, as long as it can be shown that no substantial bias results from the elimination of individuals on whom only partial data are available. This was an important advantage in the present study because there were many instances in which data were missing for administrative and other reasons. The disadvantage of linear multivariate analysis, of course, is that it rests upon certain assumptions of linearity in the relationships studied. Such assumptions could have been circumvented by a method of analysis that would study the outcomes of the training course for subdivisions of the total group made with respect to critical predictor variables; such a method, however, would be relatively cumbersome and would encounter various problems caused by the absence of data. Furthermore, such a method does not lend itself readily to the kinds of statistical significance tests to which we are accustomed.

ANALYSIS OF THE SPANISH DATA

A note on the samples studied. By combining data from the seven Spanish-trained contingents listed on page 16, we have a total of 472 students who were on the rolls at the start of training. However, according to our records, only 452 cases actually started training. Of these, only 432 cases were complete in having both EMLAT scores and SPS scores, variables which were found to be very important in the prediction of eventual success in language training. This is the basic sample from which other samples were selected for special studies. For the 432 cases, the correlation between EMLAT and SPS was .23, significantly different from zero at the 1% level, but still a very low correlation in absolute magnitude.

A third very critical variable in the prediction of eventual training success was the availability or non-availability of a placement test score, and where this score was available, the actual score itself. As noted in Chapter 5, placement tests were given to students who claimed prior knowledge of Spanish or training in it. Of the 432 students who had both EMLAT and SPS scores, 265 (61.3%) had placement test scores available. Of these, 218 (82.3%) were found to have complete data on the four objective tests of Spanish proficiency given at the end of training. A total of 167 students did not have placement test scores available and may be presumed not to have had prior knowledge of Spanish or training in it. Of these, only 118 (70.7%) were found to have complete data on the end-of-training tests mentioned above. For the most part, students who started training but did not have end-of-training tests available may be presumed to have departed from the training program for one reason or another; in some cases they were separated for "language ineptitude." (More detailed data on attrition are given in Chapter 8.)

Performance on End-of-Training Criterion Tests

For the purposes of this study, a satisfactorily high performance on the objective tests of Spanish proficiency given at the end of training constituted the objective of the training program. It behooves us, therefore, first to consider the distribution of scores on these tests and the intercorrelations of these scores, and to attempt to use these results in order to characterize the levels of achievement attained by students in the training program.

The most direct indication of end-of-training achievement can be had by examining the frequency distributions of the several achievement test scores and, where possible, comparing them with norms. Several of these frequency distributions are shown in Figures 2 and 3. No norms are available for the PACT test, but data gathered in the field (see Chapter 7) indicate that a score of 56.2 on the PACT is the optimal point for separating those who claim they had no problem of language on arriving in the field from those who report that lack of adequate language fluency was still a problem to them at that time. At the end of training, only 24% of the 336 cases studied attained this score on the PACT. For reference purposes, the means and standard deviations for selected predictor and criterion variables for 336 cases at end of training are given in Table 10.

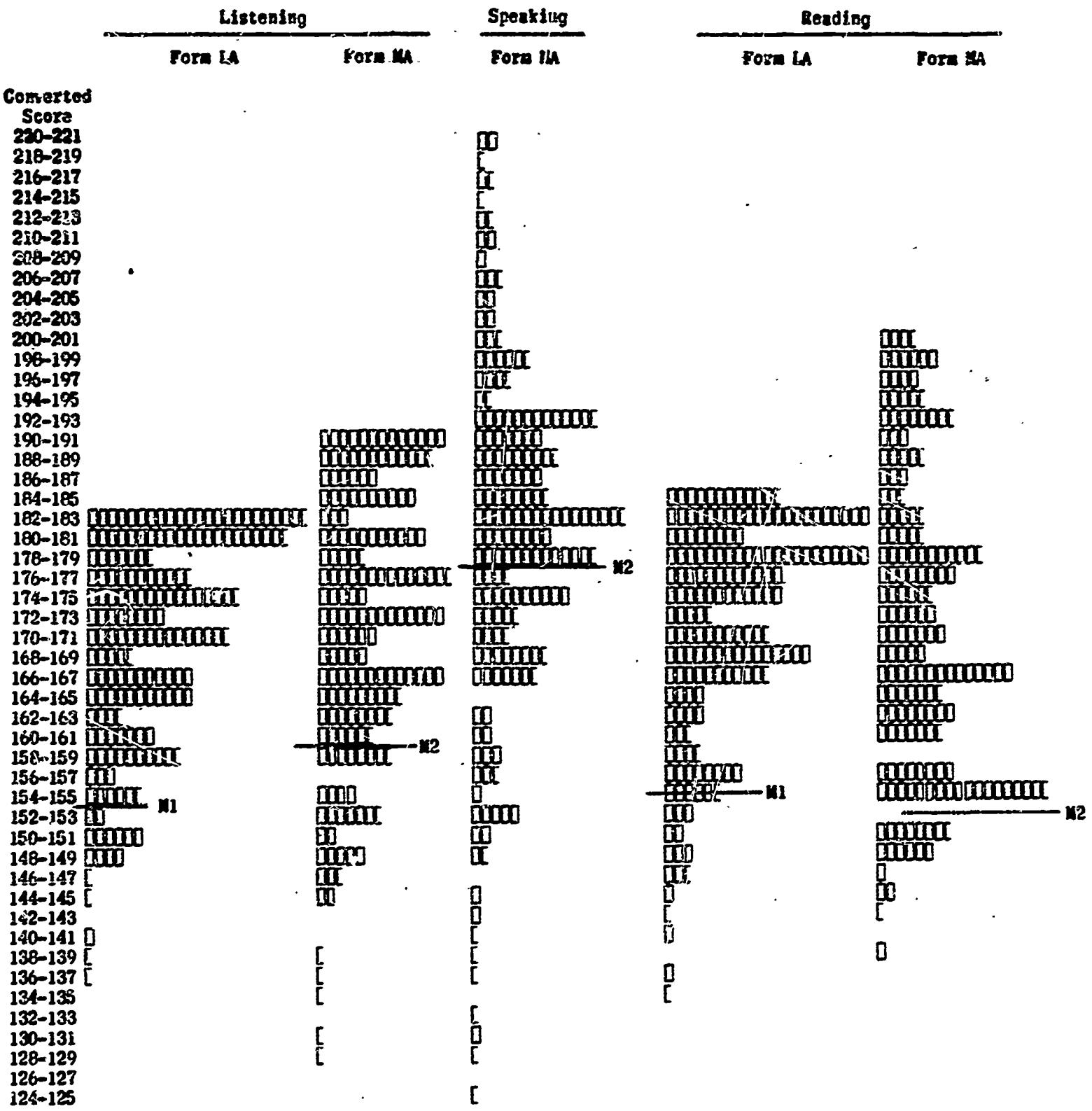
When results on the M Forms of the MLA Cooperative Tests in Speaking, Listening and Reading are compared with norms for those who have taken two years of Spanish starting in college, they are quite favorable to the Peace Corps training program. The percentiles attained by the average Peace Corps trainee studied were:

MLA-Coop. Speaking, Form M:	64
MLA-Coop. Listening, Form M:	79
MLA-Coop. Reading, Form M:	74

These are, of course, results for all cases studied, including both those who had no Spanish training when they started and those who had already had some (in many cases a considerable) amount of Spanish training when they started.[1]

The intercorrelations of the various achievement test variables presented in Table 11 are quite high, as is generally found to be the case for foreign language achievement tests of different skills. ΣListening and PACT, both auditory comprehension tests, intercorrelated to the extent of .91, but even ΣReading correlated .85 and .86 with these tests, respectively. In view of the range of ability found in the sample studied here, these correlations are not surprising. Basically, these achievement tests measure general competence with the Spanish language, quite apart from special skills of listening and reading. The correlations of the Speaking test with the other achievement measures are in the range .68 to .78; these correlations are about as high as might be expected in view of the somewhat lower reliability of of the Speaking test as compared with those of the other measures.

[1]See Appendix G for tentative FSI rating equivalents of MLA Coop. Test scores.



Legend: Each [] represents 2 cases; each [represents 1 case.

M1 = Median, First Year College General Norms
M2 = Median, Second Year College General Norms

Figure 2. Frequency Distributions of Scores on MLA Cooperative Tests at end of training
N = 336 cases with complete data

Table 10

Means and Standard Deviations of Selected Predictor and End-of-Training Criterion Variables

N=336, consisting of all students of Spanish for whom complete data were available for these variables

Variable	Mean	S.D.
Predictors		
Placement Score (118 cases with score of 0)	34.38	34.1
ΣMLAT	67.93	17.7
Section Placement Score (SPS)	49.86	10.4
End-of-Training Scores		
ΣListening (MLA Coop. Tests)	259.86	20.3
ΣReading (MLA Coop. Tests)	260.00	24.8
PACT Form A	46.17	13.4
MLA Coop. Tests (Raw Scores):		
Speaking Form MA	48.67	13.2
Listening Form LA	33.88	8.6
Listening Form MA	25.01	8.7
Reading Form LA	37.56	9.6
Reading Form MA	23.82	11.7

Table 11

Intercorrelations of End-of-Training Achievement Test Variables

N=336 Spanish students

Variable		1	2	3	4	5	6	7	8
Σ Listening	1	1.00							
Σ Reading	2	.85	1.00						
PACT Form A	3	.91	.86	1.00					
Speaking Form M	4	.74	.76	.78	1.00				
Listening LA	5	.94+	.77	.84	.68	1.00			
Listening MA	6	.96+	.84	.89	.71	.83	1.00		
Reading LA	7	.79	.90+	.78	.70	.77	.77	1.00	
Reading MA	8	.82	.94+	.83	.72	.72	.82	.76	1.00

+indicates a part-whole correlation

Prediction of End-of-Training Proficiency from Variables Available at the Start of Training

One of the major purposes of this research was to identify means of predicting the level of Spanish language competence that a student would attain at the end of the 12-week course of training. Such procedures for prediction, once identified, would presumably be generalizable for further groups of students subjected to similar courses of training.

An examination of the data confirmed the common-sense prediction that one of the most important variables in predicting how far a student would progress in a 12-week training program is whether he had any prior knowledge of Spanish or training in it, as indicated by whether he took a placement test in Spanish at the start of training. (For details on this placement test, see page 21.) This can be seen either by examining Table 12, which shows the means and standard deviations of end-of-training criterion test variables for students who did and did not take a placement test, or by noting the strikingly different frequency distributions of scores on one of these criterion tests (PACT A) for the two groups (Figure 3). Each pair of means in Table 12 yields a highly significant value of t (this being the customary statistical test for the difference between the means of two samples.)

Since the taking of a placement test is an objective fact that can be taken into account of in prediction, the bulk of the analyses in this chapter are performed separately for those who did and did not take a placement test. Students who took the placement test are designated as being in Group A, and those who did not take the placement test (and thus presumably did not claim any prior knowledge or study of Spanish) are designated as being in Group B.

Predictions of End-of-Training Proficiency: Group A (Trainees Who Took the Placement Test

The variables on which data are most complete and which also turn out to be most useful for the prediction of end-of-training success for the group that took the Spanish placement test at the outset of training are:

Placement Test Score
ΣMLAT (Total Raw Score, Parts 3,4 and 5, Modern Language Aptitude Test)
Section Placement Score (SPS)

There were 218 cases for which complete data were available not only for these predictor variables but also for the four chief end-of-training criterion variables. Data concerning the prediction of end-of-training proficiency scores are shown in Table 13.

Since a number of tables in this report will have a format similar to that of Table 13, an explanatory paragraph or two may be helpful at this point. The data for the predictors are generally at the left of the table, and for the criterion variables being predicted, at the right of the table. Each variable is numbered, for convenience. First the means and standard deviations of each variable are listed. Next, we have at the left the intercorrelations of the predictor variables. Just below are the validity coefficients, that is, the single (zero-order) intercorrelations of the predictors and the several criterion variables. To the right of the matrix of predictor intercorrelations is a matrix of beta-weights, with rows corresponding to predictor variables and columns corresponding to criterion variables. The beta-weights are the coefficients of the standardized predictor scores in a multiple regression equation of the type

$$\hat{y} = \beta_1 x_1 + \beta_2 x_2 + \ldots + \beta_m x_m ,$$

where $\hat{y}$ is the predicted value of the criterion variable in standard score form, and x_1, x_2 ... x_m are the predictor variables in standard score form. Each column of the beta-weight matrix implies a multiple regression equation of this type, found by the usual statistical procedure that minimizes the sum of the squares of prediction errors

Table 12

Means and Standard Deviations of End-of-Training Proficiency Tests for Those Who Did (Group A) and Did Not (Group B) Take the Spanish Placement Test

	Group A N=218		Group B N=118			
	Mean	S.D.	Mean	S.D.	t	p
Listening LA	36.55	7.58	28.97	8.27	8.4515	<.01
Listening MA	27.82	8.55	19.84	6.42	8.8464	<.01
ΣListening	266.50	19.42	247.60	15.57	9.0748	<.01
Reading MA	41.23	7.36	30.74	9.52	11.2114	<.01
Reading MA	27.73	12.00	16.60	6.71	9.2912	<.01
ΣReading	269.33	22.28	242.75	19.48	10.8663	<.01
PACT A	50.70	13.13	37.81	9.11	9.4661	<.01
Speaking MA	53.11*	11.95*	40.47	11.28	9.4017	<.01

*N=217

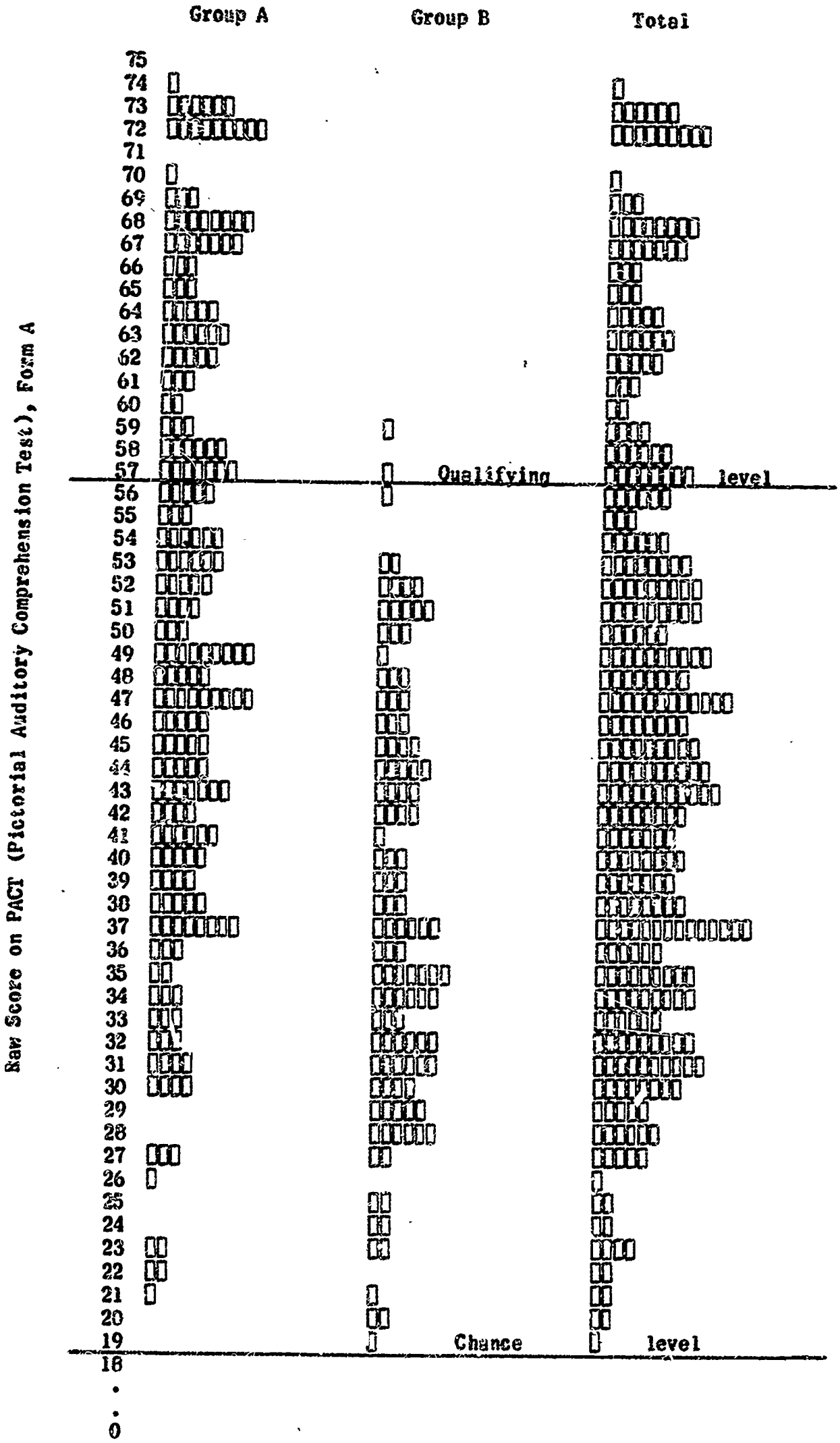


Figure 3. Frequency distributions of scores on PACT Form A at end of training, for students who did (Group A) and did not (Group B) take a Spanish Placement Test at the outset of training

Table 13

Prediction of End-of-Training Proficiency Scores from Three Predictor Variables

N = 218 Students (Group A) who took a Spanish Placement Test at the Outset of Training

		Predictors			Criteria			
		1	2	3	4	5	6	7
	Mean	53.00	69.03	54.44	266.50	269.33	50.70	53.11
	S.D.	28.40	16.96	8.62	19.42	22.28	13.13	11.92
		Intercorrelations			Beta-Weights			
Placement Test	1	1.00	.29	.67	.62**	.60**	.69**	.59**
ΣMLAT	2	.29	1.00	.16	.20**	.25**	.15**	.08
SPS	3	.67	.16	1.00	.17**	.20**	.13*	.13*
				Mult. R:	.83	.85	.84	.71
		Validity Coefficients			b-weights			
ΣListening	4	.80	.41	.62				
ΣReading	5	.80	.45	.64	1 .42	.47	.32	.25
PACT A	6	.82	.38	.62	2 .23	.32	.12	.06
Speaking MA	7	.70	.28	.54	3 .39	.51	.19	.18
				Intercept	206.58	194.46	14.95	26.27
				σ_{est}	10.82	11.79	7.20	8.34

*p < .05 (significance levels given only for β-weights)

**p < .01

and thus optimizes the linear prediction of the given criterion variable. Just below each column of the beta-weight matrix is the multiple correlation associated with it. In effect, these multiple correlations are the correlations between the raw criterion variables and the values of those variables as predicted by the multiple regression equation. The greater these correlations, the better the prediction. (Multiple correlations always have a positive sign.)

The significance level of each beta-weight is given by attaching to it one asterisk (for significance at the 5% level) or two asterisks (for significance at the 1% level). When a beta-weight is significant, it may be concluded that the predictor variable in question makes a significant and unique contribution to the prediction of the criterion variable in question--unique in the sense that it makes a contribution that is over and above that made by any of the other predictor variables used in the equation. Sometimes a validity coefficient of a given predictor is quite significant, but its beta-weight is not significant because other variables with which it is correlated are carrying the load of the prediction.

Below the matrix of beta-weights and the multiple correlations is a matrix of b-weights and associated values of "intercepts" and standard errors of estimate (σ_{est}). The b-weights are the coefficients of the raw scores of the predictor variables in an equation of the form

$$\hat{Y} = b_1X_1 + b_2X_2 + \ldots + b_mX_m + a ,$$

and the "intercept" is the value of a in that equation. $\hat{Y}$ is, of course, the predicted value of the criterion in raw score form. σ_{est} is the standard error of estimate, that is, the standard deviation of the errors of prediction that would be made by using this equation. The b-weights are partly a function of the standard deviations of the raw scores of the predictors and cannot be used for any direct interpretation; they are, however, useful in computations involving the raw scores, as we shall see.

We may now turn to the actual results shown in Table 13. First it may be noted that the overall predictions of each of the four criterion variables are quite accurate, as represented by multiple correlations that range from .71 to .85. All three predictor variables make significant contributions (as shown by the beta-weights) to the prediction of the criteria, with the possible exception of ΣMLAT as a predictor of the score on the Speaking Test. The Placement Test score is clearly the best predictor; that is, the initial level of proficiency shown was the best predictor of the final level of proficiency at the end of the 12-week training. We would probably not expect a 12-week training course to do a great deal in altering the relative initial proficiency of a group of people who had probably had, in many cases, years of training and experience with the Spanish language.

The fact that ΣMLAT makes a significant contribution, however, demonstrates that language aptitude can still be a factor in the rate of progress in second language acquisition despite the fact that the individual may start with a relatively high level of proficiency.

The relatively low beta-weights for Section Placement score may reflect the fact that most of the Group A individuals were in the high-numbered sections, but in view of the fact that the σ for SPS in Group A was actually higher (8.62) than it was in Group B (6.84), it probably means that most of the predictive variance was carried by the Spanish Placement Test score, with which it was highly correlated (r = .67).

Both of the listening test scores (variables 4 and 6) in the table and the ΣReading score are all about equally predictable; the lower multiple correlation for the Speaking test is probably due to the known lower reliability of these scores.

Prediction of End-of-Training Proficiency: Group B (Did Not Take Placement Test)

There were 118 cases comparable to the 218 cases in Group A except for the fact that these students did not take the Placement Test, and thus this score could not be used as a predictor variable. Data concerning the prediction of end-of-training proficiency for this group (Group B) are shown in Table 14. Here, the multiple correlations are not quite as high as they are in Group A, but since the standard errors of estimate are roughly comparable across the two groups, one may conclude that prediction is comparably effective in them. In Group B, the EMLAT score (the aptitude measure) is clearly the best predictor, and it has larger b-weights in the prediction equation than it had for Group A. Evidently language aptitude is more critical for those who have never had Spanish training than it is for those who already possess some knowledge of Spanish. As in Group A, all end-of-training scores are about equally predictable, with the exception of the Speaking test score.

Combination of Groups A and B into a Single Regression System

For the purpose of developing a single prediction equation for all trainees regardless of whether or not they took the Spanish Placement Test, it is possible, by making certain assumptions, to combine the data from the two groups. The assumptions that are necessary to make are (1) that the regression system found for Group A (who took the Spanish Placement Test) can be applied to the typical person in Group B (who did not take the Spanish Placement Test) in order to find the Spanish Placement Test score that such a person would have obtained if he had taken it, and (2) that a common regression system is appropriate for the combined groups using a constant value of the Spanish Placement Test score for every member of Group B. By using the raw score regression data for Group A as given in Table 13, it can be determined that a person in Group B who had the mean EMLAT score and the mean Section Placement Score for that group (65.89 and 41.83, respectively) would, if considered as a member of Group A, have to have made a Spanish placement score of 21.45 if he were to be predicted to make the mean PACT From A score for Group B (37.81). We then assume that the average person in Group B would have made a score of 21.45 on the Spanish Placement Test if he had taken it. This is, of course, a rather low score, although it is not zero. Assigning that score to every person in Group B and combining the data from Groups A and B, we compute the regression system for the combined group of 336 persons. This is shown in Table 15.

The main advantage of the regression system in Table 15 is that this single system is simpler to use than two separate systems for Groups A and B respectively. It remains true that the generality of this regression system is limited by the fact that it uses a particular Spanish placement test employed at the University of New Mexico Peace Corps training course, and also the system of Section Placement numbers that were derived from the particular set of trainees that were studied.

Graphical Representations of Predictions for Groups A and B

The data in Tables 13 and 14 can be used to construct a graph (Figure 4) showing the probable end-of-training Spanish proficiency for individuals with selected combinations of predictor variables.

In the construction of this graph, some assumptions had to be made about the equating of the Spanish Placement Test, given at the outset of training, and the PACT Form A, given at the end of training. (If an alternate equivalent form of the PACT had been given at the outset of training this problem would not have arisen.) It was reasoned that one could be reasonably sure about the equivalence of scores representing the performance of individuals with virtually no competence in Spanish. Let us assume that a score of 100 on the Spanish Placement Test represents the performance of a highly competent speaker of Spanish. From our prediction data, a person who gets such a score, who has average language aptitude for his group (mean of EMLAT for Group A = 69.03), and who is placed in a section commensurate with this performance (as predicted from the correlation of .67 between Spanish Placement score and SPS) is expected to obtain a score of 67.39 on PACT Form A. This is not, to be sure, a perfect score (the

Table 14

Prediction of End-of-Training Proficiency Scores from Two Predictor Variables

N = 118 Students (Group B) who did not take a Placement Test at the outset of training

		Predictors			Criteria		
		2	3	4	5	6	7
Mean		65.89	41.83	247.60	242.75	37.81	40.47
S.D.		18.74	6.84	15.57	19.48	9.11	11.28
		Intercorrelations			Beta-Weights		
ΣMLAT	2	1.00	.21	2 .53**	.53**	.50**	.33**
SPS	3	.21	1.00	3 .32**	.31**	.36**	.26**
				Mult. R: .68	.66	.68	.46
		Validity Coefficients			β-Weights		
ΣListening	4	.60	.43				
ΣReading	5	.59	.41				
PACT A	6	.58	.41	2 .44	.55	.24	.20
SpeakingMA	7	.39	.33	3 .72	.87	.48	.43
				Intercept 188.07	170.47	1.59	9.22
				σ_{est} 11.44	14.57	6.70	9.96

**p < .01 (significance levels given only of β-weights)

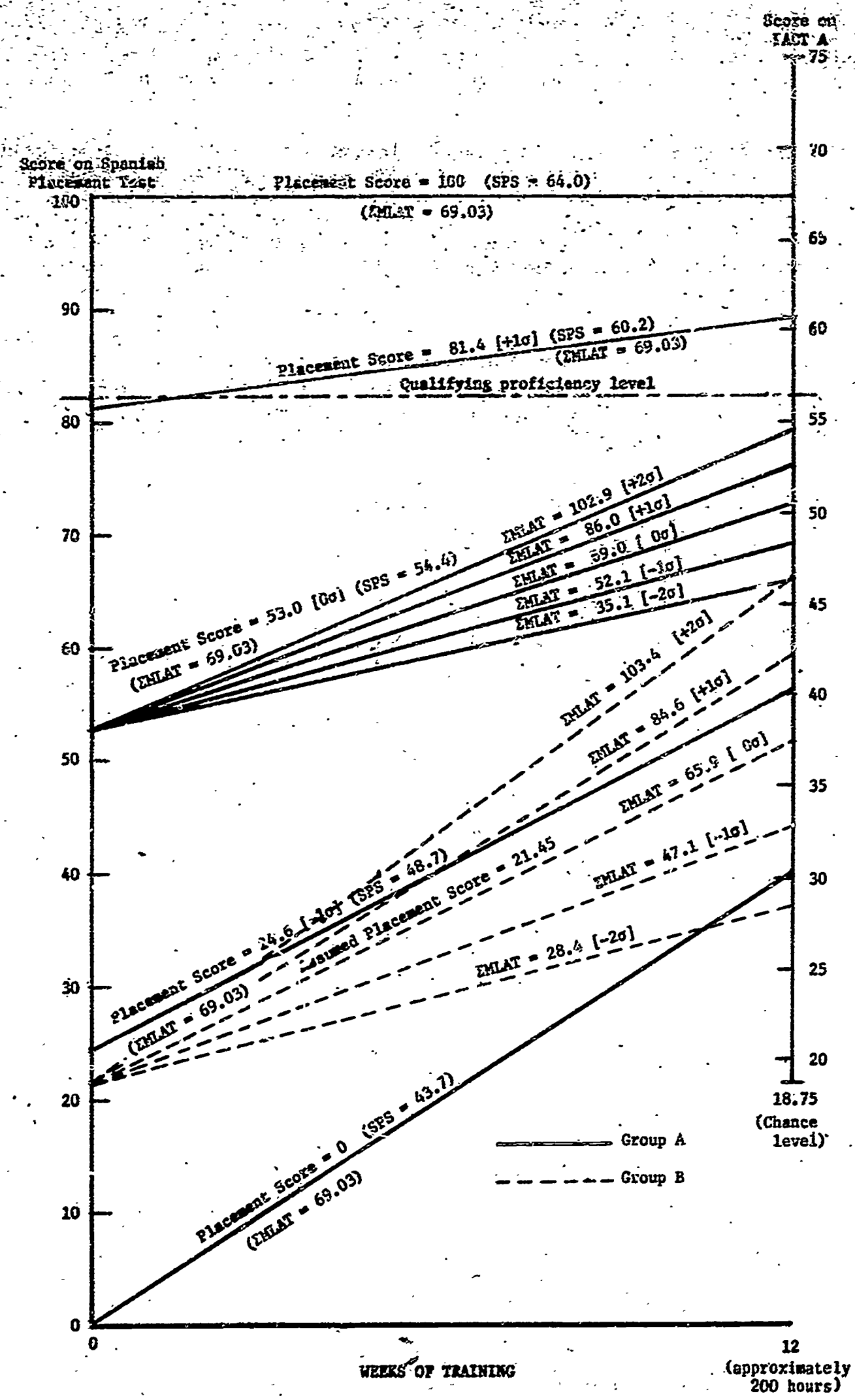


Figure 4. Graphical depiction of expected end-of-training Spanish Language Proficiency (as measured by the PACT, Form A) for individuals with selected combinations of predictor variables

maximum score is 75), but in view of the unreliability of the test and the errors of prediction, it can be regarded tentatively as equivalent to the Spanish Placement Test score of 100.

