AD632916

STUDY S-232

FOREIGN LANGUAGE TRAINING: AN INVESTIGATION OF RESEARCH AND DEVELOPMENT FOR VIETNAM

H. Wallace Sinaiko

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March 1966

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Contract SD-50
ARPA Assignment 14

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ACKNOWLEDGMENT

Information for this study came from many sources, primarily through interviews. Without exception all the people and organizations listed herein contributed generously, often in the face of other pressing commitments. I would like to thank, in particular, Col. Kemper W. Baker, USAF, Chief of the ARPA Field Unit, Viet Nam, and Capt. Bruce B. Dunning, USN, Senior Investigator ARPA Field Unit, and project officer for this study, for their assistance during the in-country phase. The assistance and cooperation of the following organizations in the Washington area and in Saigon is gratefully acknowledged.

In the Washington area:

Headquarters, Defense Language Institute

Language and Foreign Area Division, Human Resources Research Office, The George Washington University

Division of University Relations and Training, Peace Corps

Foreign Service Institute, U.S. Department of State

Military Assistance Institute, American Institutes for Research

Special Operations Research Office, American University

Combat Requirements and Readiness Branch, Headquarters, U.S. Marine Corps

Center for Applied Linguistics

Walter Reed Army Institute of Research

Institute for Behavioral Research, Inc.

Navy Medical Research Institute

Headquarters, American Institutes for Research

Office of Science Information Service, National Science Foundation

National Institute of Neurological Diseases and Blindness, National Institutes of Health

Language Development Program, U.S. Office of Education

U.S. Army Special Warfare School, Ft. Bragg, N.C.

In Saigon:

Joint U.S. Public Affairs Office

American Embassy

Military Assistance Command, Viet Nam:
Personnel Actions Branch, J-1
Intelligence Operations Division, J-2
Doctrine and Analysis Division, J-3

RAND Corporation, Viet Nam Projects

RF-PF Advisory Detachment, MACV

Summer Institute of Linguistics

Stanford Research Institute

Support Activities, MACV

Training Directorate, Schools Division, MACV

CMR Advisory Detachment, MACV

Finally, IDA Consultants, Jerry S. Kidd and A. Hood Roberts contributed significantly to this study and their participation is gratefully acknowledged.

FOREWORD

This report describes foreign language requirements for U.S. military personnel going to Viet Nam and research to improve language training. The following issues are covered: the nature of the language problem in Viet Nam, the type of training now given in Vietnamese and research results on language training generally that might be applied to the present situation. In addition, a recently developed experimental course in Vietnamese is investigated, including a follow-up in Viet Nam of people who had taken the course.

Two general types of remedial action are proposed: administrative or policy actions not involving research, and the initiation of new research projects that would be in direct support of Vietnamese language requirements. Specific conclusions and recommendations in each of these categories are made in Sec. II.

I. INTRODUCTION

Early in the summer of 1965 certain issues regarding the need for research on Vietnamese language training were raised by the U.S. Commander, Military Assistance Command, Viet Nam. The appropriateness of dialects being taught and the general level of language proficiency were questioned. The ARPA field unit in Saigon suggested several in-country research projects, including the establishment of a local experimental training facility, the development of a new Vietnamese course in a military context, and the preparation of better language aptitude measures. Subsequently, an IDA/RESD sub-task was set up to investigate the feasibility of these and other projects. We concentrated our efforts on the following:

(1) the operational requirements for language proficiency in the Viet Nam theatre;

(2) the nature of foreign language training provided Americans going overseas, particularly military personnel assigned to South Viet Nam;

(3) current research on language training techniques applicable especially to Viet Nam and, where appropriate, new areas where research would be desirable.

The IDA study involved meetings with many people who are responsible either for language training programs or for conducting research in foreign language teaching. In addition, we made a brief trip to Viet Nam to satisfy two objectives: (a) to assess, in collaboration with the ARPA field unit, an experimental language training program, and (b) to acquire additional evidence from people having a wide range of experience on the needs for language utilization.

The contents of this report, briefly, are as follows:

(1) A summary of the findings of a survey conducted in Viet Nam on Vietnamese language proficiency requirements for Americans serving in a broad range of assignments.

(2) A brief review of foreign language training practices in current use by Department of Defense and other government agencies.

(3) A review of certain R&D projects in foreign language training, particularly those with obvious military application.

(4) The results of a follow-up study of a group of U.S. Army advisors who had been trained in the Vietnamese language by an experimental technique and who later served in Viet Nam.

(5) Recommendations for research on language training.

(6) Suggested changes in current language training practices.

(7) A summary of non-language factors that might be useful in improving communications between Americans and people for whom English is not a native tongue.

In summary, this study is an evaluation of a particular problem, i.e., the improvement of Vietnamese language ability among American military personnel; its main objectives were (a) to provide suggestions for new research, where appropriate, and (b) to recommend operational or policy changes that might bring about improved language performance. It is a general review of current knowledge and practice and there was no attempt to collect original experimental data.

II. CONCLUSIONS AND RECOMMENDATIONS

This section deals mainly with operational or policy issues, and research and development on language training. Not every conclusion reached in the course of the study resulted in recommendations; on the other hand, some conclusions suggest several courses of action.

A. OPERATIONAL AND POLICY ISSUES

(1) There is no single foreign language "problem" as such in Viet Nam. Rather there is a spectrum of requirements and a variety of potentially useful language skills. Some advisors do not require any skill in Vietnamese beyond that needed to establish good personal relations with their counterparts; this is most likely to be the case in higher headquarters assignments. Other advisors require much greater fluency in order to perform their assigned functions. While no advisor should have less than S-1 (elementary) proficiency on the Foreign Service Institute scale, there has been a tendency to set unrealistically high standards (e.g., S-3).

Recommendation: Realistic and limited language proficiency goals should be established for Americans going to Viet Nam. Language training should be mission-oriented, i.e., it should be based on actual job requirements rather than the traditional and general goals of fluency, vocabulary, and structural knowledge of the language. In terms of the FSI scale, the language objective should be S-2 (limited working proficiency).

(2) Most advisors need vocabulary competence that is not provided in conventional training or measured by the FSI scale. These

special vocabulary requirements depend largely on the nature of the individuals' assignments. In general, however, training should stress the language of military operations and planning, as well as the social amenities of Viet Nam.

(3) Emphasis in language training should be on communication, in the human sense, rather than on linguistic precision and fluency.

Recommendation: Much more emphasis on the value of cultural material, e.g., paralinguistics, needs to be given in language training programs. (See Research and Development recommendations.)

(4) The creation of in-country training facilities for Vietnamese language has many favorable arguments--student motivation, immediate feedback to trainees, availability of instructors--certain administrative and policy issues must be resolved, however, before installing such a program. Principally, this means making available time and facilities.

(5) Advisors need to know that there are regional dialects in Viet Nam. It is not necessary to teach more than one dialect but the existence of dialect differences and the frustrations--or "dialect shock"--to be expected in dealing with these differences should be carefully explained and demonstrated.

(6) The use of native Vietnamese language interpreters has not been a satisfactory solution to the communication problem, although the practice will continue for reasons of expediency. There continues to be a need for skilled American interpreters to serve at high levels in the command and in special intelligence operations.

Recommendation: Select and provide intensive training for a small group of American officers whose primary task will be to serve as language interpreters.

(7) Knowledge of French is useful in Viet Nam but French should be viewed only as an interim solution and not as a substitute for Vietnamese.

(8) There are many critical problems in translating Vietnamese documents into English and vice versa: there are serious backlogs of untranslated material, the quality of most translations is poor or of unknown accuracy, and material is translated without respect to its significance or importance. Recommendation: Translation problems can be alleviated by various steps, e.g., better selection and motivation of translators, the use of special glossaries and other aids, and employment of translation services in the CONUS. It is also critical that documents for which translation is desired be screened by a high authority in MACV. Consideration should be given to partial translation--treating only portions of documents. The larger problem of improving communication between American advisors and the Vietnamese, particularly through the use of technical and field manuals, should be seriously reviewed. It is not known to what extent written training material is utilized by non-Western people.

(9) Foreign language proficiency is only one of several interrelated components of the total preparation of U.S. military advisors to work effectively overseas. In anticipation of increased American advisor involvement in other parts of the world, the entire training objective, and the procedures for accomplishing it, need to be analyzed to maximize the mutual support of each element.

(10) In summary, acquiring skill in a foreign language is a time-consuming and, for most people, a difficult undertaking. There is no pill. The realities of the world in which U.S. military assistance advisors must operate indicate that our language training resources must be used judiciously. This is particularly true in Viet Nam because there are special

language learning constraints: the language is difficult for Westerners, and advisors' tours are of limited duration after which skill in Vietnamese has no practical value.

B. RESEARCH AND DEVELOPMENT

(1) The importance of preparing Americans to be sensitive to cultural matters--the values, beliefs, and customs of the Vietnamese--has been recognized but not widely practiced. Second culture learning is similar to second language learning and the two should be considered as part of a single training objective. Not enough is known about what specific aspects of the Vietnamese culture to include in language training. Also, there are no tested methods of doing cultural sensitivity training, although several have been attempted.

Recommendation: Contrastive cultural analyses of the U.S. and Viet Nam should be undertaken. Vietnamese social scientists should participate in such an undertaking. Techniques used by the Peace Corps should be tried experimentally with U.S. military personnel undergoing language training.

(2) We do not know enough about the perception of American behavior patterns by Vietnamese. Neither do we understand how the native speakers respond to Americans' less-than-fluent use of the Vietnamese language.

Recommendations: Do attitudinal studies of the acceptance and perceptions of Americans' uses of Vietnamese. Evaluate how monolingual Vietnamese communicate with Americans who have very limited proficiency in Vietnamese. Analyze the so-called "silent language" of the country--gestures, facial expression, movement.

(3) The possibility of developing a so-called "toneless" or basic Vietnamese has been raised.

Recommendation: Inaugurate a modest effort by professional linguists to investigate the feasibility of producing such

a basic language. If it is shown to be feasible, materials should be tested on Americans in Viet Nam who have not had other language training.

(4) There are new techniques for giving specialized instruction in certain language skills such as listening to very rapid speech.

Recommendation: Do research on the applicability of so-called "rate-controlled" speech to second language comprehension, specifically Vietnamese. Determine whether the technique can be used to build up the rate with which other languages can be comprehended by native speakers of English. Study the application of the technique to English courses for Vietnamese.

(5) Although there are many favorable arguments for in-country language training, the precise form that such training might take is not known.

Recommendation: Several experiments should be run to determine the actual value of language training for Americans after they have arrived in Viet Nam. Comparison should be done of in-country refresher or advanced training and initial language training in-country. The use of native informants as teachers should be tried. Self-instruction, using programmed materials, should be an experimental condition.

(6) Specialized vocabularies in areas related to occupational duties need to be developed and incorporated into language training.

Recommendation: Determine the content of the language used by such specialists as the medic, the junk fleet advisor, and the communicator. Incorporate such material--glossaries, for example--into existing language training programs.

(7) The method of programmed instruction, using tape recorded material, offers considerable hope for improving limited

objective language training. The MALT course, developed by HumRRO, has been assessed and shown to be effective in several studies.

Recommendation: Minor changes in the MALT course should be made. The modified course should be assessed in Viet Nam with subjects who have had varying degrees of previous language training, including some people with no formal exposure. Some advisors should use the course in the field, if possible.

(8) High aptitude for foreign language learning is not widely distributed among the general population, a conclusion which is based on considerable experience in aptitude testing and prediction. Further research on language learning aptitude is not recommended.

(9) Contrastive linguistic analyses have been done for English-to-German, English-to-French, and English-to-Italian. The objective of such analyses has been to isolate the particular difficulties native speakers of English have in learning second languages. Such knowledge is useful in arranging training programs because language-specific problems can be clarified.

Recommendation: Contrastive linguistic analyses should be done for both Vietnamese-to-English and English-to-Vietnamese and the results should be incorporated into training programs.

(10) English, as a second language for the Vietnamese, is one favorable long term solution to the communication problem. However, not enough is known about optimum ways of achieving English language proficiency with Vietnamese students.

Recommendation: Continue existing English language instruction and expand such facilities if necessary. Do pilot studies in Viet Nam using new methods of teaching English as a second language.

(11) Claims that there are available techniques for producing "instant" language capability have not been verified experimentally and it is unwise to accept testimonials about the success of spectacular language training methods. Furthermore, serious research efforts along the lines of "sleep learning" and "total immersion" are not indicated.

(12) Proficiency in foreign language skill is not now measured effectively.

Recommendation: Continue to support the current DLI effort aimed at developing new, objective proficiency tests for many languages. Also, the development of "mission-oriented" tests to measure speaking and comprehension skills would have high value.

III. THE LANGUAGE PROBLEM IN VIET NAM

A. GENERAL

Even cursory exposure to the responsibilities of the U.S. Military Assistance Command, Viet Nam, convinces one that there is no single foreign language requirement for the entire organization: the need to understand, speak, read, or write Vietnamese varies widely throughout the Command. There is, in other words, a broad spectrum of language skill requirements.

At one extreme, there are Americans in Viet Nam who can and do perform their jobs satisfactorily, relying entirely on the English language. These are the men who work in staff positions, usually in Saigon, and whose only professional contacts are with other Americans or with Vietnamese for whom English is a good second language. It has been estimated by experienced staff officers that 85 percent of U.S. military personnel are in this category.*

At the other end of the spectrum is a relatively small number of Americans who must have high fluency in Vietnamese, both spoken and written. Intelligence operations involving the interrogation, sometimes in depth, of prisoners require fluent command of the subject's language. Interrogators must be unusually sensitive to the responses they get as guides to further questioning. The Viet Cong have their own idioms which, through ignorance, may be misunderstood by American interviewers, even though they know Vietnamese.

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*While many people do not need to know the Vietnamese language to do their jobs, we do not intend to minimize the importance of knowing some Vietnamese for reasons not related to actual work matters. We are referring here to the whole area of interpersonal contacts, which are of extreme importance in any overseas operation in which Americans must interact with host nationals.

Other demanding language requirements--also in the intelligence area--are the ability to lip-read in Vietnamese and the ability to eavesdrop on conversations in public places as a way of acquiring casual information. Finally, there is the need for skill in very rapid reading of Vietnamese. Captured documents are currently being acquired at the rate of several hundred thousand pages each month. While some of this material is of limited potential value, some is extremely important and, at the same time, of perishable utility. Often operations orders or other material having to do with immediate enemy plans are translated too late to be of any tactical value. At the very least, there should be enough Americans able to read Vietnamese rapidly enough to filter captured documents so that those of immediate interest can be singled out for full translation on a priority basis.

The majority of U.S. advisors assigned to work directly and continuously with Vietnamese units in the field do need a minimal command of the language, primarily the ability to speak and to understand spoken Vietnamese. At the sector and sub-sector levels, this skill is more essential than at higher echelons, because of the lower likelihood that Vietnamese counterparts will speak English. Also, at these levels there is usually considerable informality which further justifies fluency in the host national's language. While an argument can be made in favor of providing some language ability for every American coming to the theatre in an advisory role, those who operate as advisors on the sector and sub-sector levels are the ones who can most profit by some fluency in Vietnamese. One of our informants, a civilian with extensive overseas experience put the case as follows: "The level of foreign language skill an American brings to the job immediately shapes the relationship between himself and his counterpart."

Currently our best estimate is that about 75 percent of the officers and fewer than 25 percent of the enlisted personnel have had any training in Vietnamese before arriving in the theatre.* There is

*Based on estimates by J-1, MACV, and MATA school staff, Ft. Bragg, N.C.

no formal language training provided in Viet Nam, although this has been recommended. The pros and cons of training military personnel in Viet Nam are re-examined in another section of this report.

The requirement for fluency in Vietnamese should not be limited to company grade advisors. Most high ranking officers assigned to the Saigon district can function well without any language other than English. However, it would be desirable at all times to have one or two American colonels capable of participating in conferences and briefings in Vietnamese without the need for interpreters. At least one of the MACV representatives in the Vietnamese Joint General Staff should be fluent in Vietnamese; such skill is beyond the level of proficiency attainable in the six-week MATA course.

B. THE DIALECT QUESTION

The initial directives setting up the ARPA language training project stressed the need to look into potential problems caused by regional dialects in the Vietnamese language. We were to determine which of the several major dialects should be taught to U.S. advisors. It had been alleged that Americans arriving in Viet Nam had been trained in the wrong dialects and that this was a severe handicap in communicating with Vietnamese counterparts. What follows is a summary of what we learned about the dialect issue.

Very simply, Vietnamese is considered to have three major dialects distributed regionally: Northern, Central, and Southern. The Northern has six tones, the other two five tones each. There are some differences in vocabulary between the dialects. Inexperienced speakers who have learned one dialect have problems following one of the others spoken at a normal rate. Pronunciation differences between Northern and Southern Vietnamese are widespread but, according to anthropologists and linguists, such differences do not present major obstacles to communication.

Certain factors of prestige or status seem to be associated with one or another of the dialects: Northern Vietnamese is generally regarded as the language of the elite, the educated, the cultured.

However, it is important to recognize that people who speak the Southern dialect (native speakers) all understand native speakers using the Northern dialect. In any case, the best information we have indicates that an American trained to a moderate level of proficiency in any of the three dialects would be understood throughout Viet Nam. The reverse--i.e., an American trying to comprehend spoken Vietnamese in a dialect other than the one he had learned--might present a problem, but exposure to the language should, in a short time, eliminate any real difficulty.

The practical question, which of the dialects to teach, arises since, obviously, U.S. personnel cannot be expected to be fluent in all three major dialects. The consensus here seems to lean toward the Southern dialect, particularly in training advisors who are to work at the two lowest levels, i.e., sector and sub-sector. This is largely a matter of preference, however, and, if Vietnamese instruction in the Southern dialect is not available, Northern or Central would be acceptable. Most important in training, however, is the need to indoctrinate advisors as regards the existence of dialect differences. Some of the language-qualified people we interviewed did not know of such differences before they went to work with their counterpart Vietnamese officers. It would also be useful to demonstrate to students, even very cursorily, the principal dialects. This is done in the Foreign Service Institute's Vietnamese courses.

There is evidence that highly motivated Americans who persist in trying to use the Vietnamese language, irrespective of the dialect they have learned, tend to get over any initial problem in a relatively short time. Some observers have reported adverse effects on students who suddenly discover that what they had considered as moderately good ability in the language was not good enough for native speakers: the non-native speaker of the language, upon not being able to make himself understood, may refuse to use the language thereafter. This is an extreme reaction, however, and most people overcome their initial shock and disappointment quickly and go on to handle the language adequately. The experience of shock and the need for persistence should be explained clearly in language training programs.

Some linguists with whom we discussed the dialect problem suggested doing a pilot study in which the Central Vietnamese dialect would be taught to an experimental group of advisors. The language adjustment of these advisors would later be compared with a control group trained in one of the other two dialect.. Since Central Vietnamese shares certain features of both Northern and Southern, our linguist-informants predict that it would be the best compromise if a single dialect had to be selected for instruction. Other informants, however, believe that Central Vietnamese is more difficult than either of the other dialects. In any event, the resources for teaching Central Vietnamese in the U.S. are probably limited. Conclusions about the practical value of the Central dialect can only be tentative at present.

There have been some special cases in which dialect is critical to job performance. One of these is the prisoner interrogation situation in which dialect differences between the questioner and his subject have been reported to be troublesome. In general, however, dialect is not a problem for the majority of Americans in Viet Nam, and, beyond pointing out its existence to language trainees, there is little reason to give special consideration to it.* The dialect problem is closely related and often confused with the problem of accent which is discussed in the following section.

*In addition to dialect differences, there are other, more complex language problems which, while infrequently encountered, should be mentioned. Sometimes advisors have been assigned to units for which almost no language training would have been adequate. This point is best illustrated in the words of a First Lieutenant who has been stationed in the I Corps area: "...I have been assigned to a Ranger Battalion for 9 months. The Battalion Commander does not speak English, neither do his officers. He is Cambodian; we also have Laotians, Chinese Nungs, Japanese, Montagnards, and very few Vietnamese. I have had to learn a little of all, and a lot of French...." We report this only to underscore the conclusion that there are some linguistic situations which are not easily amenable to any solution.

Accent

Some linguistic experts and language teachers put great emphasis on the achievement of perfectly accurate pronunciation--the absence of a "foreign" accent. In rebuttal, it has been pointed out--particularly by people with field experience--that accent-free speech can cause a serious communication problem: native listeners erroneously assume greater proficiency on the part of the speaker than the latter actually has achieved; this may result in the use--on the part of the native--of idioms and terms beyond the comprehension of his counterpart. The presence of an accent is often a signal to the native speaker to slow down and watch for evidence that he is not being understood.