A chance score on PACT A is 75/4 = 18.75. Let us assume that this is equivalent to the score on the Spanish Placement Test that we found the average individual in Group B would have made if he had taken the test, namely, 21.45. (This assumes that Group B was composed of individuals who knew no Spanish and would therefore have made a chance score on PACT A if they had taken it at the outset of training. Actually, there is reason to believe that at least a few individuals in Group B had some marginal acquaintance with Spanish even though they did not take the Spanish Placement Test.)

In depicting the progress expected for individuals in Group A, we assumed various levels of scores on the Spanish placement test. For each level, the SPS score was assigned in accordance with the regression of SPS on Spanish Placement Test. The predicted PACT Form A score was then computed using the regression system of Table 13, with various levels of EMLAT score.

As the "qualifying level" in Figure 4, we used a score of 56.35 on PACT Form A, which as will be explained in Chapter 7, seems to represent a level of language proficiency that is minimally qualifying to enable the individual to feel that he has no problem with language fluency on arrival in the field.

What, actually, does Figure 4 show? First, it shows that an individual who claims some prior knowledge of Spanish must have a fairly high score on the Spanish Placement Test if he is to attain a qualifying level of proficiency by the end of the training course. His chances of attaining this level are enhanced considerably if he has a high degree of language aptitude as measured by EMLAT.

For individuals with no prior knowledge of Spanish (i.e. individuals in Group B of our study), language aptitude is a very significant determiner of eventual proficiency attained. Such an individual who has high language aptitude (as represented by, say, a score that is 2σ above the mean for Group B) can attain proficiency that is well on the way to a qualifying level, while an individual with low language aptitude (e.g., with a score that is 2σ below the mean for Group B) shows an end-of-course level of proficiency that is not very far above a chance level on the PACT proficiency test.

It must be pointed out, however, that according to our predictions it is extremely unlikely that any individual who claims no prior knowledge of Spanish before the beginning of training will make anything like a qualifying level of proficiency at the end of the 12-week training course. This is to be expected. Learning a foreign language necessarily takes a great amount of intensive effort, and 12 weeks is far short of what it would take the average individual to attain a level of minimal fluency. If we assume that learning progresses linearly, we can project the line drawn in Figure 4 for the individual of average language aptitude in Group B and determine that the specified qualifying level would not be met until after the 24th week of training. (This should be regarded as only an order-of-magnitude figure since it is arrived at by a series of rather shaky assumptions.)

It will be noticed that individuals in Group A who obtained low Spanish Placement scores at the outset of training nevertheless make somewhat faster progress, other things being equal, than individuals with no prior training. It is possible that this may be explained by a "refresher" effect; that is, individuals who had studied Spanish at some time in the past but had forgotten it would be expected to make fast progress in recovering their competence.

Other Predictor and Criterion Variables

The preceding section has dealt with simply the most clear-cut findings that were obtained using a small number of highly valid predictors and the criterion variables that seemed best to represent the goals of Spanish language training. As noted in

Table 15

Prediction of End-of-Training Proficiency Scores from Three Predictor Variables, With Assumed Value of Spanish Placement Score for Group B Equal to 21.4467

N = 336, Comprising Groups A and B combined

		Predictors			Criteria			
		1	2	3	4	5	6	7
Mean		41.92	67.93	50.01	259.86	260.00	46.17	48.67
S.D.		27.39	17.67	10.04	20.28	24.83	13.37	13.17
		Intercorrelations			Beta-Weights			
Placement Test	1	1.00	.24	.72	.51**	.47**	.57**	.46**
ΣMLAT	2	.24	1.00	.19	.29**	.30**	.24**	.17**
SPS	3	.72	.19	1.00	.26**	.31**	.24**	.26**
				Mult. R:	.83	.85	.85	.72
		Validity Coefficients			b-Weights			
ΣListening	4	.76	.46	.68	.38	.43	.28	.22
ΣReading	5	.76	.47	.70	.33	.42	.18	.12
PACT A	6	.79	.42	.69	.52	.76	.32	.34
Speaking MA	7	.68	.32	.61				
				Intercept	195.73	175.58	6.24	14.25
				σ_{est}	11.29	13.20	7.12	9.12

** $p < .01$ (significance levels given only for β-weights)

Chapter 5, however, a number of other predictor and criterion variables were available, although not consistently on all trainees studied.

Tables 16 and 17 show regression analyses, respectively, for 113 students in Group A (who took the Placement Test) and for 51 students in Group B (who did not take the Placement Test), with several added predictor and criterion variables.

With respect to the major predictor variables (Spanish Placement Test, EMLAT and Section Placement Score), these tables confirm the previously presented results. Indeed, the added predictor variables seem to make very little contribution. If Tables 13 and 16 (for Group A) and Tables 14 and 17 (for Group B) are compared with respect to the multiple correlations for predicting the four achievement test criterion variables, we see that most of the differences, if any, are to be accounted for by sampling variations in the validity coefficients for the major predictors, rather than by contributions from the added predictors. Only in Group A do we find any statistically significant contributions from additional predictors--mainly from the Interest factor score, and secondarily, in the case of just one of the criterion variables, from the Audiolingual Preference score. Perhaps it is not without significance that this last result is for the PACT Form A--an audiolingual test par excellence. With regard to the predictive contribtuion of the Interest score, it should be pointed out that this score was derived from a retrospective report of the individual's interest in foreign language before entering the Peace Corps training program. No attempt was made to measure motivation during the PC language training program; it may be assumed that nearly all trainees were highly motivated in the sense that they wished to pass the language training aspects of the program.

The failure of the additional predictors to make statistically significant contributions in the Group B data may be as much due to the small size of the sample (N = 51) as to any inherent property of the predictors. Interest, Compulsivity, and Audiolingual Preference each had appreciable beta-weights with one or more of the test criterion variables. But Home Exposure and Age had no beta-weights that approached statistical significance anywhere. The age range for this sample was, of course, highly restricted.

Tables 16 and 17 also show regression analyses for a series of criterion variables that were collected from the language training staff both at the end of training and at an earlier, intermediate stage. These are various types of assessments of language competence made by staff instructional personnel. The multiple correlations for predicting these assessments are all in the statistically significant range: .30 to .47 for Group A and .34 to .66 for Group B. In the case of Group A, the variables most often making significant contributions (as shown by beta-weights) are Section Placement Score, Interest, and Age. Instructors tended to assign the higher ratings to those in the most advanced sections, those who (we may presume) exhibited greater interest in foreign language learning, and those who were relatively older and more mature. In Group B, however, the high ratings went to individuals with high EMLAT scores and with high scores on the Audiolingual Preference factor.

The intermediate and final language assessments showed only moderate intercorrelations with the final achievement test criteria. It is probably not worthwhile to exhibit here the complete tables of intercorrelations. Instead, we include here Table 18, which shows the average intercorrelations within and between these groups of variables, separately for Groups A and B.

Use of MLAT Subtest Scores in Prediction

For most of the members of Group A and B, subtest scores were available not only on the three parts of the MLAT that are regularly given by the Peace Corps in its selection program, but also on Parts I and II. Regression analyses were performed to see which parts of the test are most useful in prediction, with results shown in Tables 19 and 20.

Table 16

Prediction of End-of-Training Proficiency Scores from Eight Predictor Variables

N = 119 Students (Group A) who took a Placement Test at the Outset of Training

		Predictors								Criteria													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	Mean	52.6	70.3	55.0	297.5	211.3	291.4	95.3	22.7	3.4	2.7	3.6	3.7	3.2	3.4	3.4	2.8	3.7	3.7	3.3	3.4	267.5	270.4	51.1	53.0
	S.D.	27.6	17.5	8.3	135.2	92.6	123.1	148.1	2.9	.7	.6	.6	.6	.5	.5	.9	.7	.8	.7	.6	.6	17.4	21.5	12.1	10.9
		Intercorrelations								Beta Weights															
Placement Test	1	1.00	.26	.70	.53	-.24	.33	.33	-.20	.21	-.14	-.19	-.16	.08	.12	.11	.10	.27	.24	.04	.01	.59**	.59**	.54**	.48**
EHLAT	2	.26	1.00	.08	.25	-.23	-.10	-.09	-.09	-.09	-.05	.06	-.04	-.05	-.14	.17	.10	.23*	.19	.15	.24*	.10	.21**	.16**	-.01
SPS	3	.70	.08	1.00	.39	.21	.31	.28	-.03	.08	.36*	.24	.37**	.04	.18	.05	.05	.03	-.01	.18	.12	.14	.18*	.14	.09
Interest	4	.53	.25	.39	1.00	.14	.32	.21	-.22	.25*	.20	.40**	.15	.23*	.25*	.14	.18	.09	.13	-.06	-.02	.11	.13*	.13*	.17*
Compulsivity	5	-.24	-.23	-.21	-.14	1.00	.07	-.03	.20	-.04	.01	-.04	-.07	-.08	-.02	.01	-.10	-.03	.01	-.01	-.09	-.07	-.01	-.09	-.13
Audiolingual Preference	6	.33	-.10	.31	.32	.07	1.00	.33	-.09	-.05	-.14	-.02	-.04	-.07	-.15	.03	.02	-.04	.01	.08	.15	.04	-.08	.12*	-.02
Home Exposure	7	.33	-.09	.28	.21	-.03	.33	1.00	-.01	-.01	.15	-.20	-.10	.03	-.04	.19	.13	.02	-.03	.07	.11	-.03	-.03	.03	.08
Age	8	-.20	-.09	-.03	-.22	.20	-.09	-.01	1.00	.14	.10	.20*	.13	.13	.12	.06	.20*	.08	.19	-.01	.03	-.10	.02	.04	.10
										Mult. R:	.43	.41	.47	.37	.30	.40	.42	.42	.46	.41	.30	.37	.83	.86	.86	.70
		Validity Coefficients								b-Weights															
Intermediate Assessment																									
Present Speaking	9	.35	.04	.32	.34	-.10	.13	.14	.04																
Present Comprehension	10	.19	-.02	.33	.22	-.05	.04	.20	.09		9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Rate Acquisition Speaking	11	.11	.14	.21	.33	-.07	.05	-.13	.13	1	.01	-.00	-.00	-.00	.00	.00	.00	.00	.01	.01	.00	.00	.37	.46	.24	.19
Rate Acquisition Comprehension	12	.12	.01	.29	.15	-.10	.02	-.02	.11	2	-.00	-.00	.00	-.00	-.00	-.00	.01	.00	.01	.01	.04	.01	.10	.26	.11	-.01
Adequacy Overseas Speaking	13	.26	.05	.18	.24	-.11	.04	.10	.06	3	.01	.03	.02	.03	.00	.01	.00	.00	.00	-.00	.01	.01	.30	.47	.21	.13
Adequacy Overseas Comprehension	14	.26	-.02	.29	.27	-.07	.02	.06	.06	4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	-.00	-.00	.01	.02	.01	.01
Final Assessment																									
Present Speaking	15	.32	.21	.25	.30	-.07	.17	.26	-.01	5	-.00	.00	-.00	-.00	-.00	-.00	.00	-.00	-.00	.00	-.00	-.00	-.01	-.00	-.01	-.01
Present Comprehension	16	.29	.17	.25	.28	-.15	.13	.21	.11	6	-.00	-.00	-.00	-.00	-.00	-.00	.00	.00	-.00	.00	.00	.00	.01	-.01	.01	-.00
Rate Acquisition Speaking	17	.38	.33	.27	.28	-.15	.06	.10	-.02	7	.00	.00	-.00	-.00	.00	-.00	.00	.00	.00	-.00	.00	.00	-.00	-.01	.00	.01
Rate Acquisition Comprehension	18	.30	.26	.21	.25	-.07	.08	.05	.10	8	.03	.02	.04	.03	.02	.02	.02	.05	.02	.05	-.00	.01	-.04	.15	.18	.38
Adequacy Overseas Speaking	19	.23	.15	.25	.11	-.09	.14	.13	-.03																
Adequacy Overseas Comprehension	20	.23	.23	.23	.16	-.14	.18	.17	.02	Intercept															
ILR Listening	21	.80	.31	.63	.53	-.28	.30	.24	-.18	2.01	.94	1.22	1.76	2.51	2.37	1.57	.76	1.92	1.58	2.24	2.04	222.00	197.06	10.75	27.49
ILR Reading	22	.81	.43	.63	.54	-.26	.18	.20	-.15	σ Estimate															
FACT A	23	.82	.35	.65	.57	-.29	.37	.30	-.14	.63	.54	.57	.60	.48	.45	.77	.66	.68	.67	.53	.51	9.87	11.17	6.04	7.68
Speaking H	24	.67	.18	.54	.47	-.27	.24	.30	-.06																

* $p < .05$ (significance levels given for only Beta weights)
** $p < .01$

Table 17

Prediction of End-of-Training Proficiency Scores from Eight Predictor Variables

N= 31 Students (Group B) who did not take a Placement Test at the Outset of Training

		Predictors							Criteria											
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	Mean	71.8	41.7	243.7	223.1	277.8	68.4	22.0	3.3	2.6	3.4	3.6	3.1	3.3	3.4	2.7	3.4	3.6	3.1	3.3
	S.D.	16.3	7.1	132.4	94.9	109.0	130.3	6.2	.7	.6	.7	.6	.3	.5	.6	.6	.7	.7	.4	.5
		Intercorrelations							Beta Weights											
DHLAT	2	1.00	.43	.31	.25	-.09	.04	-.05	.65**	.34*	.57**	.42**	.32*	.32*	.55**	.39*	.55**	.47**	.27	.27
SPS	3	.43	1.00	.10	-.06	-.01	.05	-.01	-.00	.21	.10	.13	.06	.07	-.27	.13	.03	-.08	-.13	-.32
Interest	4	.31	.10	1.00	.26	-.07	.11	-.05	-.[illegible]	-.09	-.13	-.11	-.07	.22	.00	.07	.01	-.02	-.13	-.07
Compulsivity	5	.25	-.06	.26	1.00	-.05	-.31	.10	.11	-.08	.04	-.02	-.24*	-.30	-.06	.08	-.10	-.10	-.06	-.13
Audiolinguul Preference	6	-.09	-.01	-.07	-.05	1.00	-.21	-.25	.21	.29*	.34**	.41**	.16*	.33	-.04	.08	-.03	-.05	.07	-.01
Home Exposure	7	.04	.05	.11	-.31	-.21	1.00	.07	.21	.24	.04	.21	.18	.19	-.13	.06	-.05	.07	-.07	.04
Age	8	-.05	-.01	-.05	.10	-.25	.07	1.00	-.02	.07	.04	.08	-.09	.01	.04	.08	.07	.06	.26	.20
									Mult. R:	.64	.56	.66	.60	.49	.61	.50	.37	.55	.45	.34	.37
		Validity Coefficients							b-Weights											
Intermediate Assessment																				
Present Speaking	9	.55	.17	.00	.14	.13	.12	-.07												
Present Comprehension	10	.36	.35	.02	-.11	.21	.22	-.01	2 .03	.01	.02	.02	.01	.01	.02	.01	.02	.02	.01	.01
Rate Acquisition Speaking	11	.55	.33	.04	.12	.28	-.03	-.06	3 -.01	.02	.01	.01	.00	.00	-.02	-.01	.00	-.01	-.01	-.02
Rate Acquisition Comprehension	12	.40	.30	.01	-.03	.32	.14	-.03	4 -.00	-.00	-.00	-.00	-.00	.00	.00	-.00	.00	-.00	-.00	-.00
Adequacy Overseas Speaking	13	.27	.22	-.01	-.25	.14	.22	-.16	5 .00	-.00	.00	-.00	-.00	-.00	-.00	.00	-.00	-.00	-.00	-.00
Adequacy Overseas Comprehension	14	.32	.25	.24	-.24	.26	.25	-.12	6 .00	.00	.00	.00	.00	.00	-.00	.00	-.00	-.00	.00	-.00
Final Assessment																				
Present Speaking	15	.41	-.04	.12	.14	-.06	-.11	.00	7 .00	.00	.00	.00	.00	.00	-.00	.00	-.00	.00	-.00	.00
Present Comprehension	16	.32	.02	.05	.15	.01	.02	.06	8 -.00	.01	.00	.01	-.01	.00	.00	.01	.01	.01	.02	.02
Rate Acquisition Speaking	17	.53	.26	.15	.06	-.09	.02	.04												
Rate Acquisition Comprehension	18	.41	.13	.11	.00	-.12	.13	.04	Intercept											
									1.32	.68	.78	1.19	2.69	2.16	2.98	1.84	1.77	2.61	2.64	3.48
Adequacy Overseas Speaking	19	.14	-.03	-.10	.03	.01	-.06	.23												
Adequacy Overseas Comprehension	20	.08	-.20	-.05	-.06	-.07	.09	.19	σ Estimate											
									.56	.46	.49	.50	.30	.35	.55	.51	.55	.59	.41	.46
Σ Listening	21	.63	.48	.03	.17	.06	.08	-.07												
Σ Reading	22	.65	.52	.11	-.00	-.01	.06	-.05												
PACT A	23	.68	.48	.14	.01	.06	.19	-.01												
Speaking M	24	.33	.40	.04	-.03	.15	.03	-.19												

		Criteria				
		21	22	23	24	
	Mean	251.1	248.7	39.8	43.2	
	S.D.	14.7	15.4	8.3	8.3	
		Beta Weights				
DHLAT	2	.54**	.58**	.64**	.23	
SPS	3	.27*	.27*	.21	.31*	
Interest	4	.21	.07	-.07	-.05	
Compulsivity	5	.17	-.11	-.07	-.02	
Audiolinguul Preference	6	.12	.04	.16	.15	
Home Exposure	7	.15	.09	.17	.05	
Age	8	-.05	.00	.05	-.14	
		.72	.71	.75	.50	Mult. R:
		b-Weights				
	2	.49	.55	.32	.12	
	3	.55	.59	.24	.36	
	4	-.02	-.01	-.00	-.00	
	5	.03	-.02	-.01	-.00	
	6	.02	.01	.01	.01	
	7	.02	.00	.01	.00	
	8	-.12	.01	.07	-.19	
		189.78	188.89	3.13	21.88	Intercept
		10.18	10.77	5.48	7.21	σ Estimate

* p < .05 (significance levels given for Beta weights only)
** p < .01

Table 18

Average Intercorrelations Within and Between Groups of Criterion Variables

N = 151 (Group A, who took Placement Test)
= 88 (Group B, who did not take Placement Test)

(Numbers in parentheses indicate the numbers of correlation coefficients averaged in each case)

	Variable Set	Group	Intermediate Assessments	Final Assessments	Achievement Tests
6	Intermediate Assessment Ratings	A	.658 (15)		
		B	.732 (15)		
6	Final Assessment Ratings	A	.386 (36)	.693 (15)	
		B	.388 (36)	.669 (15)	
4	Achievement Test Variables	A	.402 (24)	.436 (24)	.788 (6)
		B	.583 (24)	.480 (24)	.643 (6)

Table 19

Prediction of End-of-Training Proficiency Scores from MLAT Subtests

N = 188 Students (from Group A) who took a Spanish Placement Test at the Outset of Training

		Predictors					Criteria			
		1	2	3	4	5	6	7	8	9
	Mean	32.59	24.66	23.35	27.51	18.54	266.17	269.34	50.62	53.14
	S.D.	8.54	3.85	9.56	7.36	5.42	19.72	22.00	13.24	11.93
		Intercorrelations					Beta-Weights			
MLAT 1	1	1.00	.18	.32	.39	.30	-.01	-.03	-.03	-.08
MLAT 2	2	.18	1.00	.43	.37	.31	.26**	.29**	.24**	.27**
MLAT 3	3	.32	.43	1.00	.45	.24	.11	.12	.18*	.08
MLAT 4	4	.39	.37	.45	1.00	.41	.13	.18*	.04	.07
MLAT 5	5	.30	.31	.24	.41	1.00	.16*	.15*	.44	.35
						Mult. R :	.47	.54	.44	.35
		Validity Coefficients					b-Weights			
ΣListening	6	.17	.40	.31	.33	.31	1 -.03	-.07	-.04	-.11
ΣReading	7	.18	.45	.35	.40	.34	2 1.31	1.66	.82	.83
PACT A	8	.13	.37	.33	.26	.36	3 .23	.27	.25	.10
Speaking M	9	.03	.33	.22	.19	.15	4 .58	.63	.34	.10
							Intercept: 209.40	197.43	17.78	28.89

*p < .05; **p < .01 (significance levels given only for β Weights)

Table 20

Prediction of End-of-Training Proficiency Scores from MLAT Subtests

N = 96 Students (from Group B) who did not take a Spanish Placement Test at the outset of training

		Predictors					Criteria			
		1	2	3	4	5	6	7	8	9
	Mean	32.70	24.41	22.95	26.44	17.28	248.56	243.74	38.28	41.34
	S.D.	8.16	4.11	9.90	7.89	5.85	15.35	20.23	9.21	10.89
		Intercorrelations					Beta-Weights			
MLAT 1	1	1.00	.42	.18	.29	.43	.04	.10	-.08	.00
MLAT 2	2	.42	1.00	.43	.38	.36	.32**	.26**	.37**	.55**
MLAT 3	3	.18	.43	1.00	.44	.39	.35**	.27**	.32**	.19*
MLAT 4	4	.29	.38	.44	1.00	.28	.17*	.29**	.19*	.06
MLAT 5	5	.43	.36	.39	.28	1.00	.09	.17*	.13	.05
						Mult R:	.73	.76	.73	.71
		Validity Coefficients					b-Weights			
ΣListening	6	.33	.59	.60	.48	.41	1 .08	.24	-.09	.01
ΣReading	7	.40	.57	.59	.58	.48	2 1.20	1.19	.83	1.47
PACT A	8	.25	.59	.60	.49	.41	3 .54	.55	.30	.21
Speaking M	9	.31	.68	.48	.36	.34	4 .34	.75	.23	.08
							5 .25	.58	.20	.09
						Intercept:	191.45	164.55	4.62	-3.04

*p < .05; **p < .01 (significance levels given only for β-weights)

First consider the multiple correlations for the five subtests as compared with the zero-order validity coefficients for the ΣMLAT Score (the sum of the raw scores on Parts 3, 4 and 5 only), found in Tables 13 and 14. For convenience, these data are grouped here:

	Group A		Group B	
Criterion Variable	ΣMLAT (N=218)	Mult. R (N=188)	ΣMLAT (N=118)	Mult. R (N=95)
ΣListening	.41	.47	.60	.73
ΣReading	.45	.54	.59	.76
PACT A	.38	.44	.58	.73
Speaking M	.28	.35	.39	.71

Even without tests of significance, it is evident that the multiple regression systems based on five subtests of the MLAT yield substantially better prediction than the simple sum of the raw scores on three parts of the MLAT, particularly in the case of Group B. (Actually, if we assume that the N's for the ΣMLAT validity coefficients are reduced to the same size as the N's for the Multiple R's, all of the multiple correlations above are significantly different from the zero-order correlations paired with them, with p's of <.01.) Inspection of the beta-weights in Tables 19 and 20 shows at once that this is primarily due to the presence of Part 2, Phonetic Script, in the multiple regression systems. Part 2 has clearly the greatest unique contribution to make to the prediction. This accords with many other findings concerning the superior validity of the Phonetic Script subtest (Carroll, 1962). It seems to measure a unique ability that is highly relevant to successful language learning. It is unfortunate that this part can be administered only by a tape recording, since its general use in Peace Corps selection would significantly enhance the prediction afforded by the MLAT.

Nevertheless, all the other parts of the MLAT, with the exception of Part 1, Number Learning, make a significant contribution to at least one of the criterion variables in at least one of the groups. There does not seem to be any particular pattern whereby one of the criterion variables is predicted better than the others; on the whole, it would seem that the MLAT subtests predict success in all three skills tested--listening, reading, and speaking.

ANALYSIS OF THE PORTUGUESE DATA

As stated in Chapter 4, our study of Portuguese language training had to be confined to what we could glean from the material collected from the Brazil VII contingent, containing originally 51 cases. But data were available for no more than 48 cases, and were complete (with respect to the predictor and criterion variables that we were using) for only 27 cases.

Predictor variables

ΣMLAT scores were used as a measure of language aptitude, but separate scores on the three parts of the test, which ordinarily are summed to obtain ΣMLAT, were not available. Only PCMLAT scores were available from Peace Corps records. ΣMLAT scores were therefore obtained by conversion from PCMLAT scores, using the equation specified on page 20. The mean and standard deviation of the PCMLAT distribution for 48 students of Portuguese were 57.5 and 6.9 respectively; the same statistics for the derived ΣMLAT scores were therefore 73.2 and 14.6. The Portuguese students had a slightly higher mean language aptitude than the Spanish studetns as a whole, with mean = 66.3 and σ = 17.4 ($t = 2.65$, $p < .01$).

No placement test scores were available for the Portuguese students, but as they had been divided into sections on the basis of instructors' estimates of prior knowledge of Portuguese, the section numbers were used as a predictor variable. The section numbers range from one to six, one being assigned to the most proficient section and six to the least proficient; thus, we would expect negative validity coefficients for this variable. For 48 students, the correlation between ΣMLAT and section number was -.43 ($p < .01$).

Factor scores on Interest in Foreign Languages, Compulsivity, Audiolingual Preference and Home Exposure were also available for some cases.

End-of-Training Achievement Measures

The end-of-training achievement measures consisted of two derived scores, ΣListening and ΣReading, from the project-produced Portuguese versions of the MLA Cooperative Listening and Reading Tests (the scores from the two levels being combined by the procedure described in Appendix E), the Speaking score from Form MA of the MLA Tests, and the score on the Portuguese version of the Pictorial Auditory Comprehension Test, Form A.

Results

Table 21 presents the complete regression analysis for 27 cases for whom predictor and criterion data were complete. Because of the relatively small number of cases, the correlations and other statistics must be appraised not only in terms of statistical significance but also in terms of absolute magnitude.

The pattern of results is rather similar to what was obtained for the Spanish students. Both ΣMLAT and Section Number make significant contributions to the prediction of end-of-training proficiency, particularly the measures of auditory comprehension. The Interest factor score, also, shows up as a significant predictor. The multiple correlations for the auditory comprehension tests are quite high, and significant at the 1% level even for the small sample studied here.

The available records of 48 students of Portuguese were examined for evidence of any knowledge of that language prior to enlistment in the Peace Corps. None of the students reported that their parents had any knowledge of the language, but twenty-one (43.8%) of them reported that they had taken one or more courses in Portuguese. Consequently the students were divided into two groups; Group X, students who had had no previous training in Portuguese; and Group Y, students who had studied Portuguese before enlisting in the Peace Corps.

The number of courses taken by the students in Group Y ranged from 1 to 4. The average number of courses was 2.3.

The significance of the difference between the means of Group X and Group Y on the predictor and achievement variables was tested. The results appear in Table 22. Among the predictor variables, the only significant difference between the two groups occurs in interest in foreign languages. Students in Group Y were more interested in foreign languages than those in Group X.

Data on predictor and end-of-training achievement variables were complete for only 11 cases in Group X and 16 cases in Group Y. Means and standard deviations for these cases are reported in Table 23; predictor-criterion correlations are given in Table 24. In general, the pattern of results is similar for the two groups and for the various criterion variables. ΣMLAT has appreciable validity coefficients (ranging from .38 to .65) for both groups and all three criteria. Section Placement correlates highly in all instances except for ΣReading in Group X. The Interest score correlates highly with the two measures of listening ability (PACT A and ΣListening), but not with ΣReading. The Audiolingual Preference score correlates highly only with the two listening scores for

Table 21

Prediction of End-of-Training Proficiency Scores from Six Predictor Variables

N = 27 Students of Portuguese

		Predictors						Criteria			
		1	2	3	4	5	6	7	8	9	10
	Mean	73.85	3.30	234.96	249.30	205.86	75.63	245.15	264.33	42.96	50.26
	S.D.	16.75	1.66	126.87	95.37	98.77	122.66	10.93	18.05	9.25	11.25
		Intercorrelations						Beta-Weights			
EMLAT	1	1.00	-.50	.10	.11	.20	.36	.15	.11	.07	-.07
Section No.	2	-.50	1.00	-.22	.09	-.09	-.15	-.51*	-.33	-.35	-.61*
Interest	3	.10	-.22	1.00	.20	.08	.05	.30	.19	.61**	.12
Compulsivity	4	.11	.09	.20	1.00	.10	.07	-.05	.21	-.27	-.10
Audiolingual Preference	5	.20	-.09	.08	.10	1.00	.12	.13	-.05	-.04	.28
Home Exposure	6	.36	-.15	.05	.07	.12	1.00	.16	.11	.07	-.04
							Mult. R: (shrunken)	.72**	.31	.79**	.56**
		Validity Coefficients						b-weights			
ΣListening	7	.51**	-.69**	.43**	.00	.24	.31	1 .10	.11	.07	-.07
ΣReading	8	.34	-.42*	.32	.23	.05	.22	2 -3.35	-3.60	-1.95	-4.13
PACT A	9	.36	-.59**	.65**	-.17	.04	.18	3 .03	.03	.05	.01
Speaking	10	.24	-.61**	.25	-.12	.30	.04	4 -.01	.04	-.03	-.01
								5 .02	-.01	.00	.03
								6 .01	.02	.01	.00
							Intercept:	240.51	252.52	40.47	63.62
							σ_{est}	6.61	14.98	5.02	8.21

*p <.05; **p <.01 (significance levels given only for β-Weights)

Table 22

Differences Between the Means of Group X (No Prior Training in Portuguese) and Y (Prior Training in Portuguese) on Predictor and End-of-Training Achievement Variables

	Group X			Group Y			
	N	$\bar{X}$	S.D.	N	$\bar{X}$	S.D.	t
Predictor Variables							
ZMLAT	27	75.3	14.4	21	70.7	13.9	-1.09
Section Number	27	3.8	1.7	21	2.9	1.5	-1.97
Interest	12	190.4	125.7	19	304.8	121.8	2.43*
Compulsivity	12	241.2	92.1	19	231.5	100.9	.26
Audiolingual Preference	13	214.0	83.3	19	216.2	110.9	-.06
Home Exposure	13	113.4	124.6	19	89.3	147.5	-.47
Achievement Variables							
PACT Form A	16	34.6	19.5	21	41.6	9.4	2.21*
ΣListening	16	233.8	19.7	21	248.6	11.6	2.79**
ΣReading	16	244.3	36.2	21	271.1	18.3	2.85**

*$p < .05$

**$p < .01$

Table 23

Means and Standard Deviations of Predictor and End-of-Training Achievement Variables for Groups X and Y (Portuguese Students)

	Group X (N = 11)		Group Y (N = 16)	
Variables	$\bar{X}$	S.D.	$\bar{X}$	S.D.
ΣMLAT	79.6	17.2	69.9	15.7
Section	3.8	1.8	2.9	1.5
Interest	162.9	94.7	284.5	124.5
Compulsivity	254.2	89.1	245.9	102.2
Audiolingual Preference	210.6	94.4	200.4	104.5
Home Exposure	86.6	115.2	68.1	130.7
PACT A	39.9	9.5	45.1	8.8
ΣListening	242.6	11.4	246.9	10.6
ΣReading	258.6	15.8	268.3	18.9

Table 24

Correlations Between Predictor and End-of-Training Achievement Variables For Groups X and Y[1] (Portuguese Students)

	PACT A		ΣListening		ΣReading	
	Group X	Group Y	Group X	Group Y	Group X	Group Y
ΣMLAT	.42	.52*	.55	.65**	.38	.49*
Section	-.55	-.56	-.72	-.64	-.10	-.56*
Interest	.60*	.63**	.40	.60	.18	.25
Compulsivity	.13	-.35	.02	.00	.04	.35
Audiolingual	.66*	-.33	.65*	.01	.02	.09
Home Exposure	.00	.34	.22	.41	.07	.34

[1]Group X, No Prior Portuguese, N = 11; Group Y, Prior Portuguese, N = 16

* $p < .05$

** $p < .01$

Group X; Home Exposure tends to correlate with the three criteria more highly for Group Y than for Group X.

Because of the small numbers of cases, it is not worthwhile to report multiple regression analyses of these data.

Discussion[1]

The progress of learners in any educational program is presumably amenable to description in terms of certain parameters. Some of the parameters will refer to, and measure, the actual rate of progress of learners as they proceed through the program. In conventional terminology, these parameters will be incorporated in the analysis in the form of criterion measures. Other parameters have to do with variables affecting learners' rates of progress; some of these variables concern the nature of the instruction, while others stem from characteristics of the learners themselves.

The management of any educational program requires information concerning these parameters that is as precise as possible, for dependent upon such information are decisions concerning the necessary length of the program, the selection or sectioning of the learners, the formulation of the program's content or curriculum, and similar matters.

In previous writings (Carroll, (1963a) I have proposed a "model of the school learning process" that purports to provide a framework for analyses of learning programs.

In brief, the model considers a learning program as a specifiable task that will require learners varying amounts of time to master depending upon certain characteristics of the learners themselves and also upon certain characteristics of the process by which the task is presented to them. The degree to which the task is mastered is in turn regarded as further dependent upon certain parameters arising both from the instructional process and from the confrontation of the learner with the learning presentation.

One of the basic parameters of the model is a function of the learner's aptitude, regarded as measurable in terms of the amount of time it will take him to master the task to a specified standard, under optimum conditions of instruction. Aptitude, thus, may be considered as fundamentally a matter of required learning time; the observation that individuals differ in learning rate supports the inference that they differ in aptitude.

Not every individual will take the amount of time he needs to learn. For another parameter in the model is what may be called perseverance, that is, the amount of time the individual is willing to spend in learning, which may be more or less than the time required. Still another parameter may be called "opportunity to learn," which is measured in terms of the amount of time allowed by the school for learning. Again, this time allowed may be either more or less than the amount of time the learner needs, or may perchance be equal to it.

Furthermore, the learner may set forth on his learning task with an advantage stemming from the fact that he has already had prior experience with it. To the degree that he has had such prior experience, the time he will need to master the task on the present occasion will tend to be shortened.

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[1]This section is adapted from an address given before Division C, American Educational Research Association, at its February, 1966 convention in Chicago.

Two other variables included in the model are regarded as interacting in such a way as to affect the amount of time the learner will require to master the task. These two variables are: (1) the learner's general intelligence or ability to profit from instruction generally, and (2) the quality of instruction. It is postulated that the lower the quality of instruction, the more any lack of general intelligence will tend to extend the amount of time required for task mastery beyond that amount of time that is required in any case as a function of the learner's specific aptitude for the task.

In the analysis of the degree to which a given learner masters a task, the measure of task mastery is some direct function of the ratio of the amount of time the learner takes or is able to spend on the task, to the amount he would need in the light of his aptitude, his prior learning, his intelligence, and the quality of the instruction.

There are many respects in which the Peace Corps training program studied in this report lends itself to analysis in terms of the learning model described above.

First, the learning task that was the objective of the training program may be defined as competence in spoken aspects of the Spanish or Portuguese languages sufficient to enable the Peace Corps Volunteer to function effectively in the field. This was measured, it will be remembered, in terms of a certain qualifying level on one of the end-of-training proficiency tests.

Aptitude was measured <u>initially</u> by means of the Modern Language Aptitude Test. But the study has also shown that scores on the Modern Language Aptitude Tests are rather highly correlated with achievement at the end of the training program. In Figure 4, one can see how much attainment can be expected of individuals with various degrees of language aptitude, and by projecting the progress lines in that figure one can estimate the amount of time an individual with a given degree of language aptitude might be expected to require in order to reach the specified qualifying level. Such a projection, of course, is based on the assumption that progress toward the criterion is linear. In the case of foreign language learning this is not as unreasonable as it may seem. Figure 1 (p. 13) implies that new vocabulary and grammar materials are presented at an approximately constant rate in the training program, and there is reason to believe that they are also acquired at an approximately constant rate.

The placement score given to the students of Spanish, and the section numbers assigned to both the Spanish and Portuguese students may both be regarded as measures reflecting the amount of prior training the students may have had in the respective languages. Figure 4 shows how individuals with various amounts of prior training, measured in this way, may be expected to progress toward the qualifying level of Spanish language proficiency. Obviously, those who start the program with an initially high level of proficiency will not take long to reach the qualifying level, if they have not already reached it.

Section Placement Score is not only a reflection of prior knowledge of Spanish; it is also a reflection of the fact that the learners in the different sections were presented with learning tasks of different degrees of advancement. In the various regression analyses, that fact makes a significant contribution to prediction over and above that afforded by the Placement Score. An individual with a given amount of prior training and with a given amount of language aptitude tended to make a higher achievement test score when he was assigned to a relatively more advanced section than when he was assigned to a relatively less advanced section. It is possible that this result means that it is desirable to assign students to the most advanced section for which they are ready, for under these conditions the learning task is richer and more challenging to them.

In terms of the learning model, "opportunity to learn" was relatively constant for the trainees, in the sense that there was roughly a fixed amount of time allowed for learning, uniform for all trainees. That is to say, the training period was fixed at 12 weeks, and the time in the training program was tightly scheduled--only a certain portion being allocated to language training.

In the learning model, what is ordinarily regarded as motivation is represented as "perseverance," the amount of time the learner is willing to spend on learning. The group of trainees studied here can be regarded as highly motivated. Nearly all were very eager, indeed anxious, to complete the training program satisfactorily and to get assigned to field service. Nevertheless, it is difficult to believe that all were motivated to exactly the same extent, or that all spent exactly the same amount of time on learning. At least three of the factor score variables derived from the questionnaire may be said to have some relevance to motivation: the Interest score, the Compulsivity score, and the Audiolingual Preference score. Regression analysis showed that the Interest score was nearly always a significant, positive predictor of end-of-training performance. It will be remembered that this was a measure of interest in foreign languages prior to entering the Peace Corps. It may be inferred that students with higher Interest scores worked harder and longer at the task of foreign language learning during the Peace Corps training program. In terms of the graphical depiction of progress in Figure 4 (p. 47), this means that the slope of any given progress line would be increased (by an amount that is given by the b-weight for the Interest factor score) for an individual who has relatively high interest in foreign language learning, or decreased for an individual with relatively low interest in foreign language learning. In other words, the individual with high interest is likely to progress toward the qualifying level of language proficiency faster than the average of his class-mates.

Similar remarks can be made for the Audiolingual Preference factor score when it appears significantly in the regression analyses. That is, a person who likes learning to speak and understand a language, as opposed to reading and writing it, is likely to make somewhat faster progress toward the qualifying level.

We had no way of measuring quality of instruction in this Peace Corps training program; we may assume that it was generally of a high level of quality. Nor did we have any measure of general intelligence that was available for any significant number of trainees, and therefore we could not make a study of the postulated way in which the quality of instruction interacts with general intelligence. The array of data available to us was therefore not sufficient to make any definitive test of the Carroll model of school learning, but the limited results obtained at least do not controvert that model.

Summary

This chapter has shown that the two basic variables that, when taken together, are highly predictive of the level of foreign language proficiency the trainee will attain at the end of the training program are: (1) language aptitude, and (2) amount of prior training, as revealed either by a placement test or by the sectioning of the students by the instructors. The only other variable that contributes with any consistency to the criterion variables is an Interest score, which reflects the amount of positive attitude toward foreign language learning possessed by the student prior to entry into the Peace Corps.

For individuals who enter the training program with some prior knowledge of the language they study, their chances of attaining a comfortable degree of fluency in that language by the end of the training are related chiefly to the amount of prior knowledge they possess and to their aptitude for foreign language learning. In general, only persons with a considerable amount of prior knowledge of the language can be expected to attain a level of language competence that will immediately qualify them for effective performance in a foreign country where use of the foreign language is critical.

It is extremely unlikely that a person with no prior knowledge of the foreign language can attain a qualifying level of language competence in a 12-week training period, although a person can progress a considerable way toward that goal, particularly if he has a high language aptitude and a positive degree of interest in foreign language learning. It is estimated that such an individual, with an average amount

of language aptitude, would need about 24 weeks of intensive training to attain a level of language competence that would immediately qualify him for performance in the field.

It should be noted that the above conclusions apply to the 12-week course studied at the University of New Mexico in which there were only about 200 hours of formal language instruction. The projection to 24 weeks thus may more accurately be described as a projection to 400 hours of instruction, without regard to the number of weeks, although undoubtedly some account must be taken of the calendar time elapsing.

Chapter 7

Parameters of Foreign Language Learning in the Field

Introduction

As we have seen, only a relatively small number of graduates from the 12-week training program--about 24%--could really be considered to have attained, by the end of that program, a level of foreign language competence that would enable them immediately to perform their work in the host country with a comfortable degree of language fluency. Nevertheless, when placed in the foreign language milieu, the Peace Corps Volunteers (PCVs) could be assumed to have much opportunity to improve their ability to understand, speak, read and write the foreign language. How rapidly this ability would approach a level of "comfortable fluency" would depend upon many factors, but basically it might be expected to be a matter of time. From some anecdotal accounts, it appears that there might be a certain period of what might be called "latent learning" during which the PCV would not show any great amount of progress, but that this period would be followed by a period of rapid acquisition of fluency.

This chapter is concerned with an analysis of data collected in the field that was designed to shown how rapidly PCVs, in fact, acquire facility in the language of the host country, and to indicate what factors determine the rate of progress in acquiring this facility.

Data collection

Staff members visited several countries in Central and South America during the summer of 1964 to administer tests and collect other data from PCVs who had been assigned to field duty in those countries. In most cases, the data collection was accomplished during periods in which the PCVs had been assembled at some central point within the country for rest and re-orientation. Table 25 shows the contingents tested, the original training dates and inputs, the dates of field testing, the approximate number of months in the field at the time of testing and the number of cases from whom any data at all were collected. By the time of the mid-term follow-up the sample available for study had shriveled from an original count of 472 (in Spanish) and 51 (in Portuguese) to a group of 176 (in Spanish) and 31 (in Portuguese). This loss in number can be accounted for by "deselection," resignations from training, and other forms of attrition, and by the inaccessibility of some of the Volunteers while in the field. In the case of the Spanish Group, normal attrition had accounted for 169 (35.8%) of the cases, with an additional 127 (26.9%) being in the field as PCVs but inaccessible for testing.

Unless otherwise noted, the following sections pertain to the data collected concerning the language learning experiences of the PCVs assigned to Spanish-speaking countries.

The language learning environment in the host country

To understand the factors that might accelerate or retard the PCVs progress toward fluency in the language of the host country, we ought first to become acquainted with the language learning environments in which the PCVs found themselves.

Our research obtained information about these environments through the responses of the PCVs to a questionnaire (the In-Field Questionnaire, Appendix F) that was passed out for completion during the mid-tour follow-up testing. These environments were quite varied, of course, but they fell into a number of types, depending partly on the dury assignments of the Volunteers. PCVs were asked to indicate the nature of these duty assignments; based on their responses, the following job-description categories were evolved:

Table 25

PCV Contingents Tested in the Field

Contingent	N at Outset of Training	Training Dates	Dates of Field Testing	Approx. No. of Mos. in Field at Time of Testing	Total N Tested*
Colombia VIII	117	6/10-9/15, 1963	6/6-8/64	8	23**
Peru V	39	6/10-9/15, 1963	8/18/64	10	10
Ecuador V	79	7/7-10/11, 1963	8/11/64	9	35
Colombia XI	58	7/7-10/11, 1963	[illegible]/8/64	7	38
Honduras II	55	8/8-11/10, 1963	8/5/64	8	28
Colombia XIII	67	9/9-12/21, 1963	6/6/64	5	42
Colombia XV	57	10/21/63-1/10/64	(not tested)		0
				Total for Spanish:	176
Brazil VII	51	11/11/63-2/3/64	7/9-10/64	4	31

*Number from whom any data at all were collected; data were not necessarily complete because of illness, stragglers, etc.

**An additional 13 people in an ETV part of this contingent were tested in Bogota but are not included in our study because they had been transferred from U. New Mexico before being given end-of-training proficiency tests.

1. Community development. Work generally in small towns, villages, or slum areas to help the inhabitants "help themselves" in developing the resources of their community. The nature of this work has been amply described in a book by Morris Stein (1966). A majority of community development workers in our samples were engaged in school construction.

2. Teaching. Usually this involved either basic literacy teaching, or teaching English.

3. Agriculture. This usually involved instruction in the establishment and care of home, school and community gardens; reforestation projects; and supervision of 4H or 4S Clubs.

4. Community health. Health education of the local inhabitants--whether children or adults--was the chief job of those engaged in community health. Many were concerned with the organization of women's clubs to further community education.

5. Cooperatives. Work here involved establishing and advising cooperative ventures in the following areas: credit unions, woodcutting, agriculture, fishing and sewing.

6. Educational television. This involved a variety of activities in a large program to promote the use of educational television, chiefly around major urban areas. Some PCVs worked in the television studios helping to produce educational television programs; others spent most of their time visiting local schools in order to show teachers how to use educational television; still others were technicians concerned with the sending and receiving of television programs and the maintenance of equipment.

7. Host country organizations. PCVs in this category worked with and/or under organizations such as the Institute of Columbia, Department of Cooperatives; National Social Welfare; Foster Family Care Program, Food for Peace Program, and Rehabilitation Institute.

Inasmuch as the questionnaire were filled out after about five to ten months on the job and the respondents were asked to indicate any change in their duties since their original assignments, it was possible to identify "primary" and "secondary" jobs for the PCVs. The job that the respondent listed first in his description of his duties has been called his "primary" job; that listed second has been called his "secondary" job. Table 26 gives the numbers and percentages of students of Spanish whose job assignments fall into the above-mentioned categories.

A series of five questions on the In-Field Questionnaire was designed to reveal whether the Volunteer's duty station was of an urban or a rural character, the degree of his isolation from Americans, the number of his co-workers who were host nationals, the extent of his job-required contact with native speakers, and the extent of his job-required language skills. Tabulations of the responses to these questions yield the following descriptions of the field assignments of the PCVs:

Slightly over one-third were assigned to duty stations in small towns where they worked alone or with one other American. Few of these had host country national co-workers and they almost never came into contact with well-educated native speakers who preferred to speak English. "At least once a day" they met with well-educated native speakers who spoke no English or who preferred to speak Spanish; however, the majority spent most of every day with native speakers of moderate or little education who had no useful knowledge of English. Many of them spent most of every day with children under twelve. They were required to speak and understand Spanish "very much", to read "some" and to write "very little" or (occasionally) "some" Spanish.

Another third of the sample were assigned to duty in rural areas. As compared with those who worked in towns, contacts with well-educated natives were generally rarer, and those with natives with little education more abundant. Such job requirements put more

Table 26

Primary and Secondary Jobs Listed by PCVs in the Mid-Tour Questionnaire

Job Description	Primary		Secondary	
	N	%	N	%
Community Development	43	24.7	20	11.5
Teaching	20	11.5	27	15.5
Agriculture	6	3.4	14	8.0
Community Health	53	30.5	25	14.4
Cooperatives	3	1.7	4	2.3
Educational Television	43	24.7	7	4.0
Host Country Organizations	4	2.3	1	0.6
Other	2	1.1	4	2.3
None	—	—	72	41.4
	174	100.0	174	100.0

emphasis on speaking and comprehending and less on reading and writing Spanish.

The remaining third of the sample were assigned to duty in urban areas or at least near enough to urban areas to have fairly frequent contact with well-educated natives, and the job-required language skills were more evenly spread between oral and written forms of the language. The PCV might have as many as ten American co-workers, and he might occasionally have contact with native speakers who could speak English. There were a few jobs, e.g. in writing educational television programs, or in teaching literacy, where the emphasis on reading and writing was considerable.

On the whole, the language learning environment can be characterized as one favoring the development of speaking and auditory comprehension skills. Furthermore, most PCVs in these Latin American countries definitely depended upon their competence in Spanish to work effectively, since only a few reported that their jobs allowed them to "get along in English". On the other hand, one gets the impression that the actual level of linguistic competence required in many of the jobs was fairly low, since communication had to do with everyday activities and involved contact with natives who on the whole had little education. It was relatively rare that the PCV was on his mettle to use only grammatically "correct" Spanish; in fact, as Stein writes (1966, p. 198):

> "In rural Colombia perfect Spanish was not absolutely necessary. When the volunteers made mistakes or did not know certain words, it gave the villagers an opportunity to be helpful by correcting them--a circumstance that also allowed the villagers to feel, at least momentarily, they were in higher status positions."

Stein continues, however:

> "We can, however, imagine other situations--e.g., those involving frequent contact with high government officials--where a knowledge of correct grammar would be most critical. . . ."

One also gets the impression from the questionnaire responses that the PCVs had little time to study or otherwise perfect their Spanish through conscious effort. Very few reported doing any such study, yet many indicated that they would like to have done it. Some recommended that further training in Spanish should be organized for PCVs while in the host country.

Language experiences during the first month in the host country

One of the items in Part II of the In-Field Questionnaire asked each PCV to indicate the extent to which his job performance during the first month in the field was affected by any linguistic difficulties he experienced. The responses made by 167 PCVs responding to the item can be divided into three general categories:

- 14 (8%) reported either that they were able to get by with English, or that other PCVs did the communicating with host country natives; thus, these PCVs did not attempt to use Spanish.
- 41 (25%) reported that their competence was either "equal to the demand" (16%) or "superior to the demand" (9%).
- 112 (67%) reported that their competence at that time was such that it either had a "small" adverse effect (80, or 48%) or a "considerable" adverse effect (32, or 19%) on their job performance.

The PCVs' responses to this item were used as a basis for determining what level of score on ΣListening (given at the end of training) could be regarded as "qualifying" for field performance that would be relatively free of any adverse effects due to lack of language competence. Table 27 shows frequency distributions of scores on ΣListening for groups of PCVs depending on how they answered this item. It can be seen that a score of 275 on ΣListening rather sharply divides those who reported that their language competence was equal or superior to the demand from those who reported that their language competence had either a small or a considerable adverse effect on their work, and those who reported, in effect, that they did not use the Spanish language in their work. In a number of the subsequent tabulations in this research report, therefore, we have divided the PCVs into two groups on the basis of whether they exceeded this quali-

Table 27

ΣListening Score at End of Training vs. Reported Effect of Language Problems on Job Performance During First Month

ΣListening Score	No Adverse Effect				Adverse Effect		Total
	Get by with English	Others com.uni-cate	Competence equal to demand	Competence superior to demand	Small	Consi-derable	
301-305			1	1	2		4
296-300			3	2	1		6
291-295			4	3	1		8
286-290			2	5	2		9
281-285			2	1	3		6
276-280			7	3	5	1	16
271-275	1	1	2		9		13
266-270		1	2		10	1	14
261-265		1	1		7	4	13
256-260	2				11	8	21
251-255			1		9	2	12
246-250		2			4	2	8
241-245	2		1		6	7	16
236-240					3		3
231-235	1				4	2	7
226-230	1					1	2
221-225	1				2	3	6
216-220	1				1		2
211-215							
206-210							
201-205							
196-200							
191-195						1	1
N =	9	5	26	15	80	32	167

fying score of 275 on the ΣListening variable. Those who scored above 275 are called "qualified"; those who score 275 or below are designated as "non-qualified". Of the 167 PCVs, 49 (29.4%) were designated as "qualified" (in Spanish on arrival in the field).

Although ΣListening was the variable that seemed to show the clearest separation between "qualified" and "unqualified" PCVs upon arrival in the field, the score on PACT Form A was going to be more useful for tracing progress from end of training to the mid-tour followup because no score exactly comparable to ΣListening (based on a combination of the IA and MA levels of the MLA Cooperative Tests) was available for the mid-tour followup (since only the MB form was given at that time), and a score on an alternate form of PACT, Form B, was available for the mid-tour followup. Therefore it was desirable to find the score on PACT A that was equivalent to a score of 275 on ΣListening. By using data from the 336 cases having scores on both ΣListening and PACT Form A at the end of training, it was found that a score of 56.2 on PACT A is equivalent to a score of 275 on ΣListening in the sense that both these scores have the same normal deviate score. The equation for the line of equivalence between ΣListening and PACT Form A is

(PACT A Raw Score) = .6604 (ΣListening Raw Score) - 125.4389

The score of 56.2 on PACT A was therefore used as the "qualifying level" defining the competence in Spanish that was sought in the 12-week training course (see Chapter 6, pp. 48-56 and Figure 4).[1]

Self-Ratings of Spanish language competence during the first month in the field

On a retrospective basis, PCVs responding to the In-Field Questionnaire at the mid-tour followup rated their abilities to speak, understand, read, and write Spanish during the first month in the field. The distributions of ratings, broken down by whether the cases fell in the "qualified" or the "non-qualified" groups on the basis of their ΣListening scores, are shown in Table 28. For the group as a whole, the modal response was "some" [ability in the skill in question]. Only 40 (22.9%) reported "a lot" or "very much" ability in speaking, 28 (16.1%) at similar levels in understanding spoken Spanish, 38 (21.8%) in reading, and 29 (16.6%) in writing. The "qualified" and "non-qualified" groups were very significantly different with respect to each of the dimensions of rated ability. Most of the people in the "qualified" groups reported "a lot" or "very much" ability in the four skills during the first month in the field, and very few of the "non-qualified" reported such levels of ability at that time.

Reported duration of language difficulties during the course of the field experience

The In-Field Questionnaire sought to determine how long the PCVs experienced difficulties with language problems during the course of their experience in the field. Each respondent was asked, first, to indicate how many months he had been in the field, and then to make his best guess of the number of months after his arrival that he continued to have difficulty with various aspects of his use of Spanish in the host country. He was allowed, of course, to report that he was still having difficulty with a particular aspect of language use even at the time of reporting. Table 29 shows the results of this inquiry, broken down, as before, by "qualified" and "non-qualified" groups. The various types of language difficulties are arranged in the order in which, according to the results for the group as a whole, the difficulties disappear. For example, the first difficulty to disappear is that of not being able to separate the words of native speakers when listening to Spanish. Few of the "qualified" group have any difficulty with this at all even in the first month in the field, and even the "non-qualified" group are able to overcome it after an average of 2.3 months in the field. The last difficulty to disappear, if at all, is that of writing Spanish without considerable resort to a dictionary. Quite a number of even the "qualified" group report difficulty with this even at the mid-tour follow-up, and probably the majority of the "non-qualified" group report some difficulty with it at that time.

[1] As suggested in Appendix G, this is approximately equivalent to an S-2 rating on the FSI scale.

Table 28

Self-Rating of Spanish Language Competence

During the First Month in the Field

Skill and rating	"Non-Qualified" Group N	%	"Qualified" Group N	%	All Cases N	%
Speak						
very little	30	24.1	2	4.0	32	18.4
some	64	51.6	3	6.0	67	38.6
quite a bit	25	20.2	10	20.0	35	20.1
a lot	4	3.2	18	36.0	22	12.6
very much	1	.8	17	34.0	18	10.3
Total	124	99.9	50	100.0	174	100.0
Understand						
very little	43	34.7	1	2.0	44	25.3
some	66	53.3	8	16.0	74	42.6
quite a bit	14	11.3	14	28.0	28	16.1
a lot	1	.8	11	22.0	12	6.9
very much	0	0.0	16	32.0	16	9.2
Total	124	100.1	50	100.1	174	100.1
Read						
very little	26	21.0	2	4.0	28	16.1
some	59	47.6	7	14.0	66	38.0
quite a bit	31	25.0	11	22.0	42	24.2
a lot	6	4.8	10	20.0	16	9.2
very much	2	1.6	20	40.0	22	12.6
Total	124	100.0	50	100.0	174	100.1
Write						
very little	52	41.9	4	8.0	56	32.2
some	57	46.0	11	22.0	68	39.1
quite a bit	11	8.9	10	20.0	21	12.1
a lot	3	2.4	11	22.0	14	8.0
very much	1	.8	14	28.0	15	8.6
Total	124	100.0	50	100.0	174	100.0

Table 29

Length of Time in the Field and Duration of Reported Language Difficulties

	"Qualified" (N = 50)			"Non-Qualified" (N = 124)			
	Range	$\bar{X}$	S.D.	Range	$\bar{X}$	S.D.	t*
Total no. of months in the field	6-11	6.9	1.8	5-11	8.0	1.7	3.45
Number of months during which:							
Could not separate words of native speakers	0-5	.6	1.2	0-9	2.3	2.0	5.39
Speed of native speech made it impossible to understand anything	0-8	.7	1.6	0-11	2.3	2.4	4.25
Could not grasp complete sentences of native speakers	0-5	.6	1.3	0-11	2.8	2.2	6.69
Frequent difficulty in making self understood in Spanish	0-5	.8	1.3	0-11	4.1	2.6	8.53
Could not understand complete meaning of native speech	0-5	1.5	2.0	0-11	4.5	2.5	7.24
Difficulty reading Spanish without considerable use of dictionary	0-7	.7	1.6	0-11	5.2	3.0	10.18
Noticeably halting and non-fluent in [speaking] Spanish	0-7	1.7	2.0	0-11	5.0	2.6	8.10
Difficulty writing Spanish without considerable resort to dictionary	0-10	2.1	2.8	0-11	6.0	3.0	7.98
Uncomfortably slow Spanish reading speed	0-10	1.4	2.5	0-11	5.5	3.1	8.36

*All values of $p < .01$

The data of Table 29 are somewhat limited by the fact that they are based on cases that vary considerably in the length of time they had been in the field, roughly from five to ten months (some cases reported they had been in the field eleven months). Nevertheless, it has not been thought worthwhile to analyse the data with a control for the length of the time the PCV had been in the field.

It should be pointed out that for some unknown reasons, those PCVs in our sample whom we classified as "non-qualified" happened to have been in the field, at the time of responding to the mid-tour questionnaire, significantly longer on the average than the "qualified" students. (Possibly there was some chance interaction between the average after-training achievement of the various contingents and the times when those contingents happened to be surveyed at mid-tour.) Thus, to some extent the differences between the groups with respect to the durations of language difficulties are inflated. It is obvious, however, that the differences would probably remain significant even if length of field experience were statistically controlled.

The average durations of various types of language difficulties are of chief interest. For PCVs who arrive in the field already "qualified", i.e. already with a satisfactory command of the Spanish language, most difficulties disappear very rapidly, usually within a month, on the average. Difficulties in producing Spanish orally and in written form persist longest, but even then, only about two months on the average. Overcoming language problems is not so easy for those who arrive in the field "non-qualified", i.e. without a satisfactory command of the language, but for these people, the major difficulties in auditory comprehension clear up after four or five months. The stages in this process are noticeably distinct according to our results: after 2.3 months, on the average, the PCV no longer felt either that "the speed of native speech made it impossible to understand anything" or that he "could not separate words of native speakers." After 2.8 months, on the average, the Volunteer no longer felt that he "could not grasp complete sentences of native speakers," but it took him another couple of months (up to 4.5 months after arrival in the field, on the average) before he no longer felt that he "could not understand the complete meaning of native speech." It was at about the 4- or 5-month stage that the Volunteer overcame major difficulties in making himself understood and in being sufficiently fluent. Comfortable reading and writing proficiency came only after about 5 or 6 months of field experience for the average PCV who arrived in the field without adequate command of Spanish. All these figures should have three months added to them if one is to consider the amount of time it takes to attain various stages of mastery "from scratch", i.e. from the start of training. One must also consider the variation in the data: many PCVs in the "non-qualified" group reported they were having considerable amounts of difficulty with the language even at the time of filling out the questionnaire.