Vietnamese is a tonal language as are various Chinese tongues and Thai. Word meaning depends on the inflection given the word. The concept of tonal cues and practice in detecting them is probably crucial for hearing and comprehending speech at normal conversational rates. It would seem on these grounds that the emphasis in training should be on the discrimination of the inflected tones rather than on pronunciation. This is an idea which can be evaluated by research, but on present evidence it would appear both more economical and more useful to stress recognition and discrimination on the hearing end and to de-emphasize the very difficult articulation skills involved in phonemic mimicry.

In summary, the dialect problem seems to be an overstated issue except in special cases such as prisoner interrogation. In these special cases attention should be focused on the terms and idioms of the Viet Cong rather than on pronunciation. Likewise, in the matter of foreign accent, it is not so important that an American pronounce with perfect fidelity, but rather that he understands the concept of tonal cues and can recognize them and better comprehend their meaning when he is listening to Vietnamese. Because dialect requirements are so closely related to the specific situations in which advisors find themselves, designing language training to anticipate all possible dialect needs is not practical or even attainable.

C. SPECIFIC LANGUAGE OBJECTIVES

What should be the objectives of a program designed to train advisor personnel to speak and understand Vietnamese? On the Foreign Service Institute's proficiency scale,* we believe a reasonable goal should be the "S-2" or "S-1+" level on a scale from S-0 to S-5. In general, a man reaching the S-1+ level could comprehend and speak Vietnamese well enough to handle the following situations: First, there are social amenities that are useful in establishing rapport with Vietnamese, both in military and civilian contexts. Advisors repeatedly told us the advantages they gained when they could ask and answer simple questions about personal things, e.g., "How is your family?" (Kinship terms, although more complex in Vietnamese than English, are alleged to be important in establishing good rapport.) Advisors should be able to ask for help, both in a concrete and abstract sense. In the former case an American could ask to be hidden, or to be given food; in an abstract sense, it should be possible to ask, "What does this mean?", in Vietnamese. Also, according to our informants, Americans should know the proper forms of address to use as a function of age, sex, and social status. Most of the advisors with whom we talked also strongly stressed the need for military terminology in their language training. (The Foreign Service Institute and the Center for Applied Linguistics are currently preparing a specialized Vietnamese vocabulary on nursing. Other areas will also be developed.)

Some of our informants felt the need for more sophisticated language preparation. For example, the ability to use a few Vietnamese proverbs was cited as a useful way of gaining acceptance. Vietnamese humor, in the form of spoken jokes, although far beyond the level of sophistication we are advocating, would also be helpful to an American living among non-English speakers.

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*Appendix B contains a detailed description of the FSI language proficiency rating system.

There has been a tendency to set unrealistic language training requirements that are not clearly related to the demands of the job. Often this takes the form of demanding S-3 proficiency, i.e., "minimum professional level." It is our considered view that, with few exceptions, The S-1+, or at most, S-2 level would be adequate and, in a practical sense, more realistically attained.

The following behavioral goals seem to be reasonable minimum language objectives for the majority of American advisors going to Viet Nam:

(1) the ability to ask and give directions; specifically, to be able to reach a particular hotel, the post office or a restaurant;
(2) the ability to ask and answer questions about the time of day, date, and season;
(3) the ability to order a meal;
(4) the ability to understand and respond to questions about nationality, marital status, occupation, age, and place of birth;
(5) the ability to make appropriate social introductions and leave-takings.

An advisor should be able to understand native speakers and make himself understood, at least most of the time, on the above topics. Finally, although not essential for all advisory personnel, the following objectives would be desirable:

(1) the ability to answer questions of a descriptive nature about the United States, e.g., geography, size, etc.
(2) the ability to take and give simple messages over radio or telephone;
(3) the ability to hire a native speaker and to explain salary, duties, and working conditions.

Emphasis in Language Training

We have not stressed those behaviors typically central to conventional language training--pronunciation, fluency, and knowledge of the target language structure--in the belief that language training of military personnel should emphasize communication between individuals; the intentions of the speaker are accurately perceived by his listener. Further, we conclude that communication can be effective where the generally accepted subtleties of language performance are absent or, at best, minimal. That is, speech can be heavily accented, poor grammatically, rather slow in pace and, in spite of these things, the speaker communicates with his counterpart. In view of the very severe constraints imposed on attaining high language proficiency in the Vietnamese situation, we believe that this emphasis on communication is a justifiable and realistic objective of language training. Advisors need to be taught how to listen and how to use the para-language of communication (i.e., the "silent language" of gestures and expression). While very little is known about how to teach this type of knowledge, it would have very high payoff value if achieved.

The teaching of anything which does not make a major contribution to the student's ability to communicate is superfluous. We refer here to things such as matters of stylistic correctness, or an inordinate concern with pronunciation. In other words, an American advisor who speaks Vietnamese with an obvious English accent, and with minimal grammar, can still communicate effectively provided he knows the essentials of the language. Striving to attain perfection in grammatical style when one has not mastered the concept of the Vietnamese tonal system is like polishing the front doorknob when the plumbing does not work.

D. WRITTEN VIETNAMESE

Probably the most difficult aspect of any language is learning to write. The importance of knowing how to write in Vietnamese has not been emphasized either in training or by most people who have had

field experience. Some advisors strongly argued that the ability to write the language would be a useful skill. For them, at times, it had been difficult to communicate with counterpart Vietnamese officers in spoken dialogue and, the advisors felt, writing might have eased this barrier. Whether the additional training needed to master written Vietnamese is warranted and would be worth the investment is not easily decided, since (a) we do not know the actual cost (in time) of learning the write Vietnamese, and (b) more evidence of the operational value of this skill is needed.*

In summary, the average advisor probably does not need to know how to write Vietnamese, and this additional skill should not be incorporated into training programs until a better case can be made for it.

*There is another much more serious problem with written Vietnamese having to do with translation from English to Vietnamese and vice versa. Because it is peripheral to the main subject of this report, and believing that we have some material that will be useful to several agencies in MACV, our findings and recommendations are covered separately in Appendix A.

IV. ALTERNATIVE AND INTERIM SOLUTIONS

There might be means other than training all U.S. advisors in Vietnamese for solving language problems. This section reviews three of these: French as a second language, training Vietnamese nationals to speak and understand English, and the use of interpreters, both native Vietnamese and American.

A. FRENCH AS A SECOND LANGUAGE

Because of the important role the French have had in modern Viet Nam, we made a point of investigating the value of the French language as a communication medium. It is the consensus of many informants with whom we talked that French language ability is a valuable asset in Viet Nam.* Here are the reasons for this assertion:

(1) There is no resistance to speaking French on the part of the Vietnamese, in contrast to certain other former colonials--e.g., the Indonesians who have reacted negatively to Dutch as a second language.

(2) The influence of the French was, and continues to be, widespread in Viet Nam: Many families able to do so send their children to French schools. French films and literature are widely circulated in Viet Nam, and certain important Vietnamese institutions, e.g., the educational system, are patterned after French models.

(3) Because of previous exposure to French, the average Vietnamese probably finds English more difficult to learn than

*Advisors themselves, overwhelmingly believe that Vietnamese is more useful than French: Ninety percent of the Americans recently completing tours indicated they would have preferred the former language over the latter (MACV J-34 Staff Study).

French, and we have been informed that Vietnamese like to meet Americans who speak the latter language. We heard evidence that the Prime Minister and a very high ranking general, both of whom know colloquial English very well, prefer to speak French with Americans. Most district chiefs, too, are alleged to prefer French to English. A senior American advisor, who is fluent in French, uses that language exclusively with his Vietnamese counterpart officers in the Headquarters of the Popular Forces.

(4) Some Vietnamese officers use French among themselves. This seems to occur for two reasons: (a) it is a technique for insuring privacy when non-French speaking personnel are present; or (b) it is very difficult, or impossible, to discuss certain abstract concepts in Vietnamese.

(5) Because French is much more widely used throughout the world--at least 70,000,000 people speak French as a first language--it has a much greater motivational appeal for Americans than does a language like Vietnamese. The latter is useful only in Viet Nam and, since relatively few American military personnel are likely to have more than a single assignment in that country, there is less attraction to become proficient in Vietnamese for a probable one-year utilization.

Although there is no experimental evidence to support the claim, it has been alleged that French is a much easier second language for Americans to learn than Vietnamese.

There are many areas in rural Viet Nam in which French is known only by a small percentage of the elite. Finally, and most important, French should be viewed as an interim or proximate solution to the communication problem, not as a final goal. There is no completely adequate substitute for Vietnamese language capability if Americans are to be effective and accepted in Viet Nam. And, as has already been noted, some types of communication cannot be accomplished except in Vietnamese.

B. TRAINING VIETNAMESE NATIONALS IN ENGLISH

English is being learned by many Vietnamese at present--over 30,000 people are taking English lessons in Saigon under sponsorship of the Viet Nam America Association. One estimate is that English will replace French as a second language in 8 to 10 years. It seems reasonable to consider accelerating this process as a long range alternative to teaching Americans Vietnamese. However, this is an administrative and economic problem. Such a policy would be in keeping with President Johnson's statement that English language instruction overseas is in our national interest because (a) it creates a friendly attitude toward the U.S., (b) it is the best way to aid in the technological development of the emerging nations, and (c) the need for costly translation is eliminated.

English as a second language is alleged to be "...the most wanted U.S. export." Particularly in Viet Nam, English language proficiency is becoming more and more valuable. Among the Vietnamese military, for example, exposure to Americans will be of much greater duration than vice versa. Consequently, the individual Vietnamese will derive more lasting use from English and he will continue to improve his proficiency. Finally, the cost of training Vietnamese to learn English is likely to be lower than present expenditures for training Americans to speak Vietnamese.

A recently queried group of departing American advisors estimated that about 55 percent of the Vietnamese they dealt with knew English "well enough to get along."* This underscores the value of English and seems to encourage instruction of more Vietnamese in our language.