Our data do not furnish any direct evidence on the hypothesis that language learning in the foreign language milieu goes through a period of slow, "latent" learning followed by a sudden sense of mastery. Indirect evidence on this point, however, is furnished by the very fact that the PCVs were able to indicate a fairly definite length of time during which they experienced difficulties of various sorts, e.g. "noticeably halting and non fluent" speaking of Spanish. Whether language learning under field conditions is gradual or saltatory is a question that needs further investigation.

Self-ratings and reports of Spanish language competence at the mid-tour follow-up

By means of the In-Field Questionnaire administered at the mid-tour follow-up, a considerable amount of information was gathered from the PCVs concerning their own appraisals of their competence in Spanish and the various problems they met in using that language.

Table 30 presents tabulations of self-ratings in the four skills of speaking, understanding, reading and writing at the time of the mid-tour followup. (It will be remembered that the length of time the PCVs studied had been in the field varied considerably, from 5 to 11 months with a mean of 7.7 months.) The data are broken down,

Table 30

Self-Ratings of Spanish Language Competence

at the Mid-Tour Follow-Up

Skill and Rating	"Non-Qualified" Group N	%	"Qualified" Group N	%	All Cases N	%
Speak						
very little	0	0.0	0	0.0	0	0.0
some	7	5.7	0	0.0	7	4.0
quite a bit	39	31.4	5	10.0	44	25.3
a lot	58	46.8	10	20.0	68	39.1
very much	20	16.1	35	70.0	55	31.6
Total	124	100.0	50	100.0	174	100.0
Understand						
very little	0	0.0	0	0.0	0	0.0
some	6	4.8	0	0.0	6	3.4
quite a bit	35	28.2	6	12.0	41	23.6
a lot	59	47.6	9	18.0	68	39.0
very much	24	19.4	35	70.0	59	33.9
Total	124	100.0	50	100.0	174	99.9
Read						
very little	1	.8	0	0.0	1	.6
some	13	10.5	0	0.0	13	7.4
quite a bit	47	37.9	6	12.0	53	30.4
a lot	46	37.1	12	24.0	58	33.4
very much	17	13.7	32	64.0	49	28.2
Total	124	100.0	50	100.0	174	100.0
Write						
very little	7	5.6	0	0.0	7	4.0
some	34	27.4	2	4.0	36	20.7
quite a bit	45	36.4	10	20.0	55	31.6
a lot	31	25.0	19	38.0	50	28.7
very much	7	5.6	19	38.0	26	14.9
Total	124	100.0	50	100.0	174	99.9

as before, by "qualified" and "non-qualified" groups on the basis of status at the time of entry into the field.

As might be expected, at the time of the mid-tour follow-up the majority of the "qualified" group still reported they were able to understand, speak and read Spanish "very much". Their opinion of their ability to write the language was split about evenly between the "a lot" and "very much" responses. From their responses to several related questions in this part of the questionnaire, we can infer that they felt they had completely adapted to the way in which the sounds, vocabulary and idiom, and grammar of the speech of the native speakers differed from what they had been taught, but they still had "some" difficulty in expressing complex ideas and being at a loss for particular words on occasion.

Even when we turn to the group that according to tests was "non-qualified" linguistically upon assignment to the field, we find that by the time of the mid-tour follow-up the majority of these PCVs rated their abilities to speak and understand Spanish at "a lot" or "very much" and they rated themselves as being able to read and write the language fairly well. They felt that they had completely adapted to the way in which sounds made and grammar used by native speakers differed from what they had been taught, but vocabulary and idiom still gave them "some" trouble. They were still having "some" difficulty in: being at a loss for particular words, being restricted to a very limited vocabulary, speaking with sufficient grammatical correctness, and expressing complex ideas.

It is of interest to compare the PCVs' reports about the effect of language problems on job performance for the first month in the field and at the time of the mid-tour follow-up. As can be found from Table 31:

For the "qualified" group, language problems had no adverse effect on job performance for 69% during the first month in the field and for 90% at the time of the mid-tour testing. Only 10% reported any adverse effect at all, and this was "small".

For the "non-qualified" group, language problems had no adverse effect on job performance for only 6% during the first month in the field, and for 50% at the time of the mid-tour testing. Even for this group, the percentage reporting that language problems had a "considerable" adverse effect on job performance decreased from 26% at the first month in the field to 9% at the mid-tour testing. Still, there were a few in this group who were not using Spanish at all, and one may be somewhat concerned about the fact that at the mid-tour testing 40% reported "some" adverse effect of language problems, in addition to the 9% already noted reporting "considerable" adverse effect.

PCVs' recommendations concerning the language training program

Although it is not exactly germane to the title of the present chapter, an account of the recommendations that the PCVs made concerning possible changes in the Peace Corps language training program is not wholly out of place at this point. These recommendations were elicited by Part V of the In-Field Questionnaire, which contained several multiple-choice attitude questions (which also provided space for additional comments) and two open-ended items calling for general comments.

The first multiple-choice item asked the respondent to express his opinion of the length of the program, and the second asked for any recommendations the PCV might have for improving certain aspects of language training if the time involved were to remain the same (12 weeks). In Table 32, the percentages making any recommendations at all, based on the total numbers filling out the questionnaire, give an indication of the amount of concern with each of the areas of training.

If we consider the results as a whole, the majority of the students of Spanish (72.8%) felt that the language training program was of the proper length. The next most popular opinion (23.1%) was that the program should be longer, and a very few

Table 31

Comparison of Reported Effects of Language Problems on Job Performance in the First Month in the Field and at the Time of the Mid-Tour Follow-Up (Cell Values are Frequencies)

A. "Qualified" Group

First month	At Mid-Tour Follow-Up: (Did not use Spanish) (a)	(b)	No adverse effect (c)	(d)	Adverse effect (e)	(f)	Total
(Did not use Spanish)							
(a) Get by with English			1				1
(b) Others communicate							
No adverse effect							
(c) Competence equal to demand			16	2			18
(d) Competence superior to demand			2	13			15
Adverse effect							
(e) Small			8		5		13
(f) Considerable			1				1
Total:			28	15	5		48

B. "Non-Qualified" Group

First month	At Mid-Tour Follow-Up: (Did not use Spanish) (a)	(b)	No adverse effect (c)	(d)	Adverse effect (e)	(f)	Total
(Did not use Spanish)							
(a) Get by with English	3		4		1	1	9
(b) Others communicate	1		4		2		7
No adverse effect							
(c) Competence equal to demand			6	1			7
(d) Competence superior to demand							
Adverse effect							
(e) Small	1	1	31	1	31	2	67
(f) Considerable		2	6		15	8	31
Total:	5	3	51	2	49	11	121

Table 32

PCVs' Recommendations for Changes in the Language Training Program

	"Non-Qualified" Group (N = 124)		"Qualified" Group (N = 49)		Total (N = 173)	
	N	%	N	%	N	%
Recommended length of program:						
longer	32	25.8	8	16.3	40	23.1
same	87	70.1	39	79.6	126	72.8
shorter	5	4.0	2	4.1	7	4.0
	124	99.9	49	100.0	173	99.9
Recommended improvements:						
Grammar and drills						
1. more emphasis	31	25.0	11	22.5	42	24.2
2. less emphasis	14	11.3	8	16.3	22	12.7
3. improved quality	12	9.7	9	18.3	21	12.1
	57	46.0	28	57.1	85	49.1
Vocabulary						
1. more emphasis	80	64.5	27	55.1	107	61.8
2. less emphasis	3	2.4	2	4.1	5	2.9
3. improved quality	3	2.4	3	6.1	6	3.5
(1 and 3)	2	1.6	1	2.0	3	1.7
	88	70.9	33	67.3	121	70.0
Pronunciation						
1. more emphasis	40	32.3	28	57.1	68	39.3
2. less emphasis	9	7.2			9	5.2
3. improved quality	4	3.2	1	2.0	5	2.9
(1 and 3)	2	1.6			2	1.2
(2 and 3)	1	.8			1	.6
	56	45.1	29	59.1	85	49.1
Listening training						
1. more emphasis	71	57.2	35	71.4	106	61.3
2. less emphasis	7	5.6	1	2.0	8	4.6
3. improved quality	5	4.0	1	2.0	6	3.5
(1 and 3)	2	1.6	1	2.0	3	1.7
	85	68.6	38	77.4	123	71.2
Reading						
1. more emphasis	31	25.0	12	24.5	43	24.9
2. less emphasis	23	18.5	16	32.6	39	22.6
3. improved quality	7	5.6	1	2.0	8	4.6
	61	49.1	29	59.1	90	52.0
Writing						
1. more emphasis	35	28.2	15	30.6	50	28.9
2. less emphasis	19	15.3	13	26.5	32	18.5
3. improved quality	4	3.2	1	2.0	5	2.9
(1 and 3)	1	.8			1	.6
	59	47.5	29	59.1	88	50.9
Language study during field study						
1. more emphasis	56	45.1	18	36.7	74	42.7
2. less emphasis	9	7.2	5	10.2	14	8.1
3. improved quality	6	4.8	6	12.2	12	6.9
(1 and 3)	9	7.2	2	4.1	11	6.5
	80	64.5	31	63.2	111	64.2
Speaking and conversation						
1. more emphasis	89	71.8	39	79.7	128	74.0
2. less emphasis						
3. improved quality	4	3.2			4	2.3
(1 and 3)	7	5.6	2	4.1	9	5.2
	100	80.6	41	83.8	141	81.5
Ability sectioning						
1. more emphasis	33	26.6	15	30.6	48	27.8
2. less emphasis	13	10.5	4	8.2	17	9.8
3. improved quality	5	4.0			5	2.9
(1 and 3)			1	2.0	1	.6
	51	41.1	20	40.8	71	41.1

*Percentages are based on the total group or sub-group responding. Note that some values are given for combinations of responses; percentages for such combinations may be added, if desired, to those for individual response categories.

(4.0%) thought that it should be shorter. The same pattern of responses held for both the "qualified" and "non-qualified" groups with a somewhat greater proportion of the "non-qualified" group than of the "qualified" group indicating that they thought that the program should be longer.

Speaking and conversation was the aspect of language training that received the greatest number of replies (81.5%) when recommendations for improvements were requested. There was agreement among both the "non-qualified" and "qualified" groups that speaking and conversation should receive more emphasis; this was the only aspect of language training that no one thought should receive less emphasis. A few people in each group remarked that the quality of instruction in oral work should be improved.

The next greatest number of replies (71.2%) dealt with listening comprehension training. The majority of both groups (61.3% in all) felt that this, too, should receive more emphasis, and a few people felt that the quality of instruction should be improved. A few people felt that listening training should receive less emphasis.

Vocabulary, the third most frequently responded to aspect of language training, was felt to need more emphasis by the majority of the respondents from both groups (70.0% in all). A few of them felt that the quality of instruction should be improved, and even fewer felt that it should receive less emphasis.

A considerable number of the responding trainees (42.7%) felt that language study during field training should receive more emphasis, and several felt that the quality of instruction during this period should be improved. At the same time, a few (8.1%) felt that language study during field training should receive less emphasis.

Only 52.0% of the respondents made any recommendation about the teaching of reading, and those were about evenly divided in their opinion of whether reading should receive more or less emphasis. A few (4.6%) felt that the quality of instruction should be improved in this area. A slightly larger proportion of the "qualified" group than of the "non-qualified" group felt that reading should receive less emphasis.

About two-sevenths of the total sample felt that writing should receive more emphasis, and about one-sixth felt that it should receive less. Proportionately more "qualified" people than "non-qualified" people felt that it had received too much emphasis. A few people felt that the quality of writing instruction should be improved.

About 40% of the total sample felt that pronunciation should receive more emphasis; some of the "qualified" and none of the "non-qualified" people felt that it should receive less. A few felt that the quality of instruction in pronunciation should be improved, and the majority of those had been classified as being "non-qualified".

Approximately a quarter of the total sample (24.2%, actually) felt that grammar and drill should receive more emphasis; they were proportionately distributed among the "qualified" and "non-qualified" groups. An appreciable number, again proportionately distributed between the "non-qualified" and the "qualified" PCVs, felt that grammar and drill had been overemphasized, and a similar number felt that the quality of instruction should have been improved.

Ability sectioning drew the fewest responses (41.1%) from the students. The majority of those who responded (27.8%) felt that it should have had "more emphasis".

It is ironic that although a minority of the PCVs recommended an increase in the length of the training program, almost all wanted "more emphasis" on each aspect of language training.

Three hundred fourteen comments about the language training program were made by the students of Spanish. They ranged from praise for the language training they had undergone to condemnation of language study during field training. Praise for the existing program accounted for approximately eleven percent of the comments. Typical phraseology of this type of comment is, "The training program was good and should be the same length of time."

The most frequent criticism of the course concerned field training in the U.S. (at Taos, for this group). Seven percent of the comments, none of which were complimentary, involved this aspect of the program. Nine comments called for an improvement in the Taos program, twelve called the four weeks spent there "a waste", and one suggested that the Taos program be eliminated.

Eight comments noted that speaking, listening and conversation were the most important aspects of Peace Corps language training, and this is borne out by specific suggestions for improving the course. Eleven percent of the comments suggested that more time be devoted to speaking Spanish, several of them suggesting that more emphasis be given to regional variations in pronunciation and to dialects. Nine percent of the comments indicated that vocabulary, particularly idiomatic expressions, should receive more emphasis. More listening training, more recordings, more native songs, more emphasis on social formalities, the use of complete sentences in class, and smaller classes were the topics of other comments.

Eleven percent of the comments suggested a week or more of training in the country to which the Peace Corps Volunteer is assigned. Such training was envisioned as containing a review of grammar and of the country's literature, practice conversations with native speakers, and technical vocabulary for each job assignment. It was also suggested that more books be included in each Peace Corps Volunteer's book locker and that each Volunteer should have a Spanish-English dictionary.

Language Proficiency Test Performance of PCVs at Mid-Tour (Spanish cases)

Frequency distributions of scores on the three tests given at the mid-tour follow-up, together with frequency distributions for the same individuals and for comparable tests at end of training are shown in Table 33. The means, standard deviations, and intercorrelations are to be found in Table 34. In both tables, the data are shown separately for "qualified" and "non-qualified" groups because it is of particular interest to note what progress the initially "non-qualified" group made in the course of the field experience. Table 34 also contains data on the groups combined. These data are for all cases for which complete sets of scores on these tests are available. (Only 2 cases from the total number studied at mid-tour were lost in this way.)

In interpreting these data, there is a problem as to the comparability of the tests used at the end of training and at the mid-tour follow-up. In the case of the Cooperative Tests, converted scores given in norms tables published by Educational Testing Service (1965) were used to effect the equating of the A and B forms of these tests. However, since some cases were given Form A instead of Form B at the mid-tour follow-up, there is possibly a small amount of practice effect--probably negligible in view of the long time-interval between test administrations--inherent in the results. There are no data to support the comparability of Forms A and B of the PACT; they were, however, constructed simultaneously and according to the same guidelines and may be presumed to be approximately comparable.

The "qualified" group maintained about the same level of performance at the end of training and at the mid-tour on the two tests of listening; there was a slight amount of improvement ($t = 3.26$, $p < .01$) on the MLA Coop. Reading Test. A few people seem to have lost ground. There is, of course, a possible regression effect involved in this comparison inasmuch as the "qualified" group was selected on the basis of per-

Table 33

Frequency Distribution of Language Proficiency Test Scores at Mid-Tour (MT) Compared to Those of Similar Tests, for the Same Individuals, at End of Training (EOT), by Qualification Groups

Q = "Qualified" at end of training

NQ = "Non-Qualified" at end of training

Scores are for "A" Form of Tests at end of training, and generally for "B" Form at Mid-Tour

MLA-Coop. Listening (Level M)					MLA-Coop. Reading (Level M)					PACT				
Converted Score	Q		NQ		Converted Score	Q		NQ		Raw Score	Q		NQ	
	EOT	MT	EOT	MT		EOT	MT	EOT	MT		EOT	MT	EOT	MT
205-209					205-209				1	72-74	9			
200-204					200-204	3	4		2	69-71	6	11		
195-199					195-199	19	26		6	66-68	11	13		5
190-194	16	16		4	190-194	11	12	2	10	63-65	7	14		5
185-189	26	25	1	28	185-189	7	5	1	28	60-62	2	4		12
180-184	7	6	14	42	180-184	2	2	8	25	57-59	6	5	2	13
175-179	1	2	26	22	175-179	7	1	17	17	"qualifying level"				
170-174			20	11	170-174	1		21	16	54-56	7		4	12
165-169		1	16	5	165-169			20	3	51-53	2	1	15	26
160-164			19	5	160-164			19	3	48-50			13	10
	M2					M2				45-47		2	17	12
155-159			7	1	155-159			13	0	42-44			13	8
150-154			7	1	150-154			12	5	39-41			11	6
145-149			6	1	145-149			9	2	36-38			9	7
140-144			3	2	140-144				3	33-35			8	3
135-139			2		135-139				0	30-32			17	0
130-134			0		130-134				1	27-29			4	1
125-129			1		125-129					24-26			2	1
										21-23			6	1
										18-20			1	
N	50	50	122	122		50	50	122	122	N	50	50	122	122
$\bar{X}$	187.5	187.1	167.3	178.7		191.2	194.4	166.0	179.0	$\bar{X}$	64.4	64.4	40.7	50.9
σ	3.1	4.2	11.5	9.1		7.5	5.9	10.6	13.0	σ	6.6	5.4	9.3	9.2

M2 = Median, Second Year College General Norms

Table 34

Means, Standard Deviations, and Intercorrelations of Language Proficiency Tests given at End of Training and at Mid Tour for "Qualified" (Q), "Non-Qualified" (NQ) and Total (T) Groups

		Listening*				Reading*				PACT**			
		EOT		MT		EOT		MT		EOT		MT	
	N	$\bar{X}$	σ	$\bar{X}$	σ	$\bar{X}$	σ	$\bar{X}$	σ	$\bar{X}$		$\bar{X}$	σ
Q:	50	187.5	3.1	187.1	4.2	191.2	7.5	194.4	5.8	64.4	6.6	64.4	5.4
NQ:	122	167.3	11.5	178.7	9.1	166.5	10.6	179.0	13.0	40.7	9.3	50.9	9.2
T:	172	173.1	13.4	181.2	8.9	173.4	15.1	183.5	13.4	47.6	13.8	54.9	10.3
Listening*													
EOT Q		1.00		.40		.70		.18		.78		.22	
NQ		1.00		.68		.58		.65		.78		.55	
T		1.00		.73		.79		.75		.88		.71	
MT Q		.40		1.00		.35		.19		.41		.58	
NQ		.68		1.00		.43		.68		.64		.71	
T		.73		1.00		.57		.72		.68		.76	
Reading*													
EOT Q		.70		.35		1.00		.49		.78		.43	
NQ		.58		.43		1.00		.59		.58		.37	
T		.79		.57		1.00		.71		.84		.65	
MT Q		.18		.19		.49		1.00		.20		.55	
NQ		.65		.68		.59		1.00		.64		.60	
T		.75		.72		.71		1.00		.72		.72	
PACT													
EOT Q		.78		.41		.78		.20		1.00		.36	
NQ		.78		.64		.58		.64		1.00		.58	
T		.88		.68		.84		.72		1.00		.74	
MT Q		.22		.58		.43		.55		.36		1.00	
NQ		.55		.71		.37		.60		.58		1.00	
T		.71		.76		.65		.72		.74		1.00	

*Data are in terms of converted scores. Form A was given at EOT; Form B was given to the majority of the cases at MT, and Form A to the remainder.

**Data are for raw scores. Form A was given at EOT, Form B at MT.

formance on ΣListening, highly correlated with all three variables used in the comparison. Nevertheless, one would not expect the group that was already "qualified" at the end of training to make great gains during a few months of field service in Latin America; even if there had been such gains, the tests used in this study to measure proficiency may be relatively insensitive to changes at the upper end of the scale.

On all the tests, the group that was classified as linguistically "non-qualified" for field service at the end of training made large average gains, all significant well beyond the 1% level. Nevertheless, even at the mid-tour follow-up there were many individuals who tested at relatively low levels. The correlations shown in Table 34 indicate that the relative rankings of individuals in the "non-qualified" group remained similar (r ranging from .58 to .68) from end-of-training to mid-tour follow-up. If we take a score of 56.2 as representing a "qualifying level" of performance on PACT Form B, we may note that whereas only 1.6% of the "non-qualified" group exceeded this score at the end-of-training point, 28.7% were able to surpass it at the mid-tour follow-up. A majority of the group, however, were not far from attaining this qualifying score at the mid-tour point. If we examine the scores of the "non-qualified" group on the MLA Cooperative Tests at the mid-tour, we see that 96% exceeded the median for second year college general norms on the Listening test, and about 94% exceeded the median for these norms on the Reading test. Even if not all the "non-qualified" group attained the rather high qualifying level set on the PACT test, most of them were clearly far ahead of the performance of the typical graduate of a two-year college course in Spanish.

The reader may rightfully be concerned about the propriety of setting a qualifying score at the score level of 56.2 on PACT B, in view of the fact that the original basis for setting a qualifying score was on the score called ΣListening, derived from a non-linear composite of tests given at the end of training. Since the qualifying score level on ΣListening had been set on the basis of its ability to discriminate between those who reported "no adverse effect" of language problems on job performance at the beginning of the field service period and those who reported "some" or "considerable" adverse effect, it seems useful to indicate to what extent the qualifying score of 56.2 on PACT B is able to make a similar discrimination with respect to PCVs' reports of the effects of language problems on job performance at mid-tour. Table 35 has been prepared with this in mind. It shows that in the "qualified" group, all those who reported even a "small" adverse effect had scores above 56.2 — a result that does not favor the test's ability to identify people who would report trouble with language problems at mid-tour. Furthermore, the three individuals who did <u>not</u> attain the qualifying score all reported no adverse effect of language problems on job performance. Nevertheless, test scores and subjective reports agreed for the 41 people (84% of 49) who made the qualifying score and also reported no adverse effects.

In the case of the initially "non-qualified" group, the test shows only slight differences between those who reported "no adverse effect," on the one hand, and those who reported "some" or "considerable" adverse effect or those few who reported that, in effect, they did not use Spanish in their work, on the other. Nineteen (35%) of the 54 in the former category attained the qualifying score, while 16 (24%) of the 67 in the latter categories made the qualifying score. Of all 35 cases making a qualifying score, 19 (54%) reported no adverse effects of language performance on job performance, while of the remaining 86, not attaining a qualifying score, 35 (41%) reported no such effects. The association between test score and subjective report is not significant (χ^2=1.85; p >.05) for this group; the test does not clearly identify those who report language problems at mid-tour. It is only when we consider the combined group ("qualified" and "non-qualified" together) that the test fairly clearly identified such people. Of the 81 attaining the qualifying score, 60 (74%) report no adverse effects of language problems, while of the 89 not attaining the qualifying score, only 38 (43%) report no such effects. For the combined group, this association is highly significant (χ^2 = 17.11, p<.001) but it actually reflects mainly the initial classification of the group at the end of training.

Table 35

PACT B Scores Versus PCVs' Reports on the Effect of Language Problems on Job Performance at Mid-Tour Follow-Up, by Qualification Groups (For meanings of column headings, see bottom of table)

PACT B Raw Score	"Qualified" a,b	"Qualified" f	"Qualified" e	"Qualified" c	"Qualified" d	"Non-Qualified" a,b	"Non-Qualified" f	"Non-Qualified" e	"Non-Qualified" c	"Non-Qualified" d	Total a,b	Total f	Total e	Total c	Total d
69-71			1	8	2								1	8	2
66-68			0	8	5			2	3				2	11	5
63-65			2	7	4			1	3	1			3	10	5
60-62			0	2	2		1	5	5	0		1	5	8	2
57-59			2	2	1		0	7	6	0		0	9	8	1
← qualifying level →															
54-56				0	0		1	4	7	0		1	4	7	0
51-53				1	0	4	0	9	13	0	4	0	9	14	0
48-50				0	0	1	0	2	7	0	1	0	2	7	0
45-47			1	1		1	3	6	2	0	1	3	6	3	1
42-44						0	1	6	0	1	0	1	6	0	1
39-41						0	3	2	0		0	3	2	0	
36-38						0	1	2	4		0	1	2	4	
33-35						0	1	1	1		0	1	1	1	
30-32						0		0			0		0		
27-29						0		1			0		1		
24-26						1					1				
21-23						1					1				
N		0	0	5	29	15	8	11	48	52	2	8	11	53	81	17
				49					121					170		

Column Headings:

a = (Don't use Spanish) "Get by in English"
b = " " " " "Others do the communication"

f = Considerable adverse effect
e = Some adverse effect

c = No adverse effect: Competence equal to the demand
d = " " " : Competence superior to the demand

The report of any adverse effects of language problems is, of course, a notably subjective matter. It may depend not so much upon absolute language proficiency as upon the individual's perception of the linguistic demands of his job or upon the actual variation in those demands from individual to individual, partly as a function of the inherent nature of the job and its setting. In setting a qualifying score on the PACT Form B in the manner that we have, we are in effect assuming that the demands of Peace Corps jobs in the field are such as to require that they be filled by persons who are quite competent in Spanish, say, at the level that would be expected of an individual who had studied Spanish for at least three or four years in college. This level may in point of fact be quite above the level actually demanded by many jobs performed successfully by PCVs in the field. Nevertheless, it is a target that is worthwhile aiming at in Peace Corps language training because many Peace Corps jobs undoubtedly exist where a high level of competence is desirable, and in any case it may be said that the higher the competence in Spanish, the greater the probability that language problems will not interfere with job performance.

From this point of view, the chart drawn in Figure 5 may be of interest and use. It is derived from the information in Table 35 and shows an estimated (smoothed) curve for the probability that a person with a given score on PACT Form B will report no adverse effects of language problems on his job performance. It will be noted that for a score of 49, this probability is only 50%, while for a score of 68, for example, the probability is 90%. In setting objectives for Peace Corps language training, an administrator could use this figure to select an appropriate level of PACT Form B score.

Prediction of Mid-Tour Language Proficiency from Data Available at the Start of Training

It would be of use to know to what extent it is possible to predict the PCV's level of language performance at mid-tour from data available at the start of training, for on this basis it might be possible to improve selection and/or training procedures so as to increase the chances that a PCV at the time of a mid-tour follow-up would have a satisfactory level of foreign language competence.

In Chapter 6 we showed how it was possible to predict end-of-training language proficiency from start-of-training data in the case of two distinct groups: Group A, those who claimed some prior knowledge of Spanish and therefore took a Spanish placement test, and Group B, those who did not take a Spanish placement test and who therefore probably had little if any prior knowledge of Spanish. We will follow a similar strategy here; that is, we will make the analysis separately for groups that did and did not take the Spanish placement test. Because of the normal attrition that occurred at the end of training and the inaccessibility of some of the PCVs that were assigned to the field, the numbers of cases available for the study of predictions of mid-tour language proficiency are smaller than was the case for predictions of end-of-training proficiency. Whereas Group A in the end-of-training predictions had 218 cases, the largest sample available for prediction of mid-tour proficiency had 117 cases. Similarly, Group B was reduced from 118 to 55 cases. Comparative data on the predictor variables for the two sets of samples are shown in Table 36. It is evident that there is very little, if any, selective bias with respect to the predictors. Although the means of the mid-tour samples are slightly higher than those for the end-of-training samples, the differences are so slight in relation to the standard deviations that significance tests (which would be accomplished by the special formulas for sampling from a finite population) were not deemed worthwhile to obtain. While some restriction of range might have been expected to occur through selection, the standard deviations of the mid-tour samples are in every case slightly <u>larger</u> than those for the end-of-training samples. We may therefore use the data from the mid-tour samples as if it represented a satisfactory sample of persons finishing the training course. In fact, as may be seen from Table 36, it is not too far from representing the sample of persons available at the start of training.

Figure 5

Estimated Probability of Reporting No Adverse Effects of Language Problems on Job Performance at Mid-Tour, as a Function of Raw Score on PACT Form B

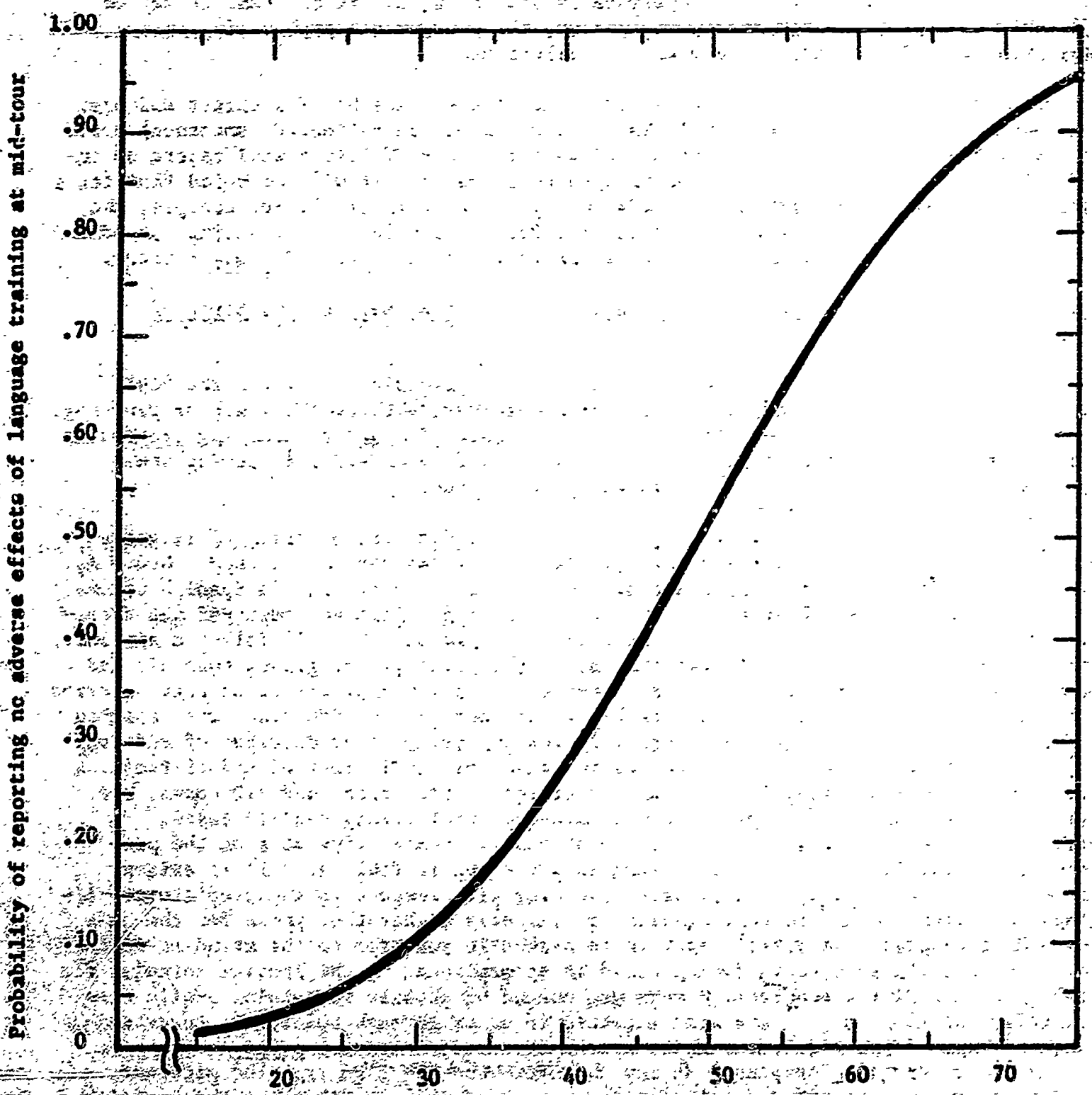

Table 36

Means and Standard Deviations for Predictor Variables for Samples Available at Start-of-Training (SOT), End-of-Training (EOT), and Mid-Tour (MT)

		Group A (Took Placement Test)			Group B (Did Not Take Placement Test)		
		SOT	EOT	MT	SOT	EOT	MT
	N	268-276	218	117	170-171	118	55
Placement Test	$\bar{X}$	50.41	53.00	55.05	-	-	-
	σ	28.40	28.40	29.12			
MLAT	$\bar{X}$	67.50	69.03	70.84	64.57	65.89	66.36
	σ	16.98	16.96	17.12	18.05	18.74	21.15
Section Placement Score	$\bar{X}$	53.85	54.44	53.14	40.83	41.83	42.93
	σ	8.90	8.62	9.04	8.61	6.84	7.20

The predictor variables of chief interest are, of course, the Spanish placement score, the sum of scores on the Modern Language Aptitude Test (Short Form), and the Section Placement Score. For some cases, data are also available on factor scores derived from the questionnaire given during training: Interest in Foreign Languages, Compulsivity, Audiolingual Preference, and Home Exposure [to the foreign language]. The criterion variables include the four self-ratings of language competence at mid-tour and scores on three language proficiency tests given at the mid-tour follow-up, Listening Form MB[1], Reading Form MB[1], and PACT Form B. In addition, a gain score based on the difference between the score on PACT Form B (at mid-tour) and the score on PACT Form A (given at end of training) is used as a criterion variable to see whether data available at the start of training could predict the relative amount of improvement in Spanish auditory comprehension that would occur during the course of the field experience.

The regression systems for the two groups (A and B) using only the three major predictor variables are shown in Tables 37 and 38. There are some notable differences between the two regression systems, quite apart from the fact that one predictor variable is lacking for Group B:

1) In Group A, the two predictors that make significant unique contributions to the prediction of mid-tour self-ratings of language proficiency are the placement test and the section placement score (SPS), even though these predictors are rather highly correlated. MLAT makes no significant contribution to the prediction of any of the self-ratings. In contrast, in Group B, MLAT shows significant beta-weights for the prediction of at least two of the self-ratings, while the section placement score has insignificant beta-weights.

2) The mid-tour self-ratings are much more predictable in Group A than they are in Group B; that is, the multiple correlations are higher in that Group.

3) MLAT makes a much greater contribution to the prediction of the proficiency test scores in Group B than it does in Group A. The section placement score also tends to have higher beta-weights in Group B than it does in Group A.

4) The PACT Gain score is much more predictable in Group A than in Group B; it should be noted, however, that the beta-weight of the placement test is negative, signifying probably that gain is largely a function of how far the student was from a qualifying level of proficiency at the outset of training.

Despite these differences, the data from Group A and Group B are agreed in showing that mid-tour proficiency can be rather well predicted from data available at the start of training. For students who have already acquired some knowledge of Spanish before the start of training, the critical variable is their level of mastery of Spanish, while for students who have little knowledge of Spanish, the critical variable associated with mid-tour performance is foreign language aptitude as measured by the Modern Language Aptitude Test. The section in which the student is placed during training has some role in determining the level of mastery he will reach. If we measure level of mastery at mid-tour in terms of the PCVs' self-ratings, the section placement score is an important variable, either because it reflects the standard of performance to which the student is held in training or because it determines the student's confidence in his mastery of the foreign language. This is especially true for students who already have some knowledge of Spanish when they start training. Section placement is less important for students without prior knowledge of Spanish, partly because these students are usually placed in the lower numbered sections in any case.

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[1]As noted previously, because of a shipper's error some cases were given Form MA of the Listening and Reading tests at the mid-tour follow-up. Although the two forms are not exactly equivalent, the scores on the MA forms were used as if they were MB form scores. ETS Converted Scores have been used in many of the tabulations in this report, in order to make the scores on the two forms more nearly comparable.

Table 37

Prediction of Mid-Tour Language Proficiency Self-Ratings and Test Score Variables from Three Predictor Variables, N = 117 PCVs (Group A) Who Took a Spanish Placement Test at the Outset of Training

	Predictor Variables			Criterion Variables							
	1	2	3	4	5	6	7	8	9	10	11
Mean:	55.05	70.84	53.14	4.12	4.11	3.91	3.41	32.54	56.17	33.83	34.91
S.D.:	29.12	17.12	9.04	0.84	0.86	0.97	1.04	7.49	9.96	10.84	8.42
	Intercorrelations			Beta-Weights							
Placement Test 1	1.00	.29	.65	1 .15	.22**	.32**	.45**	.41**	.40**	.50**	-.67**
EMLAT 2	.29	1.00	.15	2 .00	.02	-.06	.00	.21*	.28**	.33**	.03
Section Placement Score 3	.65	.15	1.00	3 .51**	.44**	.36**	.15	.00	.20*	.06	.09
	Validity Coefficients			Mult. R: .61	.61	.60	.56	.51	.68	.72	.61
Self-Rating: Speaking 4	.48	.12	.60					b-weights			
Self-Rating: Understanding 5	.51	.15	.59	1 .00	.01	.01	.02	.10	.14	.19	-.19
Self-Rating: Reading 6	.54	.09	.56	2 .00	.00	.00	.00	.09	.16	.21	.01
Self-Rating: Writing 7	.55	.15	.44	3 .05	.04	.04	.02	.00	.22	.07	.08
Listening Form MB (or MA) 8	.47	.33	.30	Inter-							
PACT Form B 9	.64	.43	.50	cept 1.40	1.47	1.53	1.62	20.26	25.33	4.69	40.21
Reading Form MB (or MA) 10	.61	.49	.44								
Gain Score (PACT) 11	-.60	-.16	-.34								

*p < .05 (significance levels given only for beta-weights)
**p < .01

Table 38

Prediction of Mid-Tour Language Proficiency Self-Ratings and Test Score Variables from Two Predictor Variables, N = 55 PCVs (Group B) Who Did Not Take a Spanish Placement Test at the Outset of Training

		Predictor Variables		Criterion Variables							
		2	3	4	5	6	7	8	9	10	11
	Mean:	66.36	42.93	3.65	3.84	3.55	3.00	30.27	51.47	27.47	42.09
	S.D.:	21.15	7.20	0.79	0.78	0.85	1.08	7.65	10.10	10.27	8.78
		Intercorrelations					Beta Weights				
EMLAT	2	1.00	.02	2	.45**	.32*	.16	.08	.64**	.50**	.63**	.03
Section Placement Score	3	.02	1.00	3	.19	.00	.01	-.04	.22	.28*	.24*	-.21
		Validity Coefficients		Mult. R	.49	.32	.16	.09	.68	.58	.68	21
Self-Rating: Speaking	4	.46	.20					b-Weights				
Self-Rating: Understanding	5	.32	.00	2	.02	.01	.01	.00	.23	.24	.30	.01
Self-Rating: Reading	6	.16	.01	3	.02	.00	.00	-.01	.23	.39	.35	-.26
Self-Rating: Writing	7	.08	-.04									
Listening Form MB (or MA)	8	.55	.23	Inter-cept	1.64	3.06	3.09	2.96	4.92	18.99	-7.59	52.21
PACT Form B	9	.50	.28									
Reading Form MB (or MA)	10	.63	.25									
Gain Score (PACT)	11	.03	-.21									

*p <.05; **p <.01 (significance levels given only for beta weights)

Figure 6 is an attempt to depict the relationships in Tables 37 and 38 graphically. The left-hand half of the figure is identical to Figure 4 (page 47) that was drawn to show predictions of end-of-training language proficiency for individuals with selected combinations of predictor variable scores. In the right-hand half, the progress lines of the left-hand half are continued to show the predicted levels of language proficiency at the midtour follow-up. Again, the "qualifying level" is set at a score of 56.2 on PACT Form B, which for the purposes of this chart is assumed to be equivalent to PACT Form A.

One advantage of such a graphical representation is that it gives some idea of the relative amounts of gain during the training period and during the field experience. It is evident that during the field experience the PCVs do not gain as rapidly in Spanish competence as they do during formal training. In fact, the rate of growth is not actually as great as the chart may imply because the abscissa does not accurately show the length of time in the field (actually from 5 to 10 months). The smaller rate of progress during the field experience can probably be ascribed partly to the fact that the PCVs do not in general devote much time to any concentrated study of Spanish during this period, what progress they make being based on purely informal learning. Also, the smaller rate of growth in this later period corresponds to what would be expected for a negatively accelerated learning curve.

Beyond this, the chart indicates that it is only those PCVs who had relatively high Spanish placement scores and/or relatively high language aptitude who can be predicted to attain the qualifying score level on PACT Form B at the midtour follow-up.

The interpretation of the data in Tables 37 and 38 is aided by a consideration of the intercorrelations of the criterion variables; the intercorrelation matrices are given in Tables 39 and 40. These tables show that the self-ratings of language proficiency tend to correlate fairly highly among themselves, but that they do not correlate highly with objective tests of language proficiency. Particularly notable are the intercorrelations of the self-ratings of speaking and understanding, which are .82 in Group A and .70 in Group B. Yet, these self-ratings correlate only moderately with objective tests of listening comprehension.

At the same time, the objective measures of language proficiency at mid-tour correlate quite highly among themselves. Evidently the objective measures and the self-ratings measure somewhat different aspects of proficiency. There is even a question as to which of these types of measure is more valid. It might be argued that the high intercorrelations between the Spanish placement score and the language aptitude test, on the one hand, and the objective proficiency tests, on the other, reflect a "method" rather than a "trait" variable, in the sense discussed by Campbell and Fiske (1959). That is, these intercorrelations could be regarded as arising out of the fact that they are correlations between patterns of behavior that are similar mainly because they are objective tests. It is difficult to believe, however, that performance on these objective tests is not to a substantial degree dependent on actual Spanish language competence. One is inclined to put more stock in the validity of these objective tests than in that of the self-ratings, which are notoriously subject to various sources of bias.

If we add the questionnaire factor scores as predictors, it is possible to enhance the prediction of mid-tour language proficiency to a considerable extent. Tables 41 and 42 show the relevant data. For Group A, Interest in Foreign Languages makes a significant contribution to the prediction of the self-ratings of language proficiency. Perhaps this result is not particularly remarkable inasmuch as both types of variables involved are self-reports. Nevertheless, the self-reports were made at widely spaced points of time, relatively speaking, and therefore cannot have very much spurious correlation. What is surprising is that Interest in Foreign Languages makes no significant contribution to the prediction of any of the objective proficiency variables, for either Group. What is more surprising is that it makes no significant contribution to the prediction of the Gain score (a measure of amount of gain from the end of training to the mid-tour

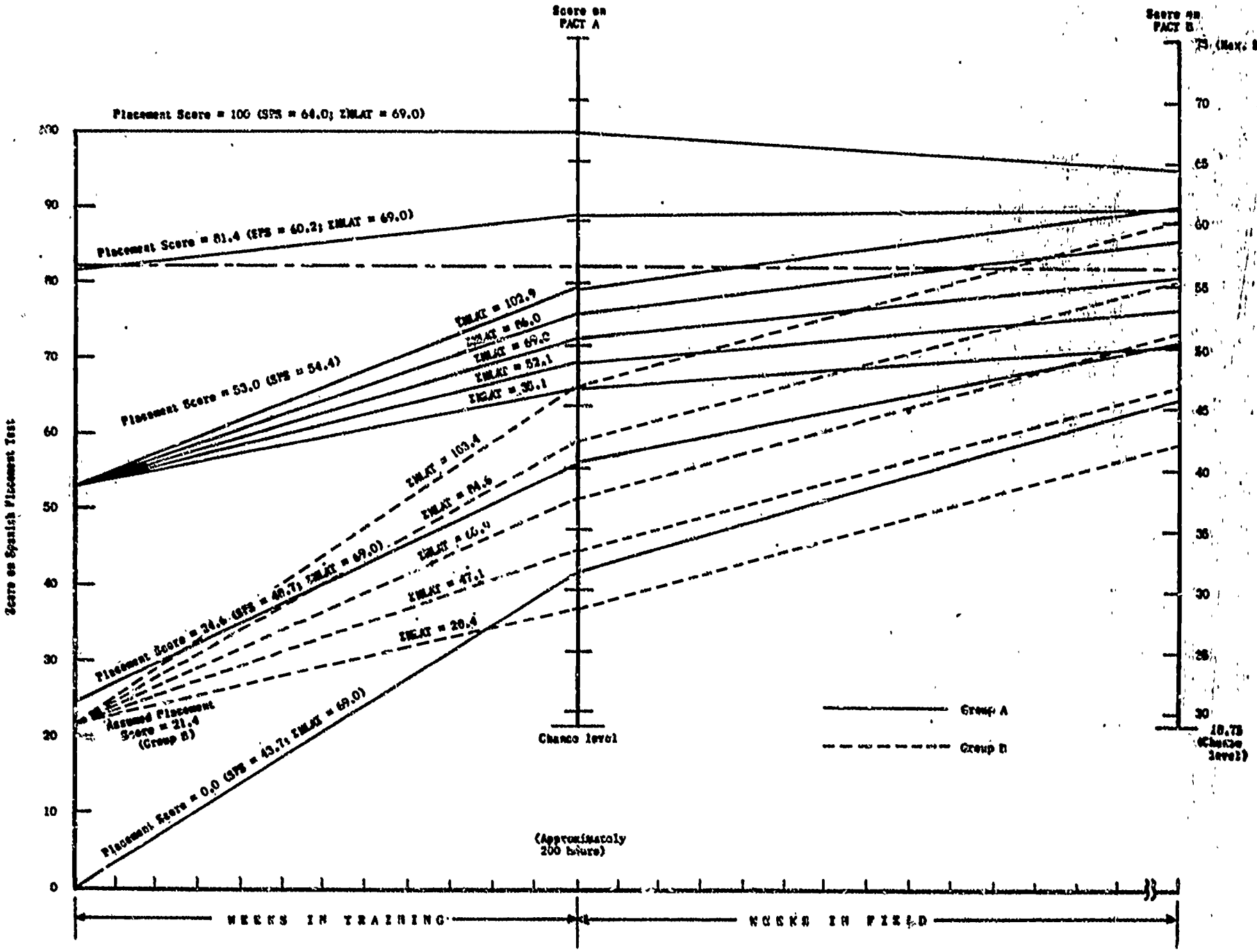

Figure 3. Graphical Depiction of Expected Mid-Tour Spanish Language Proficiency (as Measured by FACT, Form B) for Individuals with Selected Combinations of Predictor Variable Scores

Table 39

Intercorrelations of Criterion Variables Used in Table 37
(N = 117 PCVs, Group A, Who Took a Spanish
Placement Test at the Outset of Training)

Criterion Variable		Criterion Variables							
		1	2	3	4	5	6	7	8
Self-Rating: Speaking	1	1.00							
" " : Understanding	2	.82	1.00						
" " : Reading	3	.59	.63	1.00					
" " : Writing	4	.59	.60	.78	1.00				
Listening Form MB or MA	5	.29	.38	.34	.35	1.00			
PACT Form B	6	.49	.57	.48	.50	.72	1.00		
Reading	7	.40	.42	.49	.49	.73	.70	1.00	
Gain Score (PACT)	8	-.35	-.26	-.29	-.34	-.13	-.09	-.32	1.00

Table 40

Intercorrelations of Criterion Variables Used in Table 38
(N = 55 PCVs, Group B, Who Did Not Take a
Spanish Placement Test at the Outset of Training)

Criterion Variable		Criterion Variables							
		1	2	3	4	5	6	7	8
Self-Rating: Speaking	1	1.00							
" " : Understanding	2	.70	1.00						
" " : Reading	3	.47	.44	1.00					
" " : Writing	4	.51	.37	.69	1.00				
Listening Form MB or MA	5	.46	.40	.34	.34	1.00			
PACT Form B	6	.48	.43	.38	.32	.73	1.00		
Reading	7	.41	.30	.43	.27	.75	.65	1.00	
Gain Score (PACT)	8	.14	.29	.14	.11	.09	.50	-.02	1.00

Table 41

Regression System Analogous to that of Table 37 but with the Addition of Questionnaire Factor Scores as Predictors (N = 83 PCVs, Group A)

		Criterion Variables[1]							
		4	5	6	7	8	9	10	11
Mean:		4.16	4.20	3.94	3.41	32.89	57.02	34.14	34.78
S.D.:		0.86	0.82	1.00	1.04	7.52	9.79	11.15	8.42
Predictor Variables		Beta Weights							
Placement Test Score	1	.03	.09	.26	.40**	.34*	.37**	.45**	-.65**
ΣMLAT	2	-.09	-.06	-.16	-.16	.14	.26**	.22*	.06
Section Placement Score	3	.41**	.44**	.37**	.17	.05	.22*	.11	.18
Interest in For. Langs.	12	.21*	.16	.25*	.25*	-.02	-.07	.20	-.09
Compulsivity	13	-.13	-.17	-.09	-.02	-.08	-.15	-.04	-.02
Audiolingual Preference	14	.18	.15	.03	-.03	.11	.17*	.01	-.11
Home Exposure	15	-.02	-.02	-.12	-.02	-.25*	-.23**	-.22**	-.12
	Mult. R.:	.69**	.73**	.72**	.64**	.51**	.75**	.77**	.66**
$\bar{X}$	S.D.	b-Weights							
57.76	28.39	1	.00	.00	.01	.01	.09	.13	.18	-.19
71.04	16.66	2	.00	-.00	-.01	-.01	.06	.15	.15	.03
54.10	8.53	3	.04	.04	.04	.02	.05	.26	.14	.17
325.88	140.29	12	.00	.00	.00	.00	.00	-.01	.02	-.01
210.76	100.01	13	.00	.00	.00	.00	.01	-.01	.00	.00
310.84	117.35	14	.00	.00	.00	.00	.01	.01	.00	-.01
111.88	145.49	15	.00	.00	.00	.00	-.01	-.02	-.02	-.01
	Intercept		1.60	1.66	1.35	1.73	21.46	26.76	2.96	39.80

*p < .05; **p < .01

[1]Criterion Variables:
1. Self-Rating: Speaking
2. " " : Understanding
3. " " : Reading
4. " " : Writing
5. Listening Form MB (or MA)
6. PACT Form B
7. Reading Form MB (or MA)
8. Gain Score (PACT)

Table 42

Regression System Analogous to that of Table 38 but with the Addition of Questionnaire Factor Scores as Predictors (N = 35 PCVs, Group B)

		Criterion Variables[1]							
		4	5	6	7	8	9	10	11
	Mean:	3.77	3.94	3.66	3.14	31.89	53.20	29.57	43.14
	S.D.:	0.76	0.79	0.86	1.02	5.15	8.60	8.99	8.89
Predictor Variables		Beta Weights							
ΣMLAT	2	.33*	.12	-.04	-.06	.51**	.26	.43**	-.13
Section Placement Score	3	.27	.05	.09	.00	.18	.28	.34*	-.12
Interest in For. Langs.	12	.12	.12	.16	.17	-.15	-.04	-.10	.03
Compulsivity	13	-.19	.08	-.14	-.11	.15	.11	.17	-.06
Audiolingual Preference	14	.05	.08	-.11	.19	.25	.23	.18	.07
Home Exposure	15	-.24	.01	-.26	-.23	-.33*	-.31*	-.17	-.25
	Mult. R.:	.56	.24	.29	.37	.75**	.62*	.68**	.31
$\bar{X}$	S.D.	b-Weights							
71.54	20.66	2	.01	.00	.00	.00	.13	.11	.19	-.06
41.29	7.41	3	.03	.01	.01	.00	.12	.33	.41	-.15
239.43	124.36	12	.00	.00	.00	.00	-.01	.00	-.01	.00
213.74	87.92	13	.00	.00	.00	.00	.01	.01	.02	-.01
280.29	99.92	14	.00	.00	.00	.00	.01	.02	.02	.01
83.46	148.89	15	.00	.00	.00	.00	-.01	-.02	-.01	-.01
	Intercept		1.93	2.87	3.75	2.89	14.56	26.40	-6.32	53.89

*p < .05; **p < .01

[1]Criterion Variables:
4. Self-Rating: Speaking
5. " " : Understanding
6. " " : Reading
7. " " : Writing
8. Listening Form MB or MA
9. PACT Form B
10. Reading Form MB (or MA)
11. Gain Score (PACT)

follow-up). One might have expected that those who reported particular interest in foreign language learning prior to Peace Corps training would be those who would make most progress in language learning when presented with the admirable opportunity to do so afforded by the experience in the host country, but such is not the case.

Prediction of Mid-Tour Language Proficiency from Start-of-Training Data supplemented by End-of-Training Data

Considerable interest attaches to how well it would be possible to predict mid-tour language proficiency from data that becomes available at the end of training. Such data in many instances may have been crucial in determining whether the Peace Corps trainee is ready to be assigned to the field; there is a problem as to whether these data are valid for such use.

Relevant results from this study are given in Tables 43 (for Group A, that took the Spanish placement test) and 44 (for Group B, that did not take the Spanish placement test). It should be noted, however, that in the construction of these tables there was a further loss of cases due to incomplete data on some of the predictor variables used, particularly the intermediate and final assessments. Therefore, only the validity coefficients and multiple correlations are shown, rather than the complete regression system (beta weights and b-weights). From these statistics it is at least possible to gain an impression of the usefulness of the various predictor variables. Particular interest attaches to the usefulness of the end-of-training variables because the validity of the start-of-training variables has already been thoroughly examined above.

For Group A (students who took a Spanish placement test, Table 43), the Intermediate Assessments (made by Spanish instructors halfway through the training) showed very low validity in predicting PCVs' self-ratings of competence at the mid-tour follow-up. They did, however, fairly well predict test scores in auditory comprehension at mid-tour, with validity coefficients ranging from .22 to .56. Ratings of fluency in speaking tended to show higher validities than ratings of comprehension, and assessments of "rate of progress" tended to be less valid than out-and-out ratings of level of competence.

Again for Group A, the Final Assessments showed very little validity in predicting mid-tour competence, either as self-rated or as tested objectively. Indeed, some of the correlations were negative. One can only speculate on why these Final Assessments by the language training staff were so invalid. (We have already seen, in Chapter 6, that they had low intercorrelations with end-of-training objective tests.) In any case, these results tend to raise a question about any use of Final Assessments in determining trainees' fitness for overseas duty with respect to language competence.

The results for Group B (Table 44) are rather different, however. Both Intermediate and Final Assessments were fairly valid predictors of mid-tour language competence. It is difficult to account for the differences between Group A and Group B in this respect. Examination of the means and standard deviations for the assessment variables scotches the obvious hypothesis that there was a higher mean assessment in Group A and a consequent restricted variance in these assessments. In fact, Groups A and B do not differ significantly on any of the assessment variable means, and the variances are quite comparable.

End-of-training objective proficiency tests were good predictors of mid-tour tested language proficiency, in both groups A and B. If we ignore the possibility that the high correlations are simply an artifact of the method of measurement, the magnitude of the correlations is probably best interpreted as indicating simply that within the span of some five to ten months in the field, there is not enough time for the relative positions of the PCVs to change very much in their language competence. Although, as we have seen, considerable improvement in language competence takes place during the field tour, the rate of improvement is roughly the same for all PCVs. The only possible exception to this statement comes when we consider the correlations of the end-of-training proficiency tests with the amount of gain that occurred when measured by the PACT (Pic-

Table 43

Prediction of Mid-Tour Language Proficiency Self-Ratings and Test Score Variables from Various Start-of Training, End-of-Training, and Early Field Variables

N = 89 PCVs (Group A) Who Took a Spanish Placement Test at the Outset of Training (N = 52 for last Four Predictors in Table)

		Criterion Variables (Mid-Tour)							
		Self-Ratings				Proficiency Test			
Predictors		Speaking	Understanding	Reading	Writing	Listening M	PACT B	Reading M	CAIN
		Validity Coefficients							
Placement Test	1	.46	.53	.56	.56	.57	.60	.68	-.59
ΣMLAT	2	.08	.14	.09	.17	.44	.45	.55	-.16
Section Placement Score	3	.60	.60	.59	.43	.35	.45	.44	-.29
Intermediate Assessments:									
Level of Fluency, Speaking	4	.23	.27	.28	.35	.52	.41	.30	-.27
" " " , Comprehension	5	.19	.24	.18	.27	.46	.38	.23	-.15
Rate of Progress, Speaking	6	.09	.14	.05	.12	.36	.25	.19	-.08
" " " , Comprehension	7	.04	.09	-.01	.02	.34	.22	.14	-.03
Adequacy for Overseas, Speaking	8	.16	.28	.18	.25	.56	.45	.28	-.13
" " " " , Comprehension	9	.20	.31	.18	.30	.51	.36	.23	-.13
Final Assessments:									
Level of Fluency, Speaking	10	.07	-.01	.06	.10	.16	.07	.08	-.17
" " " , Comprehension	11	.13	.04	.10	.12	.22	.08	.14	-.23
Rate of Progress, Speaking	12	.06	.06	.04	.10	.28	.16	.14	-.11
" " " , Comprehension	13	-.03	-.07	-.01	.01	.19	.06	.12	-.10
Adequacy for Overseas, Speaking	14	.10	.02	.03	-.04	.16	.13	.10	-.05
" " " " , Comprehension	15	.11	.03	.04	-.02	.18	.16	.16	-.06
Proficiency Tests (End of Training)									
ΣListening	16	.58	.60	.54	.52	.73	.76	.77	-.54
PACT A	17	.55	.57	.53	.56	.72	.76	.74	-.66
ΣReading	18	.50	.53	.60	.59	.69	.71	.79	-.50
Speaking M	19	.52	.44	.39	.50	.50	.56	.53	-.47
Self-Ratings, First Month in Field:									
Speaking	20	.64	.66	.57	.62	.54	.58	.51	-.43
Understanding	21	.64	.69	.57	.61	.56	.62	.56	-.44
Reading	22	.41	.44	.59	.59	.46	.53	.58	-.39
Writing	23	.42	.40	.56	.65	.48	.52	.54	-.41
Multiple R from above 23 Variables		.83	.82	.77	.75	.82	.83	.85	.76
Interest in Foreign Languages	24	.47	.49	.52	.50	.40	.44	.57	-.35
Compulsivity	25	-.40	-.42	-.44	-.35	-.34	-.44	-.30	.26
Audiolingual Preference	26	.44	.43	.35	.20	.15	.24	.14	-.28
Home Exposure	27	.33	.38	.26	.30	.04	.09	-.05	-.42
Multiple R from above 27 variables		.87	.89	.90	.84	.86	.82	.94	.84

Table 44

Prediction of Mid-Tour Language Proficiency Self-Ratings and Test Score Variables from Various Start-of-Training, End-of-Training, and Early Field Variables. N = 41 PCVs (Group B) Who Did Not Take a Spanish Placement Test at the Outset of Training. (N = 23 for Last Four Variables in Table)

		Criterion Variables (Mid-Tour)							
		Self-Ratings				Proficiency Test			
		Speaking	Understanding	Reading	Writing	Listening M	PACT B	Reading M	PACT Gain
Predictors		Validity Coefficients							
EMLAT	2	.47	.36	.23	.13	.78	.58	.81	.02
Section Placement Score	3	.16	-.01	-.13	-.12	.27	.26	.17	-.22
Intermediate Assessments:									
Level of Fluency, Speaking	4	.27	.25	.20	.15	.65	.59	.73	-.02
" " " Comprehension	5	.27	.17	.14	.04	.69	.58	.58	-.06
Rate of Progress, Speaking	6	.24	.19	.12	.08	.68	.60	.63	-.04
" " " Comprehension	7	.25	.18	.14	.10	.71	.60	.54	.00
Adequacy for Overseas, Speaking	8	.38	.39	.37	.21	.51	.62	.51	.14
" " " Comprehension	9	.41	.43	.39	.25	.49	.56	.54	.17
Final Assessments									
Level of Fluency, Speaking	10	.40	.43	.17	.21	.64	.49	.58	.05
" " " Comprehension	11	.24	.26	.14	.26	.36	.31	.44	-.05
Rate of Progress, Speaking	12	.43	.53	.25	.19	.57	.47	.55	.02
" " " Comprehension	13	.33	.42	.25	.22	.58	.46	.54	-.08
Adequacy for Overseas, Speaking	14	.33	.44	.22	.18	.59	.43	.47	.05
" " " Comprehension	15	.34	.40	.17	.23	.55	.36	.35	.04
Proficiency Tests (End of Training)									
ΣListening	16	.41	.35	.16	.13	.78	.71	.69	-.03
PACT A	17	.34	.22	.25	.20	.75	.61	.69	-.34
ΣReading	18	.39	.37	.29	.11	.68	.60	.85	-.08
Speaking M	19	.38	.37	.24	.26	.40	.49	.39	.13
Self Rating, First mo. in Field									
Speaking	20	.26	.14	.13	.01	.42	.40	.46	.00
Understanding	21	.12	.11	-.19	-.16	.24	.15	.12	.18
Reading	22	.35	.28	.48	.30	.23	.30	.34	.02
Writing	23	.23	.21	.31	.33	.17	.20	.21	-.12
Multiple R from above 23 Variables		.75	.81	.75	.71	.95**	.85*	.97**	.78
Factor Scores (N = 23)									
Interest in FLs	24	.07	.09	.27	.30	.06	.16	.09	.14
Compulsivity	25	-.23	-.09	-.06	.08	.19	.17	.25	-.02
Audiolingual Preference	26	.22	.18	.03	.17	.38	.37	.25	.23
Home Exposure	27	.29	.22	-.03	.19	-.22	-.19	-.19	-.36
Multiple R from above 27 Variables		(not computed because of lack of degrees of freedom)							

*p <.05; **p < .01

torial Auditory Comprehension Test). In Group A, these correlations are all significantly negative. It is possible that this means there is a ceiling effect in the measurement of linguistic competence by the PACT, for evidently those who are initially high on the PACT gain least, while those who are initially low on the PACT (at the end of training) gain most during the field experience. If the PACT test were a better measuring instrument for discriminating among levels of ability at the top end of the scale, these negative correlations might not have occurred. In Group B, very little such effect is to be noticed. There, only PACT A shows any noticeable negative correlation with the gain score, and this is barely significant at the 5% level. This is probably because members of Group B approached the ceiling of the PACT B test. For Group B, then, the amount of gain in competence during the field experience is not very predictable from end-of-training language proficiency scores. Relative standing in language competence remains approximately the same from the end of training to the mid-tour point, but the actual amount of gain the PCV will make, within broad limits, is not predictable from end-of-training data except in the case of Group A, where the crucial element is how far from the ceiling of the PACT test the individual is at the end of training.