C. INTERPRETERS

Many Americans, who are not language-qualified, use Vietnamese nationals as interpreters. That this is not a solution to the language problem is indicated by the almost unanimously negative experiences

*MACV Staff Survey, MACJ 34, (1965-1966).

and attitudes toward interpretation that we encountered. The following are the principal arguments against the use of interpreters:

(1) The techniques of skilled language interpretation are not equated with bilingualism. Relatively few people who know two languages are effective interpreters beyond the level of simple escort activities. An interpreter must be knowledgeable about the substantive areas he is discussing as well as the two languages involved. According to our best estimates there are virtually no Vietnamese well enough qualified in English to handle interpretation at the level demanded for effective communication.

(2) Even when qualified interpreters are used, the parties involved may not know how best to take advantage of the interpreter's skill. Moreover, the time required to communicate goes up by at least a factor of two. This time expansion does not need to occur in the case of simultaneous interpretation, but this technique is only applicable under very special conditions, and it can be accomplished only by a few highly trained interpreters.

(3) There are cultural factors in Viet Nam, and in the Far East generally, that make interpretation an unsuitable means of communication. First, non-Westerners are strongly motivated to conceal or modify what they perceive to be unpleasant information. Interpreters tend to exhibit this behavior and, in the experience of some of our informants, have deliberately distorted what they say so as to conform to an imagined standard of acceptability. Second, in Viet Nam there are more pronounced status differences between social classes (and officer and enlisted ranks) than there are among Americans. Interpreters are regarded as socially inferior and, as a result, many principal speakers refuse to discuss sensitive matters with an interpreter present. Sometimes this is done for security, rather than status, reasons. We heard of situations in which Vietnamese officers have

preferred to use English, or French, in talking with their American counterparts when there were enlisted personnel present. Finally, some interpreters of the limited skill and experience levels typically available in Viet Nam tend to inject themselves into the situations they are interpreting.

(4) Easy access to interpreters tends to cause Americans to become less interesting in improving their Vietnamese and, eventually, to lose what skills they possess through disuse. When this happens, or if the American never knew any Vietnamese and had to rely on an interpreter, the American is at the mercy of the linguist who is likely to introduce distortions of the type mentioned above. Some of our informants said they felt they were in the dark whenever interpreters were used.

There are situations, however, in which interpreters must be used. Some Americans, because of their positions and their unavailability for language training, require skilled interpreters. An incident was reported in which a senior U.S. commander in Viet Nam was given a falsified briefing (later corrected) through a native-speaking interpreter. An American interpreter would have prevented this had one been available. Since it is possible to train interpreters, the best approach here seems to be to build a special staff of American interpreters who have had intensive language and interpreter training. Because of the large investment needed to prepare such people, it is apparent that their tours in Viet Nam need to be longer than the current one-year assignments. Also, because skill in Vietnamese is not transferable to other parts of the world, a small interpreter corps would have to be utilized more often, on a rotation basis, than would be the case if another language were involved. An increase in tour duration, as well as the decision to provide special interpreter training, is a policy issue rather than an R&D matter. But, we mention this here as a potential solution to a special language problem.

V. LANGUAGE TRAINING IN THE U.S.

This section is a brief review of foreign language training, particularly as it is given to military personnel or others with similar mission-oriented goals.

A. DEFENSE LANGUAGE INSTITUTE (DLI)

The DLI was established in 1963 to provide training in foreign languages for the services. In addition to its own schools, DLI centers were established through contracts with commercial schools, universities, and at command schools. In each case DLI has technical control but it does not determine language training objectives. This is done by the services and agencies who send their people to DLI for training.

While the DLI currently offers training in 47 languages, the demand for Vietnamese ranks second (after Russian): 13 percent of all DLI students last year received Vietnamese instruction. In its West Coast Center, DLI will have handled 1400 full-time students of the Vietnamese language in FY '66. An additional 2,000 will have received some training of a much more limited type at the Army's Special Warfare Center, Ft. Bragg.

Vietnamese is given in both a 47-week and a 12-week course at the DLI-West Coast Center. The language proficiency objectives of the 47-week course are the Foreign Service Institute's Level 3 in Speaking, Comprehension, Reading, and Writing. Level 3 is defined as "minimal professional proficiency." (See Appendix B for complete descriptions of the FSI rating system.)

The shorter course, which is the one taken by the majority of advisors who get any language training at all, aims at a proficiency

level of 1 for spoken Vietnamese, i.e., they can satisfy routine travel and courtesy needs.

The military advisors who take the six-week Military Assistance Training Advisor course at Ft. Bragg, N.C., receive approximately 120 hours of language and area training.

Most native-speaking instructors of Vietnamese in DLI schools teach in the Northern dialect, although some of these people have been in the U.S. long enough (6 or 7 years) to have developed American accents in their own Vietnamese speech. The supply of native-speaking Vietnamese instructors available in the U.S. is seriously low, and it is not expected to improve.

The DLI follows the so-called audio-lingual method of instruction in three phases. First, the sound system or phonology of the language is introduced. This is particularly important for tonal languages like Vietnamese and Chinese because of their unfamiliar "sing-song" character. Language laboratory devices--i.e., special tape recorded lessons and speech models to be emulated by the student--are used. Emphasis is on imitation of sounds. Later phases progress to instruction in sentence building, from simple to more complex structures. The final stage in the audio-lingual method stresses vocabulary development, usually in the context of real situations; thus, a DLI course would emphasize military vocabulary and cultural or area terminology during this phase.

Proficiency measurement in DLI is done using the Army Language Proficiency Test (ALPT). This is an oral comprehension test which has been criticized on several grounds: First, only one test form exists for each language, making it possible for a subject to show proficiency in a language he does not know by learning the test questions in another language with which he is familiar. Another defect is that, over the years, the ALPT has been compromised and copies of the test have become available outside proper channels. Finally, ALPT was developed initially for only two languages--Russian and Mandarin Chinese--and all other forms of the language test are

translations from one of these. There is serious doubt, among linguists, that such translations result in valid new test forms. These defects in the ALPT have been noted and the DLI is presently engaged in developmental work to produce a new language proficiency test.

B. THE FOREIGN SERVICE INSTITUTE

The Foreign Service Institute of the U.S. Department of State offers courses in Vietnamese ranging from 8 to 44 weeks in duration. The length of course taken depends largely on the expected job assignment and the availability of the trainee for various lengths of training.

Typically the student in the 8-week course is a young volunteer in the AID program. This course gives very intensive (39 class hours per 6-day week) training to a limited number of students. Those with high language aptitude can get close to achieving an S-1 rating at the end of the course, but none yet have scored S-1.

The 16- and 21-week courses are typically attended by military students, but the 21-week course is also attended by AID personnel.

The 44-week course is attended primarily by USIA personnel. The goal of this course is to have the students achieve the S-3 and R-3 levels, but in some cases certain individuals have achieved an even higher proficiency.

The FSI method of language training utilizes native speakers for most of the class week and linguists who visit the classroom in order to point out certain grammatical or structural features of the language for the students. Small classes are the rule. The final examinations are oral, including the examination for proficiency in reading. FSI teaches the Southern Vietnamese dialect. Dr. Elinor Jordon has pointed out that both Southern and Central Vietnamese are 5-tone languages, whereas Northern is a 6-tone language; also, that Central is more nearly like Southern than like Northern.

Specialized vocabularies have been and are being developed (the one useful for nurses, for instance).

C. PEACE CORPS

Since its establishment four years ago, the Peace Corps has provided language training to its volunteers in some 40 different languages. Although training in other fields is given concurrently with language instruction during the 12- to 13-week course in the U.S., language training occupies the major portion of the curriculum. The volunteer's language instruction is limited to a maximum of 5 hours per day and the average exposure is about 30 hours per week. The language proficiency sought is an FSI rating of S-2 or S-2+ but an S-1+ is deemed to be acceptable.

The Peace Corps has recently (within the last 6 months) begun giving mid-tour (18th month) and end-of-tour language proficiency tests. One recently returned group of volunteers scored an average of S-4 on Nepali. This was after 27 months with the Peace Corps and at the end of their service. Peace Corps volunteers are for the most part young, intelligent, and highly motivated even though their language aptitude varies widely.

The Peace Corps offers no training in Vietnamese.

VI. CONTRIBUTIONS OF RESEARCH TO LANGUAGE TRAINING

A. INTRODUCTION

While a large amount of basic research in physiological phonetics, linguistics, and psychology might be considered as language training R&D, most of the research which is relevant to present considerations has had as its principal objective the discovery and evaluation of means by which language training can be made more efficient. The one most prominent fact about the achievement of skill in a foreign language is the great amount of time and effort required by the agency providing instruction to get the student to reach even a modest proficiency. It can be said quite bluntly and without qualification that no significant breach has been made by any of the research efforts reported in the time and effort barrier. At best, even the most sophisticated training techniques provide only a set of tools to limit or prevent inefficiency. There have been some commercial promotions of language training techniques which allegedly produce spectacular results: so-called "sleep learning" and "total immersion" are examples of these (see Appendix C for a description and evaluation of the latter). All of these reputed miracle methods, when subjected to unbiased and rigorous testing, are found to have compensatory deficiencies of one kind or another. These methods look good only until all the consequences of their use have been examined.

The only clear-cut and immediately-available way to minimize the amount of time and effort required to learn a language is to reduce the level and breadth of proficiency sought as an end product of training. This adjustment could be achieved without affecting the performance of other tasks nominally dependent on language if the level of proficiency sought were exactly equivalent to that needed to do the specific job--no more, no less.

While determining the level of proficiency needed for each job and predicting or controlling personnel assignments could prove nearly as difficult as breaking the efficiency barrier in language training, this kind of administrative approach seems most promising for dealing with the acute problems in language proficiency which exist in Viet Nam.

In summary, the following points are relevant to an analysis of language training R&D:

(1) Proficiency achieved is directly related to the time and effort expended; there are no proven short cuts.

(2) Programs of instruction can be established which minimize inefficiency and the probability of wasted effort.

B. MAJOR VARIABLES IN LANGUAGE TRAINING R&D

1. The Trainee

There is little question that individuals can be successfully selected, on the basis of language aptitude, who will profit more than others by exposure to language training. Language aptitude can be measured by paper-and-pencil tests which apparently tap four distinct abilities:

(1) the ability to recognize and remember different sounds,

(2) the ability to recognize grammatical cues,

(3) the ability to memorize, and

(4) the ability to recognize the consistent patterns, rules, and logical flow of a language.

These abilities are not highly related to general intelligence nor to vocabulary knowledge in the native tongue, the latter factor being a large component in most adult intelligence tests used in the U.S.