Self-ratings of their language competence as the PCVs remember it stood when they first arrived in the field are good predictors of mid-tour self-ratings only in the case of Group A, with validities ranging from .40 to .69. In Group B, the validities range from -.19 to .48. These two self-reports were made at the same time (i.e., at the mid-tour follow-up); the low correlations for Group B can only mean that Group B was highly variable in the amount of progress they thought they had made in acquiring fluency in Spanish. In contrast, Group A tended to have much the same opinions (at least, relative to each other) of their abilities for the first month in the field as for the time of the mid-tour testing. In the case of Group A, also, the self-ratings for the first month in the field are quite good predictors of the scores on the mid-tour objective proficiency tests.

A certain limited amount of data on Questionnaire Factor Scores are available for the mid-tour groups. The numbers of cases are small, and the results do not present a very consistent picture. The validities of the factor scores in predicting mid-tour criterion variables are higher in Group A than in Group B. All four questionnaire factor scores show some significant amount of correlation with at least one of the criterion variables in Group A. The best language learner, according to these data, is the person who is interested in foreign languages, is not compulsive about trying to do well in everything, has a preference for learning audiolingually (rather than by studying principally the written language), and has some exposure to the language at home. Group A, it will be remembered, was composed primarily of people who had already had some training in Spanish before joining the Peace Corps. Apparently it was these traits of interest, non-compulsivity, audiolingual preference, and favorable home environment that provided the Group A students with the added push to work hard to improve their knowledge of Spanish beyond what they had initially. These traits apparently did not have any influence on learning in Group B, where language aptitude was the critical variable (as may be seen clearly in Table 43, where EMLAT has validity coefficients against mid-tour proficiency tests as high as .81). In fact, in Group B, there is a nearly significant negative correlation of -.36 for the home exposure factor score vs. the gain score variable.

Prediction of Mid-Tour Language Proficiency from End-of-Training Data

For some purposes it may be useful to have regression systems available for the prediction of mid-tour language proficiency solely from data that can be collected at the end of training. Table 45 gives such a regression system based solely upon three language proficiency tests given at the end of training and computed to show separate predictions for each of four language proficiency variables at the mid-tour follow-up for all available cases with complete data. The multiple correlations for the three

Table 45

Prediction of Mid-tour Language Proficiency from End-of-training Test Scores

N = 172, "Qualified" and "Non-qualified" Groups Combined

		Predictor Variables			Criterion Variables			
		1	2	3	4	5	6	7
Mean:		173.14	173.35	47.60	181.16	183.48	54.85	37.24
S.D.:		13.44	15.09	13.75	8.89	13.35	10.28	9.25
		Intercorrelations			Beta Weights			
Listening MA[1]	1	1.00	.79	.88	1 .61**	.45**	.27*	.30*
Reading MA[1]	2	.79	1.00	.84	2 -.10	.31**	.05	.06
PACT A	3	.88	.84	1.00	3 .22	.06	.46**	-.98**
					Mult. R: .73	.78	.75	.68
		Validity Coefficients			b-weights			
Listening MB[1]	4	.73	.57	.68	1 .40	.45	.20	.20
Reading MB[1]	5	.75	.71	.72	2 -.06	.27	.04	.04
PACT B	6	.71	.65	.74	3 .14	.06	.34	-.66
Gain	7	-.51	-.53	-.66	Intercept	114.24	55.87	-3.21	26.66
					σ_{est}	6.05	8.28	6.78	6.75

*p < .05 (significance levels given only for Beta weights)

**p < .01

[1]Converted scores. Some cases were given Form MA instead of MB at the Mid-tour follow-up.

test variables range from .73 to .78. The multiple correlation for predicting the amount of gain in listening proficiency during the field experience is .68, but it should be noted that this prediction is mainly dependent upon a negative weighting of the end-of-training PACT score, showing that the amount of gain is actually primarily a function of how far the PCV at the end of training had to go. That is, those who were poorest in language proficiency at the end of training gained most, on the average.

It is noteworthy that the beta weights show that there are specific relationships between the two forms of the MLA Cooperative Listening Test and between the two forms of the PACT. Evidently these two tests measure slightly different aspects of listening proficiency. On the other hand, performance on Form B of the Reading test is predicted somewhat better from the Form A Listening test than from the Form A Reading test.

On page 91 it was noted that self-ratings of language competence may reflect a slightly different dimension from what is measured by objective tests. To explore this matter further, Table 46 was prepared to show a regression system based upon both objective tests and self-ratings pertinent to the end of training as predictors, and also, both objective tests and self-ratings at the mid-tour follow-up as criterion variables.

The first set of self-ratings were actually rendered at the time of the mid-tour follow-up, but they were retrospective and referred to the first month in the field, i.e. shortly after the end of training. That they were valid reflections of language competence at the end of training is suggested by the fact that, as we may see in Table 46, these retrospective ratings were more highly correlated with objective test scores at the end of training than with objective test scores attained at the time of the mid-tour follow-up. The correlations of the mid-tour self-ratings with the end-of-training and mid-tour objective proficiency test variables are as follows:

		Midtour Self-Ratings (N = 172)			
		Listening	Speaking	Reading	Writing
End-of-Training:	Listening MA	.54	.50	.44	.44
" " "	Reading MA	.54	.48	.53	.47
" " "	PACT Form A	.57	.51	.50	.51
Midtour:	Listening MB	.42	.46	.37	.40
"	Reading MB	.50	.47	.50	.47
"	PACT Form B	.53	.55	.47	.47
"	PACT Gain	-.26	-.14	-.21	-.24

The midtour ratings tend to be correlated slightly more highly with the end-of-training test scores than with the midtour test scores, a finding that possibly indicates that the midtour self-ratings reflect self-concepts of language competence formed at the end of training and relatively unaffected by the field experience.

Nevertheless, that the self-ratings measure some aspects of language competence that are not measured by the objective tests is again suggested by the fact that for the prediction of midtour self-ratings, the corresponding retrospective end-of-training self-rating has the only significant beta-weight (see Table 46). That is, the retrospective self-rating of listening is the best predictor of the mid-tour self-rating of listening, the retrospective self-rating of speaking ability is the best predictor of the mid-tour self-rating of speaking ability, etc.

Only in the case of the midtour test of Reading ability does a retrospective end-of-training self-rating make any significant contribution to prediction, and this self-rating, not surprisingly, is that of Reading ability. Furthermore, even though the end-of-training objective tests are correlated substantially with the midtour self-

Table 46

Prediction of Mid-Tour Language Proficiency Self-Ratings and Test Score Variables from Data Pertaining to End-of-Training

N = 172, "Qualified" and "Non-Qualified" Groups Combined

		Predictors								Criteria							
		1	2	3	4	5	6	7		8	9	10	11	12	13	14	15
Mean:		2.59	2.31	2.66	2.23	173.14	173.35	47.60		3.98	4.03	3.81	3.30	181.16	183.48	54.85	37.24
S.D.:		1.22	1.19	1.22	1.23	13.44	15.09	13.75		0.86	0.85	0.95	1.08	8.89	13.35	10.28	9.25
		Intercorrelations								Beta-weights							
Self-Rating, 1st Month:																	
Listening	1	1.00	.84	.70	.67	.65	.69	.74	1	.38**	.03	-.02	.11	-.06	.10	.01	.00
Speaking	2	.84	1.00	.69	.65	.65	.70	.72	2	.14	.42**	.05	.07	.02	-.18	.07	.08
Reading	3	.70	.69	1.00	.84	.59	.68	.63	3	-.07	.00	.43**	-.04	-.06	.29*	-.02	-.02
Writing	4	.67	.65	.84	1.00	.58	.67	.65	4	.06	.04	.04*	.49**	-.01	-.18	-.07	-.08
Listening MA[1]	5	.65	.65	.59	.58	1.00	.79	.88	5	.17	.19	-.11	-.06	.61**	.44**	.26*	.29*
Reading MA[1]	6	.69	.70	.68	.67	.79	1.00	.84	6	.04	.00	.13	-.09	-.05	.29**	.07	.08
PACT A	7	.74	.72	.63	.65	.88	.84	1.00	7	.02	.00	.16	.22	.26	.11	.46**	-.98*
									Mult. R:	.65	.67	.72	.82	.74	.79	.76	.68
		Validity Coefficients								b-weights							
Self-Rating, Mid-Tour:																	
Listening	8	.63	.60	.48	.48	.54	.54	.57	1	.27	.02	-.01	.09	-.46	1.05	.05	.03
Speaking	9	.52	.59	.45	.43	.50	.48	.51	2	.10	.30	.04		.11	-2.01	.57	.58
Reading	10	.49	.50	.61	.55	.44	.53	.50	3	-.05	.00	.34	-.04	-.44	2.73	-.18	-.16
Writing	11	.53	.51	.54	.62	.44	.47	.51	4	.04	.03	.03	.43	-.09	-2.00	-.62	-.63
Listening MB (or MA)[1]	12	.45	.47	.39	.39	.73	.57	.68	5	.01	.01	-.01	.00	.40	.44	.20	.20
Reading MB (or MA)[1]	13	.56	.52	.56	.49	.75	.71	.72	6	.00	.00	.01	-.01	-.03	.26	.05	.05
PACT Form B	14	.55	.56	.46	.45	.71	.65	.74	7	.00	.00	.01	.02	.17	.10	.34	-.66
Gain on PACT	15	-.48	-.45	-.42	-.46	-.51	-.53	-.66									
									Intercept	.83	1.23	2.14	3.13	110.52	57.41	-4.60	25.40
									Test	.65	.67	.72	.82	5.96	8.14	6.68	6.75

*p < .05; **p < .01 (Significance levels given only for β-weights)

[1]Converted scores. Some cases were given Form MA instead of MB at the midtour follow-up.

ratings, in no case does an end-of-training objective test make any unique contribution to the prediction of a midtour self-rating.

MIDTOUR DATA COLLECTED FROM PCVs TRAINED IN PORTUGUESE

As noted earlier, midtour data were collected from only one small contingent of PCVs trained in Portuguese and assigned to duty in Brazil. The results obtained from the field questionnaire are so similar in their general character to those analyzed for the PCVs trained in Spanish that it seems hardly worthwhile giving any detailed account of them. The Portuguese-trained PCVs reported about the same amount of difficulty with language problems on arriving in the field as the Spanish-trained students, if account is taken of their respective levels of training. They made much the same kinds of recommendations about possible changes in the language training program. The duties to which they were assigned were in general similar to those already described for the Spanish-trained contingents, except that it may be noted that a much larger proportion of the Portuguese-trained PCVs were assigned to teaching duties, largely the teaching of English.

Table 47 gives the means and standard deviations of various predictor and criterion variables for 24 cases for whom data were complete. The only test which affords any possibility of indicating the amount of progress in Portuguese during the field experience is the PACT, and here the comparison would appear to indicate that there was actually a loss in competence in Portuguese. Unfortunately, no data are available to show how comparable Forms A and B of the Portuguese PACT are; therefore, even this comparison is not interpretable with any degree of definitiveness. If large numbers of the Portuguese-trained PCVs were assigned to the teaching of English, as would appear to be the case, a loss in Portuguese during the field experience could be accounted for by disuse of the skills acquired during training. Yet, as may be seen from Table 48, self-ratings of language skills showed considerable improvement from the first month of field experience to the midtour follow-up. By the time of the midtour follow-up, for example, 20 out of 31, or 64.5%, rated their ability to speak as either "a lot" or "very much." Furthermore, Table 49 shows that 13 out of the 31, or 41.9%, reported no adverse effects of language problems on job performance at the midtour point.

Table 50 presents correlations between predictor and in-field achievement variables. Because of the small number of cases (N = 24), interpretation must be limited to an appraisal of the patterns of relationships, which are in general similar to those found for Spanish-trained PCVs.

The language aptitude score taken at the start of training shows only moderate validity in predicting in-field Portuguese achievement; its highest validity is in predicting reading achievement. Section number in training has slightly higher validity than language aptitude. Of the factor scores derived from the Foreign Language Questionnaire, only Interest tends to show any appreciable predictive validity. The end-of-training Portuguese achievement tests are substantially correlated with in-field achievement tests, as one might expect (in-field Reading achievement being particularly well predicted).

As in the case of the data analyzed for PCVs with assignments in Spanish-speaking countries, the amount of gain from end-of-training to the mid-tour testing was essentially correlated negatively with end-of-training scores. It is unlikely that this result reflects a "ceiling effect" whereby the in-field achievement test did not measure the upper levels of achievement with sufficient precision, because it may be observed that few individuals attained near-perfect scores on the in-field achievement tests. Rather, it seems to reflect a tendency for those with least satisfactory language achievement at the end of training to gain more than those who reached the field already possessing a satisfactory level of language competence. Presumably the former PCVs were under more pressure to improve themselves than the latter.

Table 47

Means and Standard Deviations of Predictor and Criterion Variables, PCVs Trained in Portuguese (N = 24)

Variable	Mean	S.D.
At start of training:		
ΣMLAT	76.4	15.9
Section Number	3.3	1.6
Factor Scores:		
Interest	231.8	126.6
Compulsivity	246.6	97.3
Audiolingual Preference	209.2	97.6
Home Exposure	84.2	127.7
End-of-training:		
ΣListening	245.8	10.8
ΣReading	264.3	18.0
PACT A	43.1	9.4
Midtour:		
Listening Form MB	24.6	6.6
Reading Form MB	26.5	10.4
PACT B	34.1	9.2

Table 48

Self Ratings of Language Proficiency During First Month in the Field and at the Midtour Follow-up, PCVs Trained in Portuguese (N = 31)

	First Mo.		Mid-Tour	
	N	%	N	%
Speak				
Very little	2	6.5	0	0.0
Some	12	38.7	0	0.0
Quite a bit	12	38.7	10	32.2
A lot	3	9.6	13	41.9
Very much	2	6.5	7	22.6
No response			1	3.2
Understand				
Very little	9	29.0	0	0.0
Some	7	22.6	3	9.6
Quite a bit	11	35.5	8	25.8
A lot	4	12.9	13	41.9
Very much	0	0.0	6	19.4
No response			1	3.2
Read				
Very little	4	12.9	0	0.0
Some	13	41.9	4	12.9
Quite a bit	10	32.2	9	29.0
A lot	2	6.5	13	41.9
Very much	2	6.5	4	12.9
No response			1	3.2
Write				
Very little	8	25.8	1	3.2
Some	12	38.7	6	19.4
Quite a bit	8	25.8	14	45.1
A lot	2	6.5	6	19.4
Very much	1	3.2	3	9.6
No response			1	3.2

Table 49

Effect of Language Problems on Job-Performance during the First Month in the Field and at the Mid-Tour Follow-up, PCVs Trained in Portuguese (N = 31)

	First Month in Field		At Mid-Tour Follow-up	
	N	%	N	%
No use of Portuguese				
Get by with English	5	16.2	1	3.2
No adverse effect				
Competence equal to demand	1	3.2	11	35.5
Competence superior to demand	2	6.4	2	6.4
Adverse effect				
Small	18	58.0	16	51.6
Considerable	5	16.2	1	3.2
	31	100.0	31	99.9

Table 50

Validity Coefficients for Several Variables in Predicting Mid-Tour Language Proficiency, N = 24 PCVs Trained in Portuguese

Predictor Variables	Criterion Variables: Listening Form MB	Reading Form MB	PACT Form B	Gain on PACT
Start-of-Training:				
ΣMLAT	.36	.61*	.18	-.24
Section Number (reflected)	.50*	.64**	.35	-.21
Factor Scores:				
Interest	.29	.49*	.44	-.24
Compulsivity	.16	-.18	.15	.38
Audiolingual Preference	.11	.10	-.07	-.07
Home Exposure	-.07	.08	.09	-.16
End-of-Training:				
ΣListening	.54*	.75**	.40	-.46*
ΣReading	.15	.45*	.15	-.06
PACT A	.49*	.73**	.54*	-.50*

*p < .05; **p < .01 (Two-tailed test)

Because of the small numbers of cases involved, it is not considered useful to report multiple regression analyses of these data.

SUMMARY

Out of the 336 students of Spanish and 48 students of Portuguese who were studied at the end of training, 176 PCVs assigned to Spanish-speaking countries and 31 assigned to a Portuguese-speaking country were followed up and tested in the field, some five to ten months after they had arrived in the host country. Because of the larger numbers involved, most of the results reported in this chapter are from the PCVs trained in Spanish.

In the In-Field Questionnaire, they were asked to assess their competence in the foreign language and the effect of language problems on job performance when they first arrived in the field. About two-thirds of the group reported that at that time language problems had at least some adverse effect on their job performance. Their responses were used to set a "qualifying level" on the language proficiency tests that had been administered at the end of training, such that the qualifying level optimally differentiated those who reported some or considerable adverse effects of language problems from those who reported that their competence was equal or superior to the demand.

During the course of the field experience, however, considerable progress in overcoming language problems was reported by the group. Those who were already competent in Spanish at the outset of the field tour took only a month or so, on the average, to adjust completely to the linguistic demands of their jobs in the host country. Those who had not reached the qualifying level on the proficiency tests at the end of training took on the average five months to overcome the difficulty of being noticeably halting and non-fluent in speaking Spanish.

At the time of the midtour follow-up, the majority of the PCVs, even those who had not initially reached the qualifying level on the end-of-training proficiency tests, rated their abilities in spoken Spanish as quite high. Only 10% of the initially "qualified" group reported any adverse effects of language problems on job performance, and only 50% (as compared with 94% at the time of arrival in the field) of the initially "non-qualified" group reported such problems at all. Still, there were a few PCVs even at the time of the midtour follow-up who apparently were not using Spanish in their work at all, and 9% of the initially "non-qualified" group were still reporting "considerable" adverse effects of language problems on job performance.

At the time of the midtour inquiry, the majority of the PCVs--about 73% of them--thought the length of the training program had been proper; 23%, however, thought it should have been longer, and 4% thought it should have been shorter. A very large number of the respondents thought that regardless of the length of the training program, there should have been even more emphasis than there was on speaking and listening training, as well as on the development of vocabulary.

Language competence at the midtour point was tested objectively by means of alternate forms of tests that had also been given at the end of training. On these tests, those who were already at qualifying levels at the end of training showed little or no progress, except in reading levels. The remainder, i.e., those who had not met qualifying levels by the end of training, made considerable gains, although progress did not appear to be as rapid as it had been during the period of formal training. Whereas 1.6% of the initially "non-qualified" group were technically above the qualifying level on one of the tests at the end of training, 28.7% were above this level at the midtour testing, and the majority of the remainder were not far behind. Nevertheless, progress was very good when compared with norms for the performance of college students studying Spanish. Ninety-six per cent of the initially "non-qualified" PCVs had scores on the advanced ("M") form of the Cooperative Listening Test that were above the median for second-year college norms. Even if not all the "non-qualified" group attained the

rather high qualifying levels set on the proficiency tests, most of them were clearly far ahead of the performance of the typical graduate of a two-year college course in Spanish.

It was shown that even though objective proficiency tests did not do a particularly good job of identifying those who would report adverse effects of language deficiencies on job performance at the midtour point, scores on the test were associated with the probability of making such reports.

It was found that language proficiency at the midtour testing could be predicted quite well--with multiple correlations ranging up to .72--from data available at the start of training. The patterns of relationships were highly similar to those found for the prediction of language proficiency at the end of the formal training period. For persons who already had some knowledge of Spanish, language proficiency at the midtour testing was primarily dependent upon the level of proficiency measured at the start of training, and only secondarily upon language aptitude and other variables. For persons who had no knowledge of Spanish at the outset of training, language aptitude as measured by the Modern Language Aptitude Test was a strong predictor. Certain questionnaire factor scores made small but significant contributions for certain groups. Aside from the initial level of language proficiency, there were no good predictors of the amount of gain in language competence the PCV would make during the field experience.

Statistical data are also given to show how midtour language competence could be predicted from combinations of data from the start of training and the end of training, and from data from the end of training alone.

Chapter 8

Studies of Attrition

During the data-gathering period of this study there were many students who left the Peace Corps for various reasons. The present study of attrition deals with differences in language aptitude and proficiency prior to Peace Corps enlistment among four groups of trainees: those who left during the training program, those who left at the end of the training program and before assignment to the field, those who left after field assignment but before the mid-tour appraisal, and those who were still in service at the time of the in-field follow-up. Language aptitude was measured by the EMLAT scores and, for students of Spanish, prior linguistic proficiency was measured by Section Placement scores.

ANALYSIS OF ATTRITION FOR STUDENTS OF SPANISH

Means and standard deviations of EMLAT scores and Section Placement scores for cases in our sample, categorized by withdrawal status, are given in Table 51. The differences in language aptitude among the four main groups defining withdrawal status are statistically significant ($F_{3,446} = 3.44$; $p < .025$), and the trend is the expected one; i.e., those with lower language aptitude scores are more likely to leave the Peace Corps during or at the end of training than are those with higher language aptitude scores. Within the "terminated during training group," those who left because of language ineptitude score significantly lower on the language aptitude test than do those who left for other reasons ($t = 2.33$, $p < .05$).

The differences among the withdrawal status groups in prior Spanish proficiency are also statistically significant ($F_{3,449} = 5.81$, $p < .001$). Those who left the Peace Corps during or at the end of training were less proficient in Spanish, as measured by section placement, before enlisting in the Peace Corps than were those who left soon after field assignment or who were still in service. Those who were terminated for language ineptitude during training were also initially less proficient in Spanish than those who were terminated for other reasons during training ($t = 3.71$, $p < .05$).

Withdrawal Status, Language Aptitude, and Prior Spanish Proficiency

Table 52 reports the percentage of students in each withdrawal category by EMLAT score for each of two Prior Proficiency Groups.[1] There is a significant relationship between knowledge of Spanish prior to Peace Corps enlistment and termination of service before the midtour follow-up ($\chi^2 = 6.5760$, $p < .02$). Thirty-eight per cent of the students without prior knowledge of Spanish left the Corps during or at the end of training, while twenty-five per cent of those with prior Spanish knowledge left within the same time period. The percentages of early field terminations were small and equal for the two groups (5.1%).

If we consider all 436 cases with EMLAT scores, there is a slight tendency for

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[1]The records of all cases were examined to see whether there was any evidence that they had some prior knowledge of Spanish. Cases were assigned to the Prior Knowledge group if they met one or more of the following conditions:

1. A Spanish Placement Test score was available.
2. They had taken one or more courses in Spanish prior to Peace Corps enlistment.
3. They had Spanish-speaking parents.

Table 51

Mean Language Aptitude and SPS Scores, By Time and Reason for Separation, as Compared to Data for Those Still in Service

	ΣMLAT			SPS		
	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Separated During Training						
for Language Ineptitude	6	46.8	17.5	6	26.0	6.9
for Lack of Motivation	12	62.2	13.6	13	49.5	8.2
Temporary or Permanent Withdrawal	6	63.3	26.9	6	45.7	23.5
for Personal Unsuitability	43	66.3	14.6	45	45.0	12.2
Miscellaneous	10	52.4	17.9	10	44.2	10.8
Total	74	62.1	17.6	80	44.3	13.6
Separated at End of Training						
for Language Ineptitude	1	40.0		1	30.0	
for Lack of Motivation	2	72.0	26.0	2	52.5	9.0
for Personal Unsuitability	49	63.0	14.6	50	47.9	9.9
Miscellaneous	7	68.0	20.1	7	48.7	8.1
Total	59	63.5	15.3	60	47.9	10.0
Separated in Field Service						
for Personal Adjustment	10	73.3	27.0	10	44.2	14.1
Miscellaneous	19	71.3	16.7	19	53.2	14.9
Total	29	72.0	20.9	29	50.1	15.2
Still in Service (at Mid-Tour Follow-up)	288	67.7	17.9	284	50.1	9.9
Total Sample (Entrants into Training)	450	66.5	17.9	453	48.8	10.7

Table 52

Withdrawal Status, ΣMLAT Groups, and Prior Proficiency

A. Cases with No Prior Spanish

	ΣMLAT Raw Scores											
	0-49		50-66		67-83		84-119		None		Total	
Withdrawal Status	N	%	N	%	N	%	N	%	N	%	N	%
During Training												
Language Ineptitude	3	8.8	1	2.6	1	1.7	0	0.0	0	0.0	5	3.2
Personality Unsuitability	2	5.9	4	10.3	11	18.6	1	5.0	2	33.3	20	12.7
Miscellaneous	2	5.9	3	7.7	3	5.1	0	0.0	2	33.3	10	6.3
Total	7	20.6	8	20.5	15	25.4	1	5.0	4	66.7	35	22.2
End of Training												
Language Ineptitude	1	2.9	0	0.0	0	0.0	0	0.0	0	0.0	1	0.6
Personality Unsuitability	6	17.6	6	15.4	8	13.6	2	10.0	0	0.0	22	13.9
Miscellaneous	0	0.0	0	0.0	2	3.4	0	0.0	0	0.0	2	1.3
Total	7	20.6	6	15.4	10	16.9	2	10.0	0	0.0	25	15.8
Early Field												
Total	1	2.9	0	0.0	7	11.9	0	0.0	0	0.0	8	5.1
Total Terminated	15	44.1	14	35.9	32	54.2	3	15.0	4	66.7	68	43.0
Still in Service at Midtour	19	55.9	25	64.1	27	45.8	17	85.0	2	33.3	90	57.0
All cases	34	100.0	39	100.0	59	100.0	20	100.0	6	100.0	158	100.0

B. Cases with Prior Spanish

	ΣMLAT Raw Scores											
	0-49		50-66		67-83		84-119		None		Total	
Withdrawal Status	N	%	N	%	N	%	N	%	N	%	N	%
During Training												
Language Ineptitude	1	2.2	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
Personality Unsuitability	4	8.9	6	8.5	9	7.5	2	4.2	0	0.0	21	7.2
Miscellaneous	4	8.9	6	8.5	6	5.0	0	0.0	1	12.5	17	5.8
Total	9	20.0	12	16.9	15	12.5	2	4.2	1	12.5	39	13.4
End of Training												
Language Ineptitude	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Personality Unsuitability	3	6.7	12	16.9	9	7.5	3	6.2	1	12.5	28	9.6
Miscellaneous	2	4.4	1	1.4	2	1.7	2	4.2	0	0.0	7	2.4
Total	5	11.1	13	18.3	11	9.2	5	10.4	1	12.5	35	12.0
Early Field												
Total	0	0.0	5	7.0	4	3.3	5	10.4	1	12.5	15	5.1
Total Terminated	14	31.1	30	42.3	30	25.0	12	25.0	3	37.5	89	30.5
Still in Service at Midtour	31	68.9	41	57.7	90	75.0	36	75.0	5	62.5	203	69.5
All cases	45	100.0	71	100.0	120	100.0	48	100.0	8	100.0	292	100.0

Table 52 (continued)

C. All cases

	ΣMLAT Raw Scores											
	0-49		50-66		67-83		84-119		None		Total	
Withdrawal Status	N	%	N	%	N	%	N	%	N	%	N	%
During Training												
Language Ineptitude	4	5.1	1	0.9	1	0.6	0	0.0	0	0.0	6	1.3
Personality Unsuitability	6	7.6	10	9.1	20	11.2	3	4.4	2	14.3	42	9.3
Miscellaneous	6	7.6	9	8.2	9	5.0	0	0.0	3	21.4	27	6.0
Total	16	20.3	20	18.2	30	16.8	3	4.4	5	35.7	74	16.4
End of Training												
Language Ineptitude	1	1.3	0	0.0	0	0.0	0	0.0	0	0.0	1	0.2
Personality Unsuitability	9	11.4	18	16.4	17	9.5	5	7.4	1	7.1	50	11.1
Miscellaneous	2	2.5	1	0.9	4	2.2	2	2.9	0	0.0	9	2.0
Total	12	15.2	19	17.2	21	11.7	7	10.3	1	7.1	60	13.3
Early Field												
Total	1	1.3	5	4.5	11	6.1	5	7.4	1	7.1	23	5.1
Total Terminated	29	36.7	44	40.0	62	34.6	15	22.1	7	50.0	157	34.9
Still in Service at Midtour	50	63.3	66	60.0	117	65.4	53	77.9	7	50.0	293	65.1
All cases	79	100.0	110	100.0	179	100.0	68	100.0	14	100.0	450	100.0

those in the lower two EMLAT score groups to have a higher probability of being terminated than those in the upper two score groups ($\chi^2_3 = 6.31$; $p < .10$). Actually, of course, most of the terminations were for personality unsuitability rather than language ineptitude. Because the numbers of students terminated for language ineptitude were so small, it was not possible to test for the significance of the trend for those with low EMLAT scores to be terminated for that reason. Approximately four per cent of students with no prior knowledge of Spanish and less than one per cent of students with prior knowledge of Spanish were terminated for language ineptitude during or at the end of training. The largest number of such terminations came from students with no prior knowledge of Spanish and with EMLAT scores of 49 or below. There were no terminations for language ineptitude from either of the groups with high EMLAT scores (84 or above). (It is not known to what extent the language aptitude scores directly influenced the assignment of "language ineptitude" as the reason for termination.

ANALYSIS OF ATTRITION FOR STUDENTS OF PORTUGUESE

Thirty-one (64.6%) of the forty-eight students of Portuguese were still in service at the end of five to six months in the field. Of the original number, eleven (22.9%) were terminated during training, and six (12.5%) left the Peace Corps soon after being assigned to the field. Means and standard deviations of the EMLAT score distributions and section assignments of these groups are given in Table 53. There are no significant differences in language aptitude among these groups ($F = .98$), but the differences in section assignment are significant ($F = 24.93$, $p < .01$). Those who were less proficient in Portuguese prior to Peace Corps enlistment, as indicated by section assignment, were more likely to leave the Corps than were those who were relatively more proficient in the language before entering Peace Corps training. This statement is further substantiated by the fact that the relationship between having had at least one course in Portuguese before entering the Peace Corps and remaining in the Peace Corps for at least five or six months of in-field service is significant ($\chi^2 = 13.31$, $p < .001$).

Table 53

Students of Portuguese: Withdrawal Status, Language Aptitude, and Prior Portuguese Proficiency

Withdrawal Status	N	EMLAT		Section Assignment	
		$\bar{X}$	SD	$\bar{X}$	SD
Left Training	11	74.1	13.6	4.2	1.8
Left Early Field	6	62.8	15.5	3.5	2.3
Still in Service	31	75.0	14.9	3.2	1.6
	48				

REFERENCES

Bolinger, D. L., et al. Modern Spanish; A project of the Modern Language Association. New York: Harcourt, Brace, 1960.

Bull, William E. A visual grammar of Spanish. Los Angeles: University of California, 1961.

Calvert, Laura D. Notes on the Peace Corps language training program. Modern Language Journal, 1963, 47 (7), 319-323.

Calvert, Laura D. Role of written exercises in an audio-lingual program. Hispania, 1965, 48, 313-316.

Campbell, D. T., and Fiske, D. W. Convergent and discriminant validation by the multitrait-multimethod matrix. Psychological Bulletin, 1959, 56, 81-105.

Carroll, John B. Wanted: a research basis for educational policy on foreign language teaching. Harvard Educational Review, 1960, 30, 128-140.

Carroll, John B. The prediction of success in intensive language training. In R. Glaser (Ed.), Training research and education. Pittsburgh: University of Pittsburgh Press, 1962. Pp. 87-136. [Also published in paperback by John Wiley & Sons, 1965.]

Carroll, John B. A model of school learning. Teachers College Record, 1963, 64, 723-733. (a)

Carroll, John B. Research on teaching foreign languages. In Gage, N. L. (Ed.), Handbook of research on teaching. Chicago: Rand McNally, 1963. Pp. 1060-1100. (b)

Carroll, John B. The foreign language proficiency of foreign language majors near graduation from college. Cambridge, Mass.: Laboratory for Research in Instruction, Graduate School of Education, Harvard University, 1966. (In preparation)

Carroll, John B., & Ho, Wai-Ching. Report on the development of a series of tests of Chinese language proficiency. Cambridge, Mass., 1959. (Mimeo.)

Carroll, John B., & Sapon, Stanley M. Modern Language Aptitude Test. New York: The Psychological Corporation, 1958.

Carton, Aaron S., & Carroll, John B. The 1959 Summer Russian Language Training Program: Final Report of Testing Project. Cambridge, Mass.: Graduate School of Education, Harvard University, July 1960. (Mimeo.)

Clark, John L. D. Item-by-item parallel achievement tests for different foreign languages. Journal of Educational Measurement, 1965, 2, 77-83.

Educational Testing Service. Handbook, MLA Cooperative Foreign Language Tests. Princeton, N. J., 1965. (a)

Educational Testing Service. Booklet of Norms, MLA Cooperative Foreign Language Tests. Princeton, N. J., 1965. (b)

Guttman, L. The quantification of a class of attributes: a theory and method of scale construction. In P. Horst (Ed.), The prediction of personal adjustment. Social Science Research Council, Bulletin 48, 1941.

Handrick, Fannie A. The role of motivation in foreign language learning. Qualifying Paper submitted to the Harvard Graduate School of Education, June 1965.

Hobbs, Nicholas. A psychologist in the Peace Corps. American Psychologist, 1963, 18 (1), 47-55.

Krug, Robert E. An analysis of eighteen Peace Corps projects. Pittsburgh: American Institute for Research, 1962.

Landgraf, John L. Peace Corps and languages: an introduction. Linguistic Reporter (Center for Applied Linguistics, Washington), 1963, 5 (2), 1-2.

Riccio, Guy J. Introduction to Brazilian Portuguese. Annapolis, Md.: United States Naval Institute, 1957.

Rice, Frank A. The Foreign Service Institute tests language proficiency. Linguistic Reporter, 1959, 1 (2), 4.

Stein, Morris I. Volunteers for peace: the first group of Peace Corps Volunteers in a Rural Community Development Program in Colombia, South America. New York: Wiley, 1966.

Topping, Donald M., & Cammack, Floyd M. University of Hawaii Peace Corps Language Training Program. Language Learning, 1965, 25 (1-2), 29-42.

Wallmark, M. The vertical equating of the MLA Cooperative Foreign Language Tests and the MLA Foreign Language Proficiency Tests for Teachers and Advanced Students. Princeton, N. J.: Educational Testing Service, 1966.

Appendix A

Class Log Form

Date_____ Hour__ _____ Section____ Instructor_____

Students absent: Name, ason for absence (if known)_____

Textbook or other media l:	Pages (sections, etc):	What the teacher did:	What the student did:

Condition of students: "Alert"____ "Dull"____ "Medium"____ Remarks?_____

Any unusual happenings, interruptions, etc.?_____

Assignment for next period (stated or implied)?_____

Any other remarks?

Appendix B

FOREIGN LANGUAGE QUESTIONNAIRE

Preliminary Information

We are conducting a study to try to determine how an individual's language background is related to his learning of a foreign language in courses such as those given in the Peace Corps. One of the major purposes of the study is to see in what ways foreign language teaching can be made more efficient and productive. In order to make this study, it is necessary for us to have considerable, and quite specific, information about each trainee's foreign language contacts, both in and out of the classroom, prior to his entry into the Peace Corps program. Thus, we would like to ask your cooperation in completing the following questionnaire as thoroughly and as accurately as possible. The questionnaire may appear somewhat long, particularly for those who have had an extensive foreign language background, but you should be able to complete it in twenty to thirty minutes. Ample time has been scheduled for this purpose.

The DIRECTIONS given you at the beginning of each of the various parts of the questionnaire are designed to help you fill out each part in the most accurate and efficient manner. Please follow the directions carefully, and do each part in the order in which it is presented. If you have any questions in the course of the questionnaire, raise your hand and the supervisor will help you.

We would like to point out that the entire questionnaire is completely confidential in nature. We are asking you to give your name only to make sure that we have received a form from each student. After the questionnaires are collected, all answers will be coded and combined statistically. Individual questionnaires will <u>not</u> be seen by a Peace Corps officer at any time. Summary statistics about <u>groups as a whole</u> will eventually be made, but no individual answers will ever be identified. The success of our project depends in large part on having you mark <u>what is true of you</u>, so please mark every item frankly and accurately.

FOREIGN LANGUAGE QUESTIONNAIRE

PART ONE - BACKGROUND DATA

PLEASE PRINT YOUR NAME: _____
Last First Initial

WHAT IS YOUR PROGRAM? (example: Colombia VIII) _____

DIRECTIONS: Please place check marks in the appropriate blanks, and write in answers where necessary.

1) My father's/mother's native language is English.
Father: Yes____ No____ (specify language) _____
Mother: Yes____ No____ (specify language) _____

2) Although English is his native language, my father/mother can carry on a reasonably fluent social conversation in some language(s) other than English.
Father: No____ Yes____ (specify language or languages) _____
Mother: No____ Yes____ (specify language or languages) _____

3) Although English is his native language, my father/mother can read books and magazines in some language(s) other than English.
Father: No____ Yes____ (specify language or languages) _____
Mother: No____ Yes____ (specify language or languages) _____

4) I have conversed with my father and/or mother in some language(s) other than English.
No____ Yes____ (specify language or languages) _____

5) In comparison to their interest in my <u>other academic courses</u>, my parents were
less interested____ equally interested____ very interested____
in my achievements in foreign language study.

6) I have had the opportunity to hear my father and/or mother conversing with friends in some language(s) other than English.
No____ Yes____ (specify language or languages) _____

7) I have studied Latin.
No____ Yes____ (give number of semesters studied)____

8) I have studied Greek.
No____ Yes____ (give number of semesters studied)____

(Note: This questionnaire has been specially prepared by Harvard Graduate School of Education for use only in connection with the Peace Corps language research project which it is conducting.) September 1963

PART TWO - REGULAR LANGUAGE COURSES: SUMMARY

DIRECTIONS: The Modern Language Course Table on the next page is intended to provide a summary of all the regular classroom training which you have had in any modern foreign language (not Latin or Greek) in high school or college. "Regular" training is any daytime, school instruction during the regular school year. Summer courses and other special situations will be examined later on in the questionnaire, so do not mention Latin, Greek, summer or special courses in this table. If you studied modern spoken Hebrew at any time do not list it in this table, but include it later on in the questionnaire under "Other Language Contacts". The Table should be filled out as follows:

FIRST: in the left-hand column of the HIGH SCHOOL part of the table, cross out with a large "X" any semester(s) in which you had no regular classroom training in any modern foreign language. You should be left with a list of high school semesters in which you had some classroom training in a modern foreign language or languages. If your high school did not use the usual semester system, check with the supervisor for instructions.

SECOND: write in the middle column the name (French, Spanish, German, etc.) of the language studied during each semester remaining. If you studied more than one modern foreign language in any one semester, check with the supervisor.

THIRD: in the left-hand column of the COLLEGE part of the table, cross out any semester(s) in which you had no regular classroom training in any modern foreign language. If your college did not use the usual semester system, check with the supervisor for instructions.

FOURTH: write in the middle column the name of the language studied during each semester remaining. If you studied more than one language during any one semester, check with the supervisor.

FIFTH: starting at the top of the HIGH SCHOOL part of the table, number each language course (i.e., each line on which you have written a language), writing the number in the right-hand column. You should number from "1" through....., continuing your numbering down through the COLLEGE part of the table. The last number in the completed table should be the total number of regular modern foreign language courses (semesters) you have taken in high school (if any) and college (if any).

SIXTH: when every one has completed his table, the supervisor will pass out Course Information Sheets. You will need to take as many of these sheets as you have numbers on your table.

Appendix B (continued)

MODERN LANGUAGE COURSE TABLE

HIGH SCHOOL

SEMESTER	LANGUAGE	NUMBER
Fall 9th		
Spring 9th		
Fall 10th		
Spring 10th		
Fall 11th		
Spring 11th		
Fall 12th		
Spring 12th		

COLLEGE

SEMESTER	LANGUAGE	NUMBER
Fall Fresh.		
Spring Fresh.		
Fall Soph.		
Spring Soph.		
Fall Jun.		
Spring Jun.		
Fall Sen.		
Spring Sen.		

PART THREE - REGULAR LANGUAGE COURSES: INFORMATION SHEETS

DIRECTIONS:

FIRST: when you receive your Course Information Sheets, number them from "1" through....., putting the number in the large box at the top right-hand corner of each sheet. Also, print your name on each sheet in the space provided.

SECOND: remembering back as well as you can what your foreign language courses were like, please fill out one Course Information Sheet for each course listed in your table, being very careful that the sheets as you have numbered them correspond to the courses numbered in the table. We realize that it is difficult to look back at courses taken some time ago, but please try to recollect as much as is humanly possible about each course. Try not to leave any item blank; if you cannot remember certain things, write DK (don't know). If information which you have given on an earlier sheet is repeated later on (for example, name of school, addresses, etc.) you may abbreviate, use ditto marks, and so forth, so long as we will be able to recreate the information from your notation and prior sheets. When you have finished filling out the Course Information Sheets, please go on to the remaining parts of the questionnaire.

PART FOUR - OTHER LANGUAGE CONTACTS

DIRECTIONS: This part of the questionnaire is intended to provide a summary of any special training (as opposed to the regular school-year classes) which you have had in any modern foreign language. Please read each of the items below. If one or more apply to you, follow the instructions given for those items.

SUMMER SCHOOL COURSES: If you attended any foreign language classes given during the summer, please ask the supervisor for one additional Course Information Sheet for <u>each</u> summer course taken. In the box at the top of the page, write "SS" and the date the course was taken (example: SS - Summer 1962). Then fill out the sheet(s) in the regular way.

NIGHT SCHOOL COURSES: If you attended any foreign language classes given during the evening, please ask the supervisor for one additional Course Information Sheet for each course taken in this way. In the box at the top of the page, write "NS" and the period during which the course was taken (example: NS - Sept.1960 through Jan.1961). Then fill out the sheet(s) in the regular way.

COMMERCIAL COURSES, SPECIAL TUTORING: If you have had any foreign language instruction from a commercial language school (example: Berlitz), or if you were tutored privately either in connection with regular language classes or for some special reason (example: summer travel abroad), please check with the supervisor to see whether you should fill out a Course Information Sheet with this information or describe your experience in some other way.

OTHER LANGUAGE CONTACTS: If you have had any foreign language contacts which have not been described in other parts of the questionnaire, but which you believe may have had some effect on your knowledge of a foreign language, please check with the supervisor to see whether you should fill out a Course Information Sheet with this information or describe your experience in some other way.

PART FIVE

DIRECTIONS: For each of your Course Information Sheets (including any filled ou, under Part Four) please read over each item quickly and place a "plus" mark (+) immediately above your answer if you are quite sure that your information (memory) for that item is correct. Place a "zero" (0) if you are reasonably sure that this was the case, and a "minus" mark (−) if there is some doubt in your mind that this entry is correct (a "DK" entry is its own minus mark). Although you will obviously be certain about some of the answers on the sheets (such as the name of your school) we would still like to have you mark each item on the sheet with one of these three designations. Do not hesitate to use "0" or "−" if you have some doubt about your answer; on the other hand, mark "+" if you think the answer is correct.

PART SIX

DIRECTIONS: This final section consists of a number of questions about your interest in and attitude toward foreign languages before you became interested in the Peace Corps program. Since foreign language training is so much a part of your work in the Peace Corps w· would expect that your attitude toward foreign languages might be at present somewhat different from what it was prior to your entry into the Peace Corps. We would like to know what you thought and did about foreign languages in the past, before you even had the idea that you might someday enter the Peace Corps. So, for the next items, please bear in mind that we are concerned with the past, with your "pre-Peace Corps" feeling, insofar as you can remember it. Please answer these questions as you were before you had "even heard about" the Peace Corps. Remember, too, that the answers are confidential---if you didn't like or weren't interested in foreign languages, say so. Frank answers are much more important to our project than "polite" or "good" ones.

Remember: ALL THESE SHOULD BE "PRE-PEACE CORPS" ANSWERS. Check marks (✓) are sufficient (i.e., not +, 0, and −).

1) I voluntarily and entirely on my own (not in connection with any class) picked up and attempted to read a foreign magazine or newspaper. Yes_____No_____
2) I voluntarily and entirely on my own attempted to read one or more plays, novels, or other serious works in a foreign language. Yes_____No_____
3) I would have enjoyed joining a club whose main object was to make it possible for students to converse with one another in a foreign language, hear lectures in the language, and so forth. Yes_____No_____

Appendix B (continued)

4) If I had had a foreign friend who was quite fluent in English and liked to speak English, I would still rather have had him talk to me in his native language. Yes____ No____

5) I would rather have taken a foreign language test by (choose one):
   A) having the teacher say the sentences. A____ B____
   B) having the teacher write the sentences on the board.

6) I would rather have:
   A) studied a foreign language by listening to a recording. A____ B____
   B) studied a foreign language by reading in a book.

7) I thought that foreign languages should be:
   A) taught to all students. A____ B____ C____
   B) taught only to those who want to study it.
   C) omitted from the curriculum.

8) When seeing a foreign film, I preferred to:
   A) have the actors speaking in the foreign language and no subtitles. A____ B____ C____
   B) have English subtitles, with the actors speaking in the foreign language.
   C) have the actors speaking in English, and no subtitles.

9) In comparison to my other courses, I was
   A) very interested A____ B____ C____
   B) equally interested
   C) less interested in foreign language study.

10) In thinking about the foreign language courses which I have taken, if I could "do it all over again," I would probably:
   A) have taken more foreign language courses. A____ B____ C____
   B) have taken about the same number of foreign language courses.
   C) have taken fewer foreign language courses.

11) Outside of class, and when not doing homework, I used to think o. words, things, or ideas in a foreign language:
   A) quite often. A____ B____ C____
   B) once in a while.
   C) hardly ever.

12) Whenever foreign language homework was assigned, I usually:
   A) did it punctually, often giving it preference over other kinds of homework. A____ B____ C____
   B) did it more or less willingly along with other homework.
   C) usually put it off in preference to other kinds of homework.

Appendix B (continued)

13) If I had had the opportunity to determine the way in which foreign languages were taught at my school, I would probably have:

A) decreased the amount of training required. A____B____C____

B) kept the amount of training as it was.

C) increased the amount of training required.

14) After I had been working at foreign language homework for some time, I found that I:

A) had a tendency to think about other things. A____B____C____

B) was interested enough to get the assignment done.

C) became very interested in what I was studying.

15) Compared to the others in my language classes I think I actually:

A) studied less than most of them. A____B____C____

B) studied about as much as most of them.

C) studied more than most of them.

16) In order to get a given grade, I think I would have to have:

A) studied more than most of them. A____B____C____

B) studied about as much as most of them.

C) studied less than most of them.

17) With the knowledge of the foreign language which you had immediately before entering the Peace Corps, which of the following things could you have done most readily? Please write "1" opposite the thing you could have done most readily, "2" opposite the thing you could have done next most readily, and so forth. Please give one different number (1-4) to each thing.

A) listened to the radio programs broadcast from a foreign station____

B) struck up a conversation with a fellow traveler who spoke only the foreign language ____

C) read a popular book written in the foreign language ____

D) written a letter in the foreign language to a travel agency asking for information ____

18) If I had had the opportunity, I would have been willing to spend time learning the rudiments of some "out-of-the-way" language such as Swahili (check one):

definitely____probably____possibly____probably not____definitely not____

19) If I had married a person whose native language was not English, I would have learned his (her) language even if we both knew English.

definitely____probably____possibly____probably not____definitely not____

20) Place a check mark anywhere along the line below to indicate how much you liked foreign languages compared to your other courses:

Foreign language courses were my least preferred courses. ——————— Foreign language courses were my most preferred courses.

21) Generally speaking, during foreign language classes, I tended:

To think about various other things. ——————— To become wholly absorbed in the subject matter.

22) Compared to others in my foreign language classes, I would have considered myself:

very inferior ——————— very superior

in foreign language ability.

23) Please rank the four language skills below from 1 to 4. Write "1" opposite the skill you were best at, "2" opposite the skill you were next best at, and so forth. Even though you may have considered yourself almost equally good (or bad) at two or more skills, please try to make a choice, giving one different number to each skill.

listening____
speaking_____
reading_____
writing_____

THIS IS THE END OF THE QUESTIONNAIRE. Please check to see that your name is on the first page of the Questionnaire and on each of the Course Information Sheets. Then place the Course Information Sheets inside the body of the Questionnaire and hand in to the supervisor. Thank you very much for your help.

Appendix B (continued)

[Sufficient copies of this were supplied so that all relevant courses could be reported]

COURSE INFORMATION SHEET

Your last name_____

COURSE NUMBER: [ ]

1) Grade in which course taken (example: 6th grade, college freshman)_____

2) Descriptive name of course (beginning French, intermediate Spanish, etc.)

_____

3) Name of school_____ Name of teacher_____

4) Address of school_____

5) How was school year divided?

A) by semesters A____ B____

B) in some other way

(If "other," explain_____)

6) If a secondary school, was it: (mark your answer in right-hand column)

A) public A____ B____ C____

B) private

C) parochial

If a college, was it:

A) state supported A____ B____

B) private

7) How many hours per week did the language class meet, excluding work in the language laboratory? (A single class meeting of 40 minutes to 1 hour should be considered an "hour") hours per week____

8) Was student work in a LANGUAGE LABORATORY, either voluntary or assigned, a part of this course? Yes____ No____

(If "No", skip to item 9; if "Yes", fill in below)

If language laboratory attendance was ENTIRELY VOLUNTARY, check the one most appropriate statement:

A) I went once or twice at the beginning of the course, but not after that. A____ B____ C____

B) I went once or twice at the beginning of the course and occasionally just before quizzes and tests.

C) I went more or less regularly, regardless of whether tests or quizzes were to be given.

If language laboratory attendance was REQUIRED, check the one most appropriate statement:

A) I went fewer times (or for shorter periods) than was required. A____ B____ C____

B) I did the required work, but really no more.

C) I did the required work and also spent a fair amount of extra time in the lab on my own.

How many hours were required per week in the language laboratory? ____

QUESTIONS CONTINUED ON REVERSE SIDE

Appendix B (continued)

9) Check the one most appropriate statement: The <u>class-room teacher</u>:

A) was a native speaker of the foreign language. A____B____C____D____

B) was not native, but had a "native" accent.

C) had a somewhat non-native accent.

D) had a definitely non-native accent.

10) How many students were there in the language class (under one teacher)?

fewer than 10____; 10 to 20____; 20 to 30____; over 30____.

11) During the class period, the teacher (mark one):

A) spoke almost entirely in English, except when reading foreign sentences. A____B____C____

B) spoke sometimes in the foreign language; attempted to explain things in the foreign language.

C) spoke the foreign language almost exclusively, using English as little as possible.

12) For this class, <u>written</u> homework was assigned:

A) never or rarely. A____B____

B) quite consistently.

13) For this class, special sheets, learning guides, and so forth (not quizzes) <u>which the teacher had produced himself</u>, were handed out:

A) never or rarely. A____B____

B) quite consistently.

14) In addition to the regular textbook, a separate book or books of reading selections was used. Yes____No____

15) The <u>final examinations</u> for this course involved the following.

paper and pencil----------Yes____No____

the students' listening to questions, sentences, etc. read aloud by the teacher----------Yes____No____

the students' speaking to the teacher (in the foreign language)----------Yes____No____

the students' listening to a tape recorder----------Yes____No____

the students' speaking into a tape recorder (in the foreign language)----------Yes____No____

16) My final grade in the course was:

about "A"____about "B"____about "C"____about "D"____lower____.

(If your school did not grade in this way, please give your grade in your school's system, with a brief explanation of its meaning)_____

_____

17) This course was: elective____required____(If "required", would you have taken the course if it had not been required? Yes____No____

Appendix C

Rationale and Computational Procedures Used in Questionnaire Factor Analysis[1]

This Appendix presents a detailed account of the procedures used to derive factor scores based upon certain sets of items in the Foreign Language Questionnaire shown in Appendix B.

As an inspection of that questionnaire will reveal, the items contain different numbers of alternative responses, and frequently there is no obvious or *a priori* manner of scaling the responses so as to yield a singl dimension along which individual differences in attitudes and opinions could be measured. Statistical techniques were therefore used to help in deciding on the number of dimensions inherent in the data collected and to develop optimal scoring weights for the responses for each such dimension.

The method chosen is closely related to one proposed by Guttman (1941). Consider a score matrix $\mathbf{X} = [X_{ij}]$ where X_{ij} is the response of the ith individual to the jth item. The items are the n discrete alternative response positions associated with the several questions in a questionnaire, and each score X_{ij} takes the value 1 if individual i responded by marking alternative j, and 0 otherwise. In general, the number of alternatives will be at least twice as great as the number of questions, and there will be redundancy and dependency in the matrix $\mathbf{X}$ to the extent that each respondent is constrained to mark one and only one alternative response to each question. If it is desired to eliminate this redundancy, the score matrix may be set up to contain only the responses to the first $(m - 1)$ alternatives, where m is the number of alternatives for a given question. However, it is in principle immaterial whether $\mathbf{X}$ contains redundancy or not.

A composite score for person i based upon a weighted sum of his responses is:

$$S_i = w_1X_1 + w_2X_2 + \ldots + w_jX_j + \ldots + w_nX_n,$$

and the variance of a set of these composite scores is

$$\begin{vmatrix} w_1 & w_2 & \ldots & w_n \end{vmatrix} \cdot \begin{vmatrix} s_1^2 & s_1s_2r_{12} & \ldots & s_1s_nr_{1n} \\ s_2s_1r_{21} & s_2^2 & \ldots & s_2s_nr_{2n} \\ \vdots & \vdots & & \vdots \\ s_ns_1r_{n1} & s_ns_2r_{n2} & \ldots & s_n^2 \end{vmatrix} \cdot \begin{vmatrix} w_1 \\ w_2 \\ \vdots \\ w_n \end{vmatrix},$$

or $\mathbf{w'Dw} = \sigma_S^2$, a scalar in quadratic form. It is evident that $\mathbf{D}$ is the variance-covariance matrix of the n items and is therefore of order $n \times n$. $s_i = \sqrt{p_i\,(1 - p_i)}$, where p_i is the proportion responding to item i, and r_{iJ} is the product-moment correlation between items i and J.

---

[1]This description is adapted from one prepared by Hendrick (1965).

The problem of finding the dimensionality of the matrix X can be thought of as one of finding the number of orthogonal axes along which significant, non-error variance can be found, and the problem of determining optimal weights for the responses is resolved by using the weights implied in the direction numbers for these orthogonal axes with reference to the original variables. The mathematical procedure involved here is that of finding the principal components of the matrix D. That is, we first need to find a vector of weights, u, analogous to w, that will maximize the product u'Du, under the restriction that $\Sigma u_i^2 = 1$. After this is found, a new vector of weights is to be found to maximize the variance left unaccounted for by the first vector, and so on until all the original variance, or all the non-error variance at least, of D is accounted for.

A theorem in matrix calculus states that if u'Du is a quadratic form, the series of vectors u that give the successive maximum values of u'Du are the latent vectors of the matrix D and the successive maximum values themselves are the successive latent roots of D, that is, $\lambda_1, \lambda_2, \ldots\lambda_n$. In the present case we are concerned only with positive latent roots because these represent variances. Any zero roots represent redundancies in the matrix and can be ignored. Because the variance-covariance matrix is Gramian there should be no negative roots.