Language aptitude is not as evenly distributed as is general intelligence. Only about one-third of the population tested shows aptitudes high enough to make success in intensive language courses

very likely.[5] Moreover, this aptitude is not specific for particular languages: if a person has a high degree of aptitude, as demonstrated by prompt learning of one language, the chances are he will learn other languages with similar ease.

In spite of the effectiveness with which the more apt language trainees could be identified, it is not suggested that military advisors or other personnel slated for overseas assignment be selected on the basis of language aptitude because other skills and attributes probably contribute more to actual job performance. Recent follow-up research on Peace Corps Volunteers, for example, shows little correlation between language aptitude and rated performance in the field. Anecdotal evidence obtained from interviews of instructors of MATA officers suggests that military skills, general knowledge of the host country, positive attitudes toward that country and MAP objectives are probably more important for success on the job than language aptitude. This view does not contradict the general importance of language but, rather, emphasizes that individual job performance and aptitude are not highly correlated.

2. Training Objectives

A simple analysis of language training suggests four categories of language ability: reading, writing, speaking, and listening. Different training procedures are likely to be more or less appropriate for each ability category.

Prior to World War II, most language training, whether civilian or military, was aimed at engendering the ability to read. The shift toward so-called "conversational" skills was brought about in part by a growing recognition that students wanted and could actually put to use audio-lingual skills while this was less true of reading ability.

In addition to ability categories another dimension of the end-product sought is the level of proficiency at the termination of formal training. Within government, proficiency standards and rating guidelines are generally based on the scale developed for use in the Foreign Service Institute of the Department of State (Appendix B). Linguistic experts score trainees in an ad-lib dialogue test situation. The rating process is, of course, judgmental and susceptible to variations in subjective standards introduced by different raters. The content and duration of the dialogue situation are not standardized. Unfortunately, while the FSI scale has proved to be useful, the reliability and precision of measurement are quantitatively unknown.

A possible alternative or supplement to the FSI method of scoring proficiency is provided by the Army Language Proficiency Tests which have the advantage of being objective but which have some serious disadvantages, discussed earlier in this report. It may suffice to say that the tests are printed and thus tap only reading and writing skills rather than those of speaking and listening which are the skills stressed in most modern training programs. The fact that the tests have been compromised and may have linguistic deficiencies adds to the reluctance to use them in a crucial evaluation.

A third approach to proficiency measurement is characterized by the term "work-sample." This method was used in the evaluation conducted by HumRRO of the short-course in Vietnamese. In this technique the examinee is required to do some meaningful task in the language he has learned. Typically, subjects may be required to interview native speakers for purposes of collecting objective information; the results of such interviews can be scored in terms of accuracy of the end product, i.e., the factual details obtained. The method has the advantage of apparent validity while incorporating standardized conditions of testing and objective scoring. However, the work-sample approach does not concern itself with linguistic nuances: pronunciation, accent, sentence structure, etc. The emphasis is on communication, however accomplished. Some work samples have had subjects

translate and record messages on tape which are later re-interpreted by native speakers and scored in terms of accuracy or deviation from the original material. This method eliminates all non-verbal cues (facial expression, gestures, etc.) and therefore cannot be considered as a completely valid representation of the actual conditions of face-to-face communication. However, because of the absence of cues, it is a more rigorous test of language proficiency than the direct face-to-face interview task.

It is clear that progress in research and development of training methods and programs is now retarded by the lack of highly valid, reliable, and sensitive techniques for the measurement of language proficiency. There is an urgent need to promote the creation of improved techniques of proficiency measurement.

Two factors--skill category and level of proficiency--are critical in planning a research program on language training. Much of the relevant research data and most of the informal interviews done specifically for the present project suggest that the degree of training inefficiency now present in the system could be significantly reduced if the end-product objectives were made clearer, more explicit and more realistic in terms of the level of proficiency desired in each skill category.

C. ALTERNATIVE METHODS

The method of training is, of course, the most controversial area of language training research. Although each instructor and each training facility has a favorite training method, none of the major alternatives seem to make much real difference except with respect to which ability category is favored. The principal alternative methods might be epitomized as follows:

(1) The classical method: emphasis on reading, lecture and text; oral and written translation of textual materials is the principal student response; grammar and vocabulary introduced concurrently via textual content.

(2) The modern conventional method: emphasis on speaking and listening; oral vocabulary developed in classroom exchanges, often involves near exclusion of native language from the classroom environment, textual support for grammar training.

(3) The augmented modern method: principal difference from above based on the use of one or more of the multitude forms of language laboratory set-ups, involving recorded materials--predominantly dual track tape systems.

(4) The intensive exposure method: small groups of from five to ten students spend four or more hours per day with an instructor who is a native speaker; all communication among students and between students and instructor is conducted in the language to be learned. In addition, the class receives a number of hours of instruction each week from a structural linguist.

(5) The so-called total immersion method: similar to the intensive exposure method with greater emphasis on the exclusion of native language props--more extensive vocabulary introduced earlier, grammar learned by inference from content and, as advertised, limited to a single student and several instructors. (See Appendix C for more details.)

(6) The programmed instruction method: usually combines the language laboratory concept with programmed textual materials; recorded content follows programmed instruction principles; self-pacing, minimum contact with instructors, and "shaping" of behavior.

In order to understand the research findings related to the comparative evaluation of these methods it is necessary to raise again the question of what is to be learned. There are nominally three components: the phonology in the sense of the distinctive sounds--one learns both to hear such sounds and to make them--the grammatical structure of the language; and the lexicon or vocabulary of words and their meanings. In addition, for languages not written in the Latin alphabet, one must learn the symbol set related to sounds or whole words, if reading is one of the desired goals.

The major differences that arise between methods are in terms of what category of skill has priority (i.e., whether speaking, reading, or writing is learned first and to greater depth) and the interrelationship between the components of each skill category in terms of phonology, grammar, vocabulary, and symbology.

A recurrent theoretical concept in language training R&D has been the referral to the means by which a child learns its native tongue. Clearly, this learning takes place in the context of an oral exchange. Listening and speaking abilities are the first to be learned. Phonology is acquired by highly repetitive mimicry with prompt and selective feedback. The child infers the grammar. That is, the child in a sense knows grammar by what "sounds right." One can speak perfectly grammatical English without knowing the meaning of the terms "verb" and "noun." Vocabulary is likewise learned on context with the basic mechanism being that of pointing and oral naming of objects and actions. Symbology comes as a formal extension of the naming process. Much of modern conventional and the intensive exposure technique is based on reproducing the process sequence experienced by a child in learning his native tongue.

The more popular modern methods focus first on listening and speaking as abilities and give great stress to phonology. Vocabulary and grammar are given the next greatest emphasis, with symbology being quite logically postponed to coincide with consideration of reading and writing abilities at the later stages of the instructional sequence.

It is clear that what is emphasized as course content will be what the student learns. However, it is also clear that some overlap is inevitable and that some things will be learned almost accidentally. For example, grammatical principles may be absorbed during pronunciation drills in which complete sentences are used as drill materials.

The possibility that accidental or incidental learning could be used to advantage in achieving greater instructional efficiency has occurred to several researchers and teachers. The potential effect

of careful scheduling of materials and shifting emphasis between the various ability categories is illustrated by the fact that while grammar could be learned during instruction on pronunciation, a reverse effect is highly unlikely.

The question of the ideal schedule for emphasizing phonology, grammar, vocabulary, and symbology has not been completely resolved despite the widespread acceptance of the notion that conversational abilities should have precedence. Some substantial benefits may yet derive from a more intensive consideration of the variations possible within the general framework provided by the model of a child learning his native tongue. For example, it is still not clearly established how much proficiency in speaking is developed by only listening to others speak. Likewise, we suspect that phonology could be de-emphasized to some extent and the time saved devoted to vocabulary and sentence building (i.e., grammar) with a resulting increase in the students' ability to communicate.

D. AIDS TO LANGUAGE INSTRUCTION

Films, workbooks, special textbooks, television, plastic models of the physiological structures involved in articulation, records and the ubiquitous tape recorder are some of the aids used in language training. Foreign travel is also considered by many to be a supportive technique and though it is a superfluous consideration in military language training for Viet Nam it has some relevance for other areas. (The Marine Corps sends area specialists on 30-day tours of countries where they concentrate on proving their language skills by interaction with local people in a variety of every-day situations.)

A summary conclusion regarding the value of training aids and supports is that their use in moderation does not seem to impair the learning process. This weak statement is necessary because there is no objective proof that aids have much positive effect over simple drill, for example, when the drill is given the same time and effort. It seems likely that if there is any modest advantage provided by

such devices it is due simply to the variety they introduce into the training situation.

The language laboratory based on dual channel tape has received wide acceptance and might, on those grounds, be considered a possible exception to the conclusion stated above. However, there is so far no evidence which suggests that the tape method of presentation actually accelerates acquisition. The advantages of the language laboratory are real but indirect. The lab set-up, first of all, relieves the teacher of the burden of conducting tedious drill sessions; in principle, no teacher is necessary. Second, it allows the use of native speakers as pronunciation models; and it allows the use of a variety of voice types to prepare the student to handle personal variations in pronunciation, tone, rate, etc.

The value of teaching machines or, from a more generic viewpoint, programmed instruction is still considered by most researchers and practitioners to be an open question. Nevertheless, a great amount of effort has gone into the development of programmed courses for foreign language instruction. A Clearinghouse for Self-Instructional Language Materials was established in 1964 by the Center for Applied Linguistics, and with major support given by the Defense Language Institute. The Clearinghouse maintains up-to-date information on the state of many programmed language courses, including publisher, cost, content of program, and validity data (if available). Also, surveys by the Clearinghouse indicate the extent to which language programs have been adopted by American colleges and universities--e.g., in 1965 approximately 15 percent of several hundred institutions were using programmed instruction in at least eight languages, including English.[18]

The Center for Applied Linguistics is currently developing a new programmed course in French, under DLI sponsorship. It is planned to use this course as a prototype for programs in other languages that are taught in DLI schools.

A serious attempt to exploit and test the potential utility of the programmed instruction concept for language training of military personnel has been made by the researchers in the Language and Foreign Area Division of the Human Resources Research Office. Courses have been developed experimentally for limited applications to the Russian, Mandarin Chinese, and Vietnamese languages.[14,17,49] A specific and most relevant case in point is reviewed in the following section.

E. THE HUMRRO EXPERIMENTAL COURSE IN VIETNAMESE

The HumRRO course in Vietnamese also known as MALT (Military Assistance Language Training) provides a good test case for the evaluation of programmed instruction methods. MALT offers a potential contribution to the immediate problem of imparting a limited but appropriate language proficiency to U.S. military personnel assigned to the Viet Nam area.

With respect to the general evaluation of programmed instructional methods as such, it is necessary to recognize the limited objectives of the MALT course. The course was intended to enable military personnel to understand and speak a selected, limited set of terms and phrases. The total vocabulary amounts to something over 200 words. The terms and phrases were rather carefully selected for their probable frequency of use in the operational setting within which the trainees would be living after deployment.* The course was also aimed toward the achievement by the trainee of some useful level of understanding of the phonetic peculiarities of Vietnamese and its basic grammatical structure so as to provide a foundation for further learning.

The structure of the course follows programmed instruction principles. It is subdivided into fifty lessons. Each lesson is on a

*Material included covers the following areas: greetings; military ranks; numbers; questions of the "how many," "who," "which," "where," "what," "when," "how much," types; military terminology; medical; food; terrain; servant orders; and other advisory matters.

separate dual-track tape reel. The student follows a listen-speak-playback sequence in accordance with the stimulus-response-feedback concept which is central to the programmed instruction doctrine. No instructor intervention nor supporting textual materials are required--all essential supplementary instructions and cues being provided on tapes. The lesson plan, however, allows for integration of such materials and instructor augmentation if this were to be desired. The student can proceed at his own pace, achieving an established level of mastery at the completion of each lesson.

The MALT course is still considered as an experimental approach to language instruction. As such it is not part of the regular inventory of training materials. However, we have recently learned of interest in the MALT course in three additional settings. The U.S. Marine Corps Schools, Quantico, have offered the course on a voluntary, out-of-hours basis. Also, the Marine Corps Institute has ordered 500 copies of the HumRRO course for independent, correspondence study. Finally, the Military Assistance Institute has recently begun to use the course.

1. Evaluation

At least three distinct evaluations of the efficacy of this course have been conducted. The first evaluation studies were conducted by HumRRO. The most significant of these was a field evaluation or demonstration using 19 MATA officers taking general instruction at Ft. Bragg before assignment to Viet Nam. The course was evaluated against the objectives stated above, i.e., limited proficiency in speaking and comprehension, and no concurrent comparison was made with alternative methods. An indirect comparison to more conventional methods indicated a modest advantage for the programmed instruction method with respect to proficiency as measured by the Army Language Proficie ·· Test (Comprehension). The average total learning score based on a work-sample test and representing a composite of speaking ability and aural comprehension was 82 percent. Taken together with the ALPT average scores achieved by the group,

the goal of S-1 was unquestionably reached. The most important aspect of the evaluation is that the desired level of performance was reached without the cost of having a live instructor present. In summary, performance among the MATA trainees was equivalent or slightly superior to that achieved by conventional methods; cost was considerably more favorable than for courses requiring instructors.

A second and less formal evaluation was conducted for the Defense Language Institute by some expert linguists. It was concluded that the HumRRO material could not make a positive contribution to the DLI programs in Vietnamese although the opinions were not unanimous. The principal reason given for this was that certain phonetic deficiencies as well as structural matters made the course unsuitable.

A third evaluation was conducted by the ARPA Field Unit in Viet Nam and consisted of follow-up interrogation, largely by questionnaire, of 14 of the 19 experimental trainees mentioned above as well as a comparison group of 16 officer-advisors who had received 12 weeks of conventional Vietnamese language training. The experimental group had the HumRRO course and the 12-week DLI course in Vietnamese as their basic language preparation. The control group had the MATA (40 hour) Vietnamese course as well as 12 weeks at DLI-West Coast. The results of the ARPA survey have been analyzed and reported elsewhere.[11] Mainly, the findings indicate a positive attitude toward the MALT course in light of the actual experience of the officers in the field. However, regarding a direct choice between the MALT course and a comparable amount of time spent in classroom instruction, the MATA group split about 50-50. The most positive attributes of the MALT course was the self-pacing feature. (Subjects, who worked at their own speeds, varied between 44 and 150 hours (average 83) to complete the course.)

In addition to the in-country follow-up of the advisors who had taken the MALT course, extensive discussions were held with anthropologists and other individuals, fluent in Vietnamese, who know the job of the advisors, and who have been exposed to the HumRRO material.

Overall reaction to the course was favorable. Expert opinion may be summarized as follows: (a) the concept of an introductory, self-instructional course in Vietnamese is very good; (b) the MALT course meets the need for such a training vehicle; and, counter to the DLI assessment, (c) there are no serious linguistic deficiencies in the HumRRO material.

In summary, the evaluations seem generally congruent with most other research on alternative methods. Achieved proficiency is far more dependent on the time spent learning than on the particular method. The advantages of programmed instruction reside in the inherent economy of this method and its flexibility in the sense of not being bound to a particular time and place and in the sense of allowing the trainee to proceed at his own pace. Another advantage derives from the explicit focus on finite objectives that is characteristic of programmed instruction. The clear specification of meaningful and relevant objectives is, of course, possible for any training method, but it is forced in the case of the programmed approach, the point being that this specification is always present in the preparation of programmed materials.

2. Improvements

The following are some suggestions that might improve the MALT course:

(a) More different voices should be incorporated into the course. Female speakers, elderly people, and a greater variety of male voices should be used.

(b) The technique of translating from Vietnamese into literal English, instead of going directly into colloquial English, might be confusing, particularly in later lessons when students should be able to translate colloquially. One linguist recommended eliminating this step early in the course.

(c) Some French or English words are used when there are suitable Vietnamese terms available, e.g., "essence" is used

although the Vietnamese have their own word for "fuel;" also "telephone" is used instead of the native word in Vietnamese. While these cognates are universally understood, they should not be substituted for native words when the latter are widely used.

(d) A few sentences were believed to be too wordy; they could be edited and simplified.

(e) There are a few instances in which Northern and Southern dialect terms are uttered in the same sentence. While this may be deliberate, the practice could be confusing unless pointed out to students.

(f) Use more voices of the types suggested in point (a) above. (Radio Saigon was recommended as a good source of speakers who represent the major dialects. These people are also current in local idiomatic expressions, which is probably not true of Vietnamese native-speakers who have been in the U.S. for a long time.)

(g) Modify the content of the course to include special vocabularies. Or, it might be more useful to follow a branching schedule, i.e., give the same introductory tapes to all students, then have available specialized tapes at an advanced point in the course into which subjects could be switched according to their professional needs (e.g., naval, medical, or electronics terminology).

Finally, we concur in the recommendation that the HumRRO course, or a modified version of it, be used in an in-country experiment in combination with native-speaker informants. We would also like to see a small evaluation of the HumRRO course as the only source of Vietnamese language instruction to non-language trained advisors after they had arrived in Viet Nam. This might include one experimental condition in which advisors would take the course after they had gotten into their field assignments.

A valuable additional benefit of the ARPA survey was the information volunteered about the use of language, additional vocabulary

requirements, dialect problems, and other such issues. The report of the sample of the 35 officers on these auxiliary topics constitutes an essential set of data for recommendations regarding crucial factors for further research and possible administrative actions. These topics will be discussed in detail in a later section.

F. FURTHER RESEARCH AND DEVELOPMENT ON LANGUAGE USAGE AND TRAINING

1. Special Vocabularies and Limited Use Languages

In addition to a proficiency level of S-2, there are two types of specialized languages that would be useful to Americans in Viet Nam. The first is intended to be a rapidly learned, non-grammatical aid to immediate communication in very specific situations. Examples of these range from simple social amenities--greetings, leave-taking, inquiries about family--to critical tactical military operations--battlefield prisoner interrogation, for instance. The second type of specialized vocabulary is intended to be useful to people who have a basic knowledge and fluency in Vietnamese and who must know a great deal more about particular subjects in order to work efficiently in special professional tasks. Examples here are intelligence interrogators and translators, and psychological warfare operators. While recognizing the need for the latter, "professional" type of language development, this section deals only with the former, more limited special language requirement.

A consistently recurring request that was made during our in-country survey was the need for more training in specialized vocabularies. This took various forms and was applied to different situations. As has already been indicated, the advisors we contacted all expressed a need to know much more military terminology. This type of special vocabulary would be additional to basic instruction in Vietnamese.

There are several special situations in which language instruction, limited to very narrow operational areas, would be useful. One of these has to do with naval operations, particularly the coastal patrol and junk inspection activities of all-American Navy units.

Most of these inspections are routine: the Vietnamese subjects know what is expected of them and there are very few words exchanged between personnel in the two crews. However, simple orders involving seamanship matters are sometimes necessary. A Naval consultant, familiar with the nature of the at-sea search routine in Vietnamese waters, has estimated that 50 words or terms would be adequate to handle 95 percent of the situations encountered there. (We know of one case in which a junk was nearly capsized because its crew could not understand the English order to "cast off." Had the American seamen known how to say this in Vietnamese, the near-accident would never have occurred.)

The medical area is also one in which special, limited language skill would be useful. Corpsmen usually acquire the specialized terminology of their field after having been in-country. We are proposing that such a vocabulary be developed and taught formally to medical corpsmen.* Two critical incidents were reported in this connection--one favorable, the other unfavorable--which illustrate the value of limited, specialized language skill: A two-man team of Korean medics who knew medical Vietnamese went to work immediately upon entering the country; an observer said that, in addition to the professional advantage of being able to ask simple questions and give instructions to patients, the Koreans were able to establish very effective rapport almost immediately on arriving in a new village. Another medical team--Filipinos who had no language capability in Vietnamese--required an interpreter and, reportedly, were much less effective in their work than the Korean group.

Other substantive areas that have been proposed for special vocabulary treatment are communications, automotive and other vehicles, and battlefield prisoner interrogation. There has been considerable research on the feasibility of special, limited language development applied to the latter situation.[48] It has been shown that Americans of average ability can learn enough of a foreign language--Russian

*See comment on page 7 about a nursing vocabulary.

in the research cited--to be able to communicate effectively with native-speaking subjects in simulated battlefield prisoner interviews. We believe that the success already demonstrated experimentally, as well as the expressed need for limited language capability by people now in Viet Nam, should be followed by formal development in the areas outlined above.