Therefore, we apply the principal components computing algorithm to the matrix D and consider the resulting latent vectors and roots, particularly the latent vectors associated with the first few largest latent roots. (If appropriate, the coordinates of these latent vectors may be rotated to produce simple structure, as in factor analysis.) The weights to be applied to the responses in the matrix X to produce factor scores are then proportional to the elements in the corresponding latent vectors. Constants may be added, if desired, to eliminate negative factor scores.

Appendix D

PEACE CORPS LANGUAGE EVALUATION FORM

Date_____ Project_____ Name of Trainee_____

I. COURSE GRADES: Grammar Test_____%
Oral Comprehension_____%
Final Grade_____%

II. FACILITY IN LANGUAGE USE

Present Level of Fluency of Speaking (Check one below):
- Exceptional fluency____
- More fluency than average____
- About average fluency____
- Below average fluency____
- Little or no fluency____

Present Level of Comprehension (Check one below):
- Exceptional comprehension____
- Better than average____
- About average____
- Little or no comprehension____

Rate of Acquisition, Speaking (Check one below):
- Outstanding____
- High average____
- Average____
- Low average____
- Deficient____

Rate of Acquisition, Comprehension (Check one below):
- Outstanding____
- High average____
- Average____
- Low average____
- Deficient____

III. ESTIMATE OF ADEQUACY OF LANGUAGE ABILITY FOR THE OVERSEAS JOB (Check one box in each line below):

	Strong	Satisfactory	Borderline	No
Speaking Fluency (check one)				
Comprehension (check one)				

IV. MANNER OF APPROACH TO LANGUAGE LEARNING (Check one box in each line below):

	Good	Fair	Poor	Don't know
Regularity of class attendance				
Promptness in attending class				
Attentiveness during class				
Participation in class				
Applies self to study and practice				
Finds opportunities to speak language				
Confidence (vs. hesitant, unsure in using language)				

V. REMARKS: Use reverse side if necessary

Appendix E

Procedures for Combining Scores from Two Levels of the MLA-Cooperative Foreign Language Tests into a Single Score

At the time the major computations for this study were performed, there was no information available from outside sources to make possible the vertical equating of the two levels (L and M) of the MLA-Cooperative Foreign Language Tests. (Since that time, Educational Testing Service [1965b] has published norms with Converted Scores that presumably accomplish this vertical equating.) Therefore, a special procedure was devised to combine scores from the two levels.

Essentially, this procedure involved a non-linear transformation of the scores from each of the two levels before being combined additively. It was found that for the sample of Peace Corps students that were tested with Forms LA and MA at the end of training, the distributions of LA scores were negatively skewed and the distributions of MA scores were positively skewed; this result suggested that, as might be expected, the LA forms had a "ceiling" such that they were much too easy for many students, while the MA forms had a "floor", being much too hard for many students. The non-linear transformations of these distributions were designed to make the scales more nearly comparable.

These transformations were effected by assuming that the true scores for the total sample were normally distributed. The midpoint percentiles for each successive raw score were plotted on normal probability paper, generally producing a series of points that for the major part of the distribution approximated a straight line, but that deviated markedly from this straight line for the upper portion of the distribution (for the LA forms) and for the lower portion of the distribution (in the case of the MA forms). In each case, the straight line was fitted by eye to that portion of the curve that approximated a straight line. Points deviating markedly from the straight line were then translated to the straight line, and the new score equivalents were read off from the abscissa. In some cases this procedure resulted in negative scores. In the interest of establishing a uniform procedure, a constant of 100 was added to each non-linearly derived score before combining it (additively, with unit weights) with the derived score from the other level.

The following tables give the raw scores, midpoint percentiles, and derived scores (with constant of 100 added in) for the Listening and Reading tests, forms LA and MA, in Spanish and in Portuguese.

Appendix E (continued)

Conversion Tables

Spanish MLA Cooperative Test

Listening LA			Listening HA		
Raw Score	Midpoint Percentiles (N = 342)	Derived Score	Raw Score	Midpoint Percentiles (N = 342)	Derived Score
7	0.44	103	2	0.15	92
8	-	-	3	0.44	96
9	0.44	108	4	-	
10	0.73	110	5	-	
11	1.02	111	6	0.73	98
12	-	-	7	1.02	100
13	-	-	8	1.31	100
14	1.31	112	9	-	
15	1.61	113	10	2.05	102
16	2.34	114	11	3.36	105
17	3.51	116	12	5.55	107
18	4.82	116	13	7.75	109
19	6.58	119	14	10.38	111
20	8.19	121	15	13.45	113
21	10.23	122	16	16.81	114
22	11.84	123	17	20.61	115
23	12.86	124	18	24.41	117
24	14.91	125	19	29.09	119
25	17.69	126	20	33.48	120
26	20.90	127	21	37.43	121
27	23.10	128	22	40.79	122
28	24.71	128	23	43.86	123
29	27.92	129	24	47.81	124
30	31.29	130	25	51.75	125
31	33.92	131	26	54.97	126
32	37.13	132	27	58.19	127
33	40.20	133	28	62.28	128
34	44.00	134	29	65.94	129
35	48.39	135	30	69.00	130
36	52.63	136	31	72.31	131
37	57.31	137	32	74.85	132
38	61.70	138	33	77.19	133
39	65.20	139	34	80.12	134
40	68.42	141	35	81.87	135
41	72.22	142	36	83.62	135
42	76.90	143	37	86.26	137
43	83.04	146	38	89.77	139
44	90.0	149	39	94.74	142
45	97.37	156	40	98.69	149

Appendix E (continued)

Conversion Tables

Spanish MLA Cooperative Test

Reading LA			Reading MA		
Raw Score	Midpoint Percentiles (N = 341)	Derived Score	Raw Score	Midpoint Percentiles (N = 341)	Derived Score
7	0.15	103	4	0.29	82
8	0.59	108	5	-	
9	-		6	0.73	87
10	-		7	1.47	91
11	1.17	111	8	2.34	93
12	-		9	3.37	95
13	1.61	113	10	5.13	98
14	2.05	114	11	8.36	99
15	-		12	12.75	105
16	2.64	116	13	17.88	108
17	3.37	117	14	23.16	110
18	-		15	27.41	112
19	4.69	119	16	31.66	114
20	6.16	120	17	35.92	116
21	6.89	121	18	40.90	118
22	7.77	122	19	45.15	119
23	9.23	123	20	47.79	120
24	10.05	124	21	51.31	121
25	12.75	125	22	54.24	122
26	15.10	127	23	56.00	123
27	17.44	128	24	58.49	124
28	18.76	129	25	61.13	125
29	19.50	129	26	63.62	126
30	20.67	130	27	67.14	127
31	21.99	130	28	70.37	128
32	23.75	131	29	72.13	129
33	26.68	132	30	73.45	130
34	29.76	133	31	74.77	130
35	33.86	134	32	76.23	131
36	38.26	136	33	77.55	131
37	41.63	137	34	78.28	132
38	44.71	138	35	79.16	133
39	47.35	139	36	80.04	133
40	50.14	140	37	81.36	133
41	53.65	141	38	82.68	134
42	57.91	142	39	83.27	134
43	61.72	143	40	84.15	135
44	66.70	145	41	85.61	136
45	73.00	147	42	87.81	137
46	78.28	149	43	89.72	138
47	83.41	152	44	91.04	139
48	89.57	155	45	92.21	140
49	95.43	160	46	93.38	140
50	98.96	168	47	95.29	142
			48	97.19	148
			49	98.66	152
			50	99.69	159

Appendix E (continued)

Conversion Tables

Portuguese Version, MLA Cooperative Tests

Listening LA			Listening MA		
Raw Score	Midpoint Percentiles (N = 70)	Derived Score	Raw Score	Midpoint Percentiles (N = 70)	Derived Score
5	0.71	100	6	0.71	98
6	-		7	2.14	100
7	-		8	4.28	103
8	-		9	7.86	105
9	-		10	13.57	108
10	-		11	22.14	110
11	2.14	104	12	29.29	112
12	3.57	107	13	33.57	113
13	5.71	108	14	38.57	114
14	8.57	110	15	44.29	115
15	13.57	113	16	48.57	116
16	17.86	114	17	53.57	117
17	20.00	115	18	58.57	118
18	26.43	117	19	62.14	119
19	32.14	119	20	67.14	120
20	35.72	120	21	73.57	121
21	40.71	121	22	79.29	122
22	45.00	122	23	83.57	124
23	50.00	123	24	86.43	125
24	54.29	124	25	87.86	125
25	57.86	125	26	-	
26	60.72	126	27	89.29	126
27	62.86	126	28	91.43	127
28	66.43	127	29	-	
29	70.72	129	30	-	
30	75.71	130	31	93.57	128
31	79.29	131	32	95.00	129
32	82.14	132	33	-	
33	85.00	133	34	-	
34	87.14	134	35	-	
35	-		36	96.43	130
36	89.29	135	37	97.86	132
37	91.43	136	38	99.29	135
38	-				
39	-				
40	94.29	138			
41	96.43	140			
42	-				
43	-				
44	98.57	143			

Appendix E (continued)

Conversion Tables

Portuguese Version, MLA Cooperative Tests

Reading LA			Reading MA		
Raw Score	Midpoint Percentiles (N = 69)	Derived Score	Raw Score	Midpoint Percentiles (N = 69)	Derived Score
8	0.72	92	5	0.72	84
9	-		6	-	
10	2.17	99	7	2.90	91
11	3.62	102	8	6.52	97
12	5.80	106	9	11.59	101
13	-		10	15.94	103
14	7.97	108	11	19.56	105
15	9.42	110	12	22.46	107
16	14.49	114	13	24.63	108
17	19.56	118	14	31.16	110
18	21.74	119	15	40.58	114
19	25.36	121	16	43.48	115
20	28.98	123	17	48.55	117
21	-		18	52.89	118
22	31.16	124	19	55.07	119
23	32.61	124	20	57.97	120
24	-		21	61.60	121
25	34.05	125	22	-	
26	35.50	126	23	65.62	122
27	38.40	127	24	71.01	124
28	42.02	129	25	76.08	127
29	-		26	-	
30	44.92	130	27	78.26	128
31	46.55	131	28	80.43	128
32	-		29	81.88	129
33	51.45	133	30	84.78	130
34	53.62	134	31	-	
35	55.79	134	32	-	
36	-		33	87.68	133
37	57.97	135	34	89.12	134
38	63.76	138	35	90.57	135
39	69.56	140	36	92.02	136
40	71.73	141	37	93.47	137
41	73.18	142	38	94.92	139
42	76.08	144	39	-	
43	82.60	147	40	-	
44	89.85	153	41	96.37	141
45	94.20	158	42	-	
46	96.37	162	43	-	
47	98.54	168	44	-	
			45	97.82	145
			46	-	
			47	-	
			48	99.99	146

Appendix F

Form 5
PJ-222

A PARAMETRIC STUDY OF LANGUAGE TRAINING
IN THE PEACE CORPS

Research conducted by the Graduate School of Education, Harvard University
under Contract No. PC-(W)-226 with the Peace Corps

IN-FIELD QUESTIONNAIRE
FOR PEACE CORPS VOLUNTEERS

1) Your Name	2) PC Number
Last First Middle Initial	

3) Group (e.g., Colombia VIII-RCA)	4) Today's Date	5) Date first arrived in host country.
	Mo. Day Year	Mo. Day Year

Instructions: The purpose of this questionnaire is to find out, in as much detail as is possible with a written questionnaire, (1) how well you have been able to use Spanish (or Portuguese, in the case of PCV's assigned to Brazil) in your work in the host country, and (2) whether you have any recommendations with regard to Peace Corps language training policies in the light of your experience. Please answer every question to the best of your ability; space is left for additional comments at appropriate points. For convenience, this questionnaire mentions "Spanish" at many points; if you happen to be a PCV assigned to Brazil, please read "Portuguese" in these cases and answer accordingly.

What you say in this questionnaire will be treated as confidential; it is for research purposes only. (Peace Corps personnel will not see your individual responses.) Therefore, do not be reluctant to cite your difficulties in Spanish. The information you give can help the Peace Corps better plan its language training program.

PART I

6) Please describe as carefully as possible the nature of the work you have been doing as a PCV in the host country. (Mention any changes that have occurred in your job assignment since you came to the host country.)

7) How would you describe the place you have been working? (Check the one that best applies.)

1) [ ] large city (e. g., Bogotá)
2) [ ] medium-sized city or town
3) [ ] small town
4) [ ] rural area

8) How many PCV's (or other American personnel) are assigned to work with you in the same specific duty station? (Check the one that best applies:)

1) [ ] none; that is, I am working alone.
2) [ ] only my wife (husband) and I are assigned to this duty station.
3) [ ] there is one other PCV (or other American) assigned to my duty station. (not a spouse)
4) [ ] there are 2 or 3 other PCV's (or other Americans) assigned to my duty station. (including spouses, if any)
5) [ ] there are 4 to 9 other PCV's (or other Americans) assigned to my duty station. (including spouses, if any)
6) [ ] there are 10 or more other PCV's (or other Americans) assigned to my duty station. (including spouses, if any)

9) How many host nationals are assigned to work with you in your duty station?

[ ] none
[ ] one
[ ] 2-3
[ ] 4-9
[ ] 10 or more

10) Please indicate how often your job requires you to have contact with various kinds of native speakers of Spanish: (Make one check in each row.)

	Most of every working day	About once a day	Several times a week	Several times a month	Never or almost never
a) Well-educated native speakers who prefer to speak English with you	[ ]	[ ]	[ ]	[ ]	[ ]
b) Well-educated native speakers who speak no English or who prefer to speak Spanish with you	[ ]	[ ]	[ ]	[ ]	[ ]
c) Native speakers with moderate education and no useful knowledge of English	[ ]	[ ]	[ ]	[ ]	[ ]
d) Native speakers with very little education and no useful knowledge of English	[ ]	[ ]	[ ]	[ ]	[ ]
e) Children under 12	[ ]	[ ]	[ ]	[ ]	[ ]
f) Other: (Specify) _____	[ ]	[ ]	[ ]	[ ]	[ ]

11) To what extent does your job require each one of the following language skills? Answer in terms of the amount of language competence required of an "ideal incumbent," that is, one who has whatever knowledge of Spanish is adequate to meet the demands of the job. (Make one check in each row.)

	Very little	Some	Quite a bit	A lot	Very much
a) Speaking (expressing yourself) in Spanish:	[ ]	[ ]	[ ]	[ ]	[ ]
b) Comprehending Spanish spoken by others:	[ ]	[ ]	[ ]	[ ]	[ ]
c) Reading Spanish:	[ ]	[ ]	[ ]	[ ]	[ ]
d) Writing Spanish:	[ ]	[ ]	[ ]	[ ]	[ ]

Space for comments on this question: _____

PART II

In this part of the questionnaire, answer in terms of how well you were able to deal with the language problems in the first month of your field experience.

12) During your first month in the host country, how well were you able to: (Make one check in each row.)

	Very little	Some	Quite a bit	A lot	Very much
a) Speak Spanish so as to be understood by native speakers:	[ ]	[ ]	[ ]	[ ]	[ ]
b) Understand Spanish spoken by native speakers at normal speaking rate:	[ ]	[ ]	[ ]	[ ]	[ ]
c) Read Spanish material involved in your work:	[ ]	[ ]	[ ]	[ ]	[ ]
d) Write Spanish (instructions, letters, etc., as needed in your work):	[ ]	[ ]	[ ]	[ ]	[ ]

Space for comments on this question: _____

13) During your first month, to what extent did you have difficulty in the following respects:

	Not at all	Some	Quite a bit
a) Being at a loss for particular words	[ ]	[ ]	[ ]
b) Being limited to a very restricted vocabulary	[ ]	[ ]	[ ]
c) Speaking with sufficient grammatical correctness	[ ]	[ ]	[ ]
d) Expressing complex ideas	[ ]	[ ]	[ ]
e) Speaking with an acceptable accent	[ ]	[ ]	[ ]

14) During your first month in the host country, to what extent did you have difficulty because the language spoken by the native speakers you had to deal with differed from what you have been taught or what you were accustomed to? (Check one in each row.)

	No differences observed	Differences caused no difficulty	Differences caused some difficulty	Differences caused much difficulty
a) In particular sounds	[ ]	[ ]	[ ]	[ ]
b) In vocabulary and idiom	[ ]	[ ]	[ ]	[ ]
c) In grammar	[ ]	[ ]	[ ]	[ ]

Any special differences you remember? (Please specify) _____

_____

_____

15) During your first month in the host country, did you need or receive any help in adjusting to the language problem?

1) [ ] I needed no help.

2) [ ] I needed help, but there was nobody to give it, or I did not have time to get help.

3) [ ] I got help from: (Check all that apply.)

4) [ ] Other PCV's or Americans at my duty station.

5) [ ] Host nationals who were able to give help informally.

6) [ ] A tutor that I employed.

7) [ ] Other: (Specify) _____

16) During your first month in the host country, how did the language problem affect your performance on the job? (Check one of the boxes in the left-hand column, and any sub-head boxes that apply.)

[ ] It had no adverse effect: (Check one)

1) [ ] because the job required no more competence in Spanish than the small amount I already possessed. (I could usually get by with English.)

2) [ ] because other PCV's or American nationals carried the burden of communication with host nationals.

3) [ ] because my competence in Spanish was easily equal to the considerable demands made on it by the job.

4) [ ] in fact, my competence in Spanish was so generally superior to that of other PCV's that it was a positive advantage.

[ ] It had an adverse effect: (Check one)

5) [ ] but only to a small extent, in the sense that I was probably not as effective as I could have been, even though my performance was generally satisfactory.

6) [ ] and to a considerable extent, because I hesitated to undertake certain tasks, or performed those tasks poorly, because my language competence was not "up to" what those tasks required.

Space for comments on this question: (Give examples, if any, of tasks that were affected by lack of sufficient language competence).

_____

_____

_____

PART III

Now consider the period from your arrival in the host country up to the present date.

17)

a) How many months have you spent in the host country? _____ (no.of mos.)

b) Of those, during how many months, starting from your arrival, has it been the case that the speed of native speech made it impossible for you to understand anything? (Write a number, anywhere from zero up to the number of months you have spent in the host country. If this is still true, check in the box over "Still true." Give your best guess of the number of months. _____ (no.of mos.) [ ] Still true

Answer the remaining questions in a similar manner.

DURING HOW MANY MONTHS, STARTING FROM YOUR ARRIVAL IN THE HOST COUNTRY, HAS IT BEEN THE CASE THAT:

c) You could not generally "separate words" in the speech of native speakers? _____ (no.of mos.) [ ] Still true

d) You could not generally grasp complete sentences in the speech of native speakers (whether or not individual words were intelligible)? _____ (no.of mos.) [ ] Still true

e) You usually could not understand the complete meaning of native speech (i.e., the meaning of nearly every word and the overall meaning of each sentence)? _____ (no.of mos.) [ ] Still true

f) You were noticeably halting and non-fluent in your Spanish? _____ (no.of mos.) [ ] Still true

g) You had frequent difficulty in making yourself understood in Spanish (even though you may have been reasonably fluent)? _____ (no.of mos.) [ ] Still true

h) Your reading speed in Spanish has been uncomfortably slow? _____ (no.of mos.) [ ] Still true

i) You felt you could not read Spanish reasonably accurately without considerable use of a dictionary? _____ (no.of mos.) [ ] Still true

j) You felt you could not write Spanish with reasonable ease and without considerable resort to a dictionary? _____ (no.of mos.) [ ] Still true

PART IV

In this part of the questionnaire, answer in terms of how well you are dealing with the language problem currently, during the present month.

18) Currently, how well are you able to: (Make one check in each row.)

	Very little	Some	Fairly well	Quite well	Very well
a) Speak Spanish so as to be understood by native speakers?	[ ]	[ ]	[ ]	[ ]	[ ]
b) Understand Spanish spoken by native speakers at normal speaking rates?	[ ]	[ ]	[ ]	[ ]	[ ]
c) Read Spanish material involved in your work?	[ ]	[ ]	[ ]	[ ]	[ ]
d) Write Spanish (instructions, letters, etc., as needed in your work?	[ ]	[ ]	[ ]	[ ]	[ ]

Space for comments on this question: _____

19) To what extent have you now been able to adapt to any difficulties that may have arisen from differences in the language spoken by the natives and the language you had been taught or were accustomed to:

	There were no difficulties in the first place	I have now completely adapted to them	I still have some trouble with these	I still have much trouble with these
a) Differences in particular sounds	[ ]	[ ]	[ ]	[ ]
b) Differences in vocabulary and idiom	[ ]	[ ]	[ ]	[ ]
c) Differences in grammar	[ ]	[ ]	[ ]	[ ]

Space for comments on this question: _____

20) Currently, to what extent are you having difficulty in the following respects:

	Not at all	Some	Quite a bit
a) Being at a loss for particular words?	[ ]	[ ]	[ ]
b) Being limited to a very restricted vocabulary?	[ ]	[ ]	[ ]
c) Speaking with sufficient grammatical correctness?	[ ]	[ ]	[ ]
d) Expressing complex ideas with sufficient accuracy and fluency?	[ ]	[ ]	[ ]
e) Speaking with an acceptable accent?	[ ]	[ ]	[ ]

Any comments: _____

21) Currently, are you in need of help in perfecting your Spanish, and are you receiving any help though study, etc.?

1) [ ] I need no help.
2) [ ] I could still use help, but there is no way to get any, or I don't have time for it.
3) [ ] I get help from: (Check all that apply.)
4) [ ] Other PCV's or Americans at my duty station.
5) [ ] Host nationals who give help informally.
6) [ ] A tutor that I have employed.
7) [ ] Other: (Specify) _____

22) Currently, speaking to a native speaker in his language over the telephone is: (Apart from any difficulties caused by poor quality of transmission)

[ ] as easy as ordinary conversation
[ ] somewhat harder than ordinary conversation
[ ] extremely difficult
[ ] impossible
[ ] I have had no opportunity to encounter this problem.

23) Currently, how is the language problem affecting your performance on the job? (Check <u>one</u> of the boxes in the left-hand column, and sub-head boxes that apply.)

[ ] It has no adverse effect: (Check one.)

1) [ ] because the job requires no more competence in Spanish than the small amount I now possess. (I can usually get by with English.)
2) [ ] because other PCV's or American nationals carry the burden of communication with host nationals.
3) [ ] because my competence in Spanish is now easily equal to the considerable demands made on it by the job.
4) [ ] in fact, my competence in Spanish is so generally superior to that of most other PCV's that it is a positive advantage or asset.

[ ] It has an adverse effect: (Check one.)

5) [ ] but only to a <u>small</u> extent--I am probably not as effective as I could be, but my performance is generally satisfactory.
6) [ ] and this effect is <u>considerable</u>: I hesitate to undertake certain tasks that I should be doing, or perform them poorly when I do them, because my language competence is still not "up to" what those tasks require.

Space for comments on this question: (Give examples, if any, of tasks that are affected by lack of sufficient language competence).

_____
_____
_____

24) To what extent do you currently use Spanish after working hours?

	Much	Sometimes	Very little	Not at all
a) Speaking Spanish to native speakers	[ ]	[ ]	[ ]	[ ]
b) Listening to Spanish (including broadcasts, movies, etc.)	[ ]	[ ]	[ ]	[ ]
c) Reading Spanish (books, newspapers, etc.)	[ ]	[ ]	[ ]	[ ]
d) Writing Spanish (letters, essays, etc.)	[ ]	[ ]	[ ]	[ ]

Comments on this question: _____

PART V

Consider now the language training aspects of the training program you had under Peace Corps auspices back in the U.S.A.

25) Would you now recommend more language training, less language training, or the same amount that you had?

I would recommend (Check one):

a) [ ] a somewhat longer training program, say,_____weeks instead of 12.

b) [ ] keeping the language training program at the same length (12 weeks).

c) [ ] a somewhat shorter training program, say,_____weeks instead of 12.

Comments on this question: _____

26) On the assumption that the language training program is to remain at the same length (12 weeks), are there any improvements you would particularly recommend? (Make any checks that apply.)

	More emphasis	Less emphasis	Improved quality of instruction
a) Grammar training and drill	[ ]	[ ]	[ ]
b) Vocabulary	[ ]	[ ]	[ ]
c) Pronunciation	[ ]	[ ]	[ ]
d) Listening training	[ ]	[ ]	[ ]
e) Reading	[ ]	[ ]	[ ]
f) Writing	[ ]	[ ]	[ ]
g) Language study during field training (Taos)	[ ]	[ ]	[ ]
h) Speaking and conversation	[ ]	[ ]	[ ]
i) Sectioning of students by ability	[ ]	[ ]	[ ]

Comments on this question: _____

27) Are there any aspects of language training that you think would be better handled in the host country (i.e., in Latin America?) If so, please describe.

28) Other general comments about any aspect of the language problem not covered by this questionnaire:

Thank you!

Appendix G

Tentative Foreign Service Institute (FSI) Absolute Language Proficiency Rating Equivalents for Form H Levels of MLA Cooperative Tests in Spanish

For the past few years, the Foreign Service Institute (FSI) has conducted interview-type examinations to measure foreign language proficiency (Rice, 1959). Ratings are rendered on an "S" scale (Speaking) and an "R" scale (Reading), the short definitions of which are as follows:

S-1 Able to satisfy routine travel needs and minimum courtesy requirements.

S-2 Able to satisfy routine social demands and limited office requirements.

S-3 Able to speak the language with sufficient structural accuracy and vocabulary to satisfy representation requirements and handle professional discussions within a special field.

S-4 Able to use the language fluently and accurately on all levels normally pertinent to professional needs.

S-5 Speaking proficiency equivalent to that of an educated native speaker.

- -

R-1 Able to read elementary lesson material or common public signs.

R-2 Able to read intermediate lesson material or simple colloquial texts.

R-3 Able to read non-technical news items or technical writing in a special field.

R-4 Able to read all styles and forms of the language pertinent to professional needs.

R-5 Reading proficiency equivalent to that of an educated native speaker.

All ratings except the S-5 and R-5 may be modified by a plus (+), indicating that proficiency substantially exceeds the minimum requirements for the level involved but falls short of those for the next higher level.

Fuller descriptions of the levels are available in a circular published by the Foreign Service Institute in May, 1963.

To our knowledge, no study directly equating these FSI ratings with scores on the MLA Cooperative Tests, at either the "L" or the "M" level, has been conducted. Tentative FSI rating equivalents are available, however, for an advanced series of tests called the MLA Foreign Language Proficiency Tests for Teachers and Advanced Students. These equivalents were obtained as a part of a study performed for the U. S. Office of Education by Carroll (1966), by obtaining both the FSI ratings and skills test scores on small groups of teachers and students, in French, German, Spanish, and Russian and setting up equivalents on the basis of equal standard scores for these groups.

Recently, vertical equating of the "M" levels of the MLA Cooperative Tests and the MLA Foreign Language Proficiency Tests for Teachers and Advanced Students has been performed (Wallmark, 1966). By indirect means, therefore, it is possible to estimate the FSI rating equivalents for scores on the MLA Cooperative Tests. This is done by finding the MLA Cooperative Test score equivalents for the scores on the advanced tests that have been assigned given FSI rating equivalents in Carroll's 1966 study. Such a procedure is somewhat unorthodox and entails an unknown amount of error in

estimation, but until a direct equating study has been done these equivalents are the best available. The table below gives the equivalents thus derived for the Form M tests in Spanish. In the table, the columns headed "Prof." refer to converted scores on the MLA Foreign Language Proficiency Tests, Form A, and the columns headed "Coop." refer to scores (both raw and converted) on the MLA Cooperative Tests, Form MA.

Tentative Equivalents: FSI Ratings, MLA FL Proficiency Tests, and MLA Cooperative Tests (Level H), in Spanish

	Listening			Speaking				Reading			Writing		
		Coop. MA			Coop. MA			Coop. MA				Coop. MA	
FSI	Prof.	Raw	Conv.	Prof.	Raw	Conv.	FSI	Prof.	Raw	Conv.	Prof.	Raw	Conv.
S-1	32.6	19	164	64.9	43	175	R-1	26.8	7	144	22.3	24	149
S-1+	36.4	25	173	71.2	49	182	R-1+	31.4	15	160	30.5	44	161
S-2	40.1	30	180	77.5	56	190	R-2	35.9	23	173	38.7	64	171
S-2+	43.9	36	187	83.8	62	197	R-2+	40.5	32	183	46.8	84	178
S-3	47.7	**	**	90.1	69	205	R-3	45.0	40	191	55.0	**	**
S-3+	51.5	**	**	96.4	75	212	R-3+	49.5	48	199	63.2	**	**
S-4	55.3	**	**	102.6	82	221	R-4	54.1	**	**	71.4	**	**
S-4+	59.0*	**	**	108.9	**	**	R-4+	58.6	**	**	79.6	**	**
S-5	62.0*	**	**	115.2	**	**	R-5	63.1	**	**	87.8*	**	**

*Exceeds maximum possible score.

**MLA Prof. Test score is too high to have a Coop. Form M equivalent.

In Chapter 7 of the present study, a score of 275 on ΣListening was set to represent the minimum level of proficiency in listening that a trainee would have to have in order to be ready to perform his field duty assignment with minimum interference from language problems. By using the data in Table 10, page 38, and by establishing equivalents on the basis of equal standard scores, we find that this score of 275 on Listening is equivalent to a score of 31.5 on Listening MA, and by using the above table we find that this qualifying score is therefore approximately equivalent to a little better than S-2 on the FSI scale. This is also true of a score of 56.2 on PACT Form A, which is equated to ΣListening by the equation to be found on page 71.