If we regard feasibility as already established, the approach to be taken is fairly clear. The specific priority of words and phases must be established by direct observation in on-the-job situations. Frequency of use and judged criticality would be criteria for priority assignment.*

2. In-Country Language Training

In June 1965 a letter from the ARPA R&D Field Unit, Viet Nam, to ARPA Headquarters suggested that Vietnamese language training be done in-country rather than in the CONUS. Accordingly, one question the present study investigated was the desirability of such a change in practice, i.e., a shift from exclusive reliance on language training in U.S. schools to new schools that would be established for this purpose in Viet Nam. Here are the arugments that seem most relevant to both sides of the issue.

(a) In-country training has a high motivational value. Students are forced to live with continual reminders of the importance of knowing Vietnamese. Put another way, the aspect of culture-shock coming from being put in a totally unfamiliar linguistic environment can be used to advantage: newly arrived advisors would have a much higher regard for the need to learn Vietnamese if their lives were improved immediately as a result of starting to learn the language.

(b) There is a frequently heard complaint that many language-trained advisors lose proficiency because of long delays

*This has been done, for example, in the development of English language materials for foreign officers attending American technical schools (see D. Klaus, Ref. 30).

that occur between finishing language school in the U.S. and their arrival in Viet Nam: "...Weeks or even months may elapse between the end of the program and the advisor's arrival overseas, during which time the student is bound to lose some of his scant and hastily acquired knowledge of the language...."[28] The practice of in-country language training would eliminate this problem.

(c) In-country training provides immediate positive reinforcement to the student from the first day he begins to learn Vietnamese. It is possible, after only a few hours, to learn such things as social greetings, how to read simple signs, etc. These can be practiced almost at once and success in being able to operate at a simple level would encourage further learning.

(d) It would be possible to emphasize selected dialects or even special languages that could not otherwise be taught in the U.S. The apparently exhausted supply of native-speaking instructors in the United States would not be a problem in Viet Nam; neither would the complaint apply that Vietnamese who have lived many years in the United States acquire spurious American accents. Furthermore, it is much easier to recruit instructors in Laotian or Cambodian in Viet Nam than in the United States.

(e) Professional linguists have argued against in-country training on several grounds. The mistakes that students make, both in pronunciation and syntax, tend not to be corrected by native speakers. Thus, bad language habits are reinforced rather than corrected. Also, there is concern that a language instructor, or informant, available in-country, would become unnecessarily supportive--a sort of "crutch," as one person put it. This might result in the American actually using less rather than more Vietnamese. The counter-argument here is that linguist-informants should always be subordinate to the trainee; their role as instructors, rather than interpreters, has to be emphasized.

(f) A major reason for not setting up in-country language training is the productive time that would be lost from the regular one-year tours of advisors in Viet Nam. One way out of this dilemma would be to extend advisor tours by the amount of time given to language training in-country. This might also become a motivating device: if language students were required to reach a certain level of proficiency before being assigned to their jobs, and if the language courses were flexible enough to permit students to progress at different rates, then advisors could be expected to learn more rapidly than in conventionally-scheduled training programs because of their interest in getting an assignment.

(g) It has also been proposed that in-country training be combined with previous language schooling in the CONUS, rather than following an "either one or the other" course. For example, a brief Vietnamese course (six to eight weeks) would be given by DLI and it would stress basic things--phonology, structure, etc. Then, in two to four weeks of intensive in-country training students would concentrate on vocabulary building, dialect differences, and regular exposure to social situations in Vietnamese.

Guthrie reports that a group of Peace Corps volunteers, who were trained in general linguistics before they left the U.S., received several weeks of intensive language instruction after they had been in the Philippines for three months. Not only was motivation to learn the language very high, but instruction could be given in the specific regional dialects appropriate to the volunteers' assignments.[21]

(h) Another problem, which would be settled only by policy decision, involves the overwhelming administrative demands currently made on new advisors upon arrival in Viet Nam. Some of our informants believe that unless language training could be given in a relatively isolated setting--certainly not in Saigon--these demands would prevent effective learning.

In summary, the notion of in-country training is attractive enough to warrant serious consideration. Assuming that the policy decisions needed to bring it about can be made, a pilot program should be initiated and carefully evaluated. Various combinations of CONUS plus in-country language experience should be compared experimentally with the present all-CONUS training. (The research approach suggested above is analogous to the operational evaluation of weapons in which selected units are armed, on a trial basis, with a new weapon and results are compared to other units, using a standard-issue weapon.)

3. New Techniques of Instruction for Comprehending Second Languages

Listening to spoken language, and comprehending what is said, is probably the first thing we learn in acquiring proficiency in our native tongues. We learn to listen and understand before being able to speak and even earlier than we can read or write. Traditionally, however, second language training has concentrated on reading and writing, rather than speaking, a new language. Only in the post-World War II period has the emphasis in training shifted from reading and writing a foreign language to oral-aural behaviors.

However, it is possible that the interest, and success, in teaching spoken language has been allowed to overshadow the development of skill in listening to a second language. A major problem facing many people who have had years of language training is that, upon arrival in the country where their second language is spoken, they cannot follow normally-paced conversations or lecture material. This may be a result of any of several factors: (a) speech in the second language is at a much faster rate than the subject has learned; (b) unfamiliar idioms and colloquialisms are used by native speakers; (c) regional dialects or accents are used; and (d) individual differences affecting voice quality are unfamiliar due to such factors as the sex or age of the speaker.

We believe research is needed on learning how to incorporate these factors into language learning. One already demonstrated technique that has promise is the work in so-called "rate-controlled speech"

done by the American Institute for Research.[42] The research cited has shown that native speakers of English can learn to listen, with high accuracy, to very much increased rates of speech; normal conversational English is about 125 to 140 words per minute and, with special training requiring only a few hours, people can learn to comprehend 325 words per minute with little loss in accuracy.

It seems likely that the same techniques could be exploited in reverse; i.e., use the AIR method to build up listening rates in Americans who have learned a second language. There are a number of other variables that need investigation in relation to the "rate-controlled speech" idea. It is not known, for example, whether tonal languages like Vietnamese are amenable to the types of electronic distortion needed to create speeded, or expanded, English. We conclude, then, that this is a neglected area, which, nevertheless, shows many promising directions for research that should be supported. In fact, the whole question of the validity of the distinction between speaking and listening skills should be investigated and an analysis should be made of the relative value of each skill and the payoff with respect to the possibility of differential emphasis during training.

4. A Suggestion Concerning "Toneless" Vietnamese

One of our linguist informants has suggested the possibility of exploiting the fact that some Vietnamese words are "toneless" or, rather, uttered at a single tonal level. If such words can be isolated it might be possible to learn to use them in context. This could provide a "basic Vietnamese" in the sense that it would eliminate the tonal, and apparently very difficult, aspects of the language. Analytical research is required to determine whether a vocabulary of "toneless" words would be useful by itself or only as a core vocabulary around which could be built a more complete competence employing intonated words.

5. Second Culture Learning*

Our informants in Viet Nam consistently indicated the importance of understanding many cultural aspects of the people with whom they lived and worked. The value of knowing Vietnamese values, beliefs, and the significance of the "silent language" of communication are demonstrated every day. We believe that language and culture are interdependent and that learning one should incorporate the other. As in second language learning, acquiring this type of information about another society involves more than the simple substitution of Vietnamese for American values. Also, there are problems of interference: the acquisition of new forms of behavior interfere with older habits and, under stress, the latter tend to dominate.

Several types of research projects should be undertaken in the area of second culture learning. First, the specifics of what is important in the Vietnamese way of life has to be determined, analyzed, and described. The use of native informants, for example Vietnamese social scientists as well as less sophisticated people, has been found to be a useful source of this type of information. It is necessary to determine and then teach those things a Vietnamese does which are meaningful to him and which could be easily misunderstood by an American and it is also necessary to determine how Vietnamese are likely to react to or misunderstand typically American behavior. Both of these effects have to be made explicit in language-cultural training.

The techniques of contrastive cultural analysis are useful and should be applied: differences between the U.S. and the target nation (i.e., Viet Nam) are enumerated and analyzed so that they can be emphasized. It has been demonstrated that too much importance has been placed on the philosophy that "all men are basically alike." In fact, apparent similarities are usually superficial and failure to recognize

*We have adopted this concept, as well as much of the material in this section, from the papers of George Guthrie, Ref. 21.

this fact can cause serious interpersonal communication problems.[19] Good or bad, dissimilarities between people of different nationalities are a fact of life.

Research is needed to further the teaching of second culture material. Not only should Americans know about the Vietnamese way of life, but they should know how to deal with it as well. Peace Corps training of volunteers for the Philippines has involved the development of new cultural-linguistics methods for doing this.[37] Starting with everyday situations involving groups of natives, Lynch and his co-workers have analyzed spoken language as well as the cultural significance of how Filipinos express themselves. Trainees not only read this material but they listen to recorded dialogues in Tagalog and they participate in role-playing situations with native informants in the local language. Values that are strikingly different from American beliefs, e.g., time and space concepts, are experienced directly by this method.

It is important to learn how American military advisors are perceived by their Vietnamese counterparts. Some of the things we value most in ourselves--American generosity, for example--may be viewed as naive and interfering by the Vietnamese. This fact suggests the need to teach Americans about their own culture and what its impact is on others.

Research is needed on the paralanguage of communication: the non-verbal behavior that is rarely taught to people going abroad, largely because it is not understood in sufficient detail. E. T Hall's The Silent Language[23] is an excellent account of non-verbal behavior and its importance in interpersonal communication. Again, as in the foregoing sections, we believe the paralanguage of Viet Nam needs analysis as a first step; then, methods for teaching it to U.S. military personnel have to be developed and tested experimentally. Most likely the paralinguistics of communication will be taught late in a language program, although this has not been established as a fact. In summary, we now recognize the importance of non-verbal communication but very

little is known about either the specific details of it in a particular culture or how best to teach such material to Americans once it is known.

6. Improved Language Aptitude Testing

The general subject of language aptitude has been treated elsewhere in this report. It is our view that further work on language aptitude test development is not warranted or, at least, this would be a low payoff area in which to support research. Psychological test research in the language aptitude area is not likely to improve the prediction of proficiency. As in many types of human endeavor, there are uncontrollable and unmeasurable sources of variance in learning a second language, motivation being perhaps the most difficult of these, to handle quantitatively.

In summary, we believe that existing language aptitude tests--the Army Language Aptitude Test and the Modern Language Aptitude Test--do about as reasonable a screening job as can be expected. Other aspects of the total language training picture, however, do present questions needing R&D support and they are more likely to provide short term payoff.

G. TRAINING PROGRAM INTEGRATION

A point has been implicit in the preceding discussion which needs to be made explicit. That is, language training is only one part of the larger training effort intended to prepare advisors and other military personnel to be effective in overseas assignments. The concept of an integrated training program is not a new one and there is no intention here to review old issues or to enlarge the scope of discussion to include fundamentals of the continuing education of professional military personnel. However, the overseas assignment has enough unique characteristics to put it outside the ordinary career development sequence and thereby make it the focus of special attention.

The elements of such a program are matters of general U.S. policy regarding military assistance, the duties performed and functions served by advisor personnel, technical logistics, host-country

resources, tactical and strategic threats to the host country, host-country politics and foreign policy, the cultural characteristics of the host country, and the language of that country. It can be seen quickly that these topics tend to intertwine and overlap in such a way that no separate course of instruction in one topic could avoid some mention of several of the other topics.

The potential importance of the advisor as an agent of U.S. policy is underlined in Viet Nam. Other serious disturbances of the peace are possible in other remote areas of the world. These conditions should help justify a re-analysis of current procedures regarding all aspects of the training of advisor personnel and an evaluation of the feasibility, cost, and utility of a restructuring of the overall training program. The principal technical objective of such an enterprise could well be a formulation in which each element in the program would provide the maximum support for all other elements. This objective is exemplified in the preceding discussion by our emphasis on the relationship between the duties and place of assignment of the advisor, his knowledge of the cultural setting and his knowledge of the language of the host country.

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APPENDIX A

LANGUAGE TRANSLATION IN VIET NAM

1. The Problem

This Appendix treats a special language problem confronting MACV: the translation of written material from English to Vietnamese and vice versa. Not including military intelligence, there are at least three agencies responsible for English-to-Vietnamese translation: the Training Directorate, Schools Division, MACV, the Joint U.S. Public Affairs Office, and the Headquarters Support Activity. Each of these groups handles somewhat different types of material and their rates of production vary considerably. Working in support of the Vietnamese Joint General Staff, the Training Directorate employs 16 Vietnamese civilians on contract as translators of technical and field manuals into Vietnamese. Compensation is based on RVN civil service pay scales. Output averages up to three pages per day, for each translator, depending upon the nature of the material. The Training Directorate receives requests for the translation of a very large volume of highly diverse material. Some of the requests appear, on the surface, to have little relationship to the conduct of combat operations in Viet Nam. Thus, in September 1965, FM 35-20, "WAC Physical Training," had been translated into Vietnamese and was undergoing review and revision; also, FM 12-50, "Marching Band," had been translated and was available in mimeographed form. The translation agency, i.e., Training Directorate, MACV, has no authority to question the appropriateness of translation requests or to impose a priority order on material. The current translation backlog, for getting new material into the system, is 2.5 to 7 years. The cost of one recently

translated technical manual of 256 pages was about $3.00 per page, including typing and supervisory costs.

In the JUSPAO, which deals with political material, translation is handled by Vietnamese civilians who are paid by the page, rather than by hours worked. After considerable screening and selection of translators, the JUSPAO is satisfied that the quality of its output is adequate. The incentive system of payment seems to attract very high level people, many of whom are university graduates who do translating as a side activity in order to supplement their incomes. A problem faced by the JUSPAO, but not other agencies, is the delay--about 10 days--in a complete cycle of translating English-to-Vietnamese, review and editing, and retranslation back into English.

The translation group of HedSupAct is supervised by a U.S. Navy officer with extensive training in Vietnamese. Because of the wide range of subjects handled, special glossaries have been developed to assist the translators. Glossary subject areas include legal, automotive, weapons, and signal. Some of the material submitted to HedSupAct for translation is not easily justified as critical to the war effort--rules for badminton, for example, and a 71-page Christmas card address list. As in the Training Directorate, HedSupAct has no authority to reject or question translation requests. There are 21 Vietnamese translators and a much smaller staff of U.S. military people; the latter, primarily, serve as editors and reviewers, not as translators. Output runs about six to ten pages per translator per day, although there are wide differences (some translators can produce 20 pages a day). Monthly output is 3000 pages and the backlog is not serious. Translators receive straight salaries rather than incentive pay. The group is sub-divided into sections according to functional areas--legal material and claims, military lesson plans, and so on.

There was evidence, obtained from advisors who have served with Vietnamese units, that the actual usage of translated technical manuals is very low. For example, advisors reported that the only

sections of automotive maintenance technical manuals that were used were the parts list so that spares could be re-ordered from supply depots.

In summary, there are serious translation bottlenecks in MACV and the situation does not seem to be improving. Agencies responsible for handling translations do not have the authority to reject or demand justifying arguments for material submitted to them. Finally, there is evidence that the utilization of translated documents, particularly field and technical manuals, is low among the Vietnamese personnel for whom they are intended.

2. Some Solutions

The translation problems that exist in Viet Nam should not be viewed merely as language issues but, rather, as system problems of which knowledge of Vietnamese language is a component factor. Following are some proposals for immediate assistance in reducing the current backlog of untranslated materials.

a. Utilization of existing translation resources. A primary resource is the Joint Publication Research Service, a component of the Clearinghouse for Federal Scientific and Technical Information, U.S. Department of Commerce. This service was established in 1957 by a group of Federal agencies that needed English translation of books, newspapers, periodical articles and other materials being published in a variety of languages. The JPRS started a search throughout the country for specialists, who possessed knowledge of a foreign language and were willing to translate materials in their fields on a part-time, contract basis at home. This search was conducted successfully, and the JPRS now has around 4,000 translators under contract--with a potential of an additional 1,500 available almost immediately. On the average, JPRS is now utilizing the services of only some 300 of its translators in any given month. Recently the Automatic Language Processing Advisory Committee of the National Academy of Sciences found that JPRS produces translations reasonably quickly and quite economically and that it has the capability of immediately expanding its operations.

Present effort and capability for expansion in English-Vietnamese, Vietnamese-English translations in JPRS are as follows:

(1) JPRS currently has additional capacity for translation. The Agency regularly receives calls from Vietnamese-English translators seeking work.

(2) The New York and San Francisco offices of JPRS have good supplies of translators who are not being utilized continuously.

(3) JPRS estimates it could handle from one-half to twice as much Vietnamese work on a routine basis as it is doing now. In this context "routine" means the delivery of 50 pages of translation in 15 days or 100 pages in 30 days. At present JPRS is doing some work for a DOD project on a priority basis and is completing batches of translations on a 3, 5, and 7 day basis. During FY 1965 JPRS translated and published 16,950 pages of Vietnamese-to-English; this is a rate of 425,000 words per month. Approximately 35 to 50 translators were involved, not all of them on a full-time basis.

(4) The cost to the requestor is $16 per thousand English words regardless of the language into which or from which the text is translated. This figure holds even for the priority project with DOD.

(5) JPRS has had experience translating dictionaries: e.g., a Vietnamese to Chinese dictionary has been reviewed and is now being converted into a Vietnamese to English dictionary. Also a Chinese to German dictionary of Communist terms has been converted to a Chinese-English dictionary.

(6) JPRS has had experience in translating technical manuals. It has, for example, translated a 1000-page manual on the internal combustion engine from English to Vietnamese.

Manuals and other documents could be sent to JPRS centers here for processing. Since many of the JPRS translators live on the West Coast, perhaps arrangements could be made for the San Francisco office

to handle the bulk of the translation, thus cutting down on the number of items sent across the U.S. The translators should be provided with whatever reference works are available and helpful. Establish priorities for translation of documents and examine documents now awaiting translation to determine (a) whether some may have already been translated elsewhere, and (b) whether others may no longer need to be translated for other reasons. (Our in-country interviews indicated that there is very little filtering of what should be translated.)

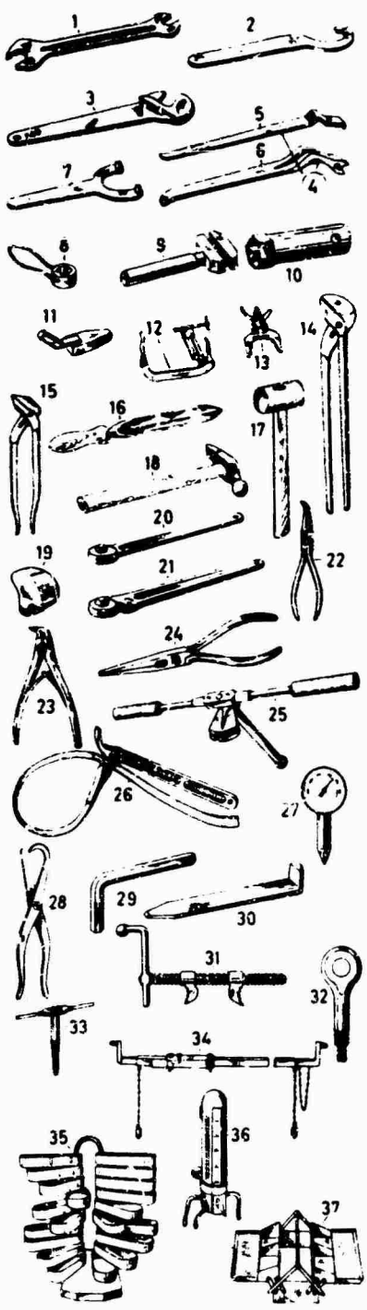
b. Increasing the producitivity and quality of translators.

(1) Hire the translators on a piece work rather than a salary or hourly basis. (This is supported by the experience of the JUSPAO.) The effect of such a hiring practice would probably be felt immediately.

(2) Provide the translators with such helpful reference materials as might be available and seek ways to produce other needed reference works. Semi-automatic means of aiding translators have been developed. There has been in operation for nearly ten years a Federal Armed Forces Translation Agency in West Germany. This group uses a computer-based system of producing "text-ordered" glossaries for translators of technical material. The translator simply underlines those words he does not know, these are keypunched and fed into the computer, and a glossary of definitions is printed in the same order the unknown words appeared in the text. Experiments comparing the output rates of translators working with and without such glossaries showed that the latter required approximately 66 percent more time to do equivalent amounts of translating (other more sophisticated uses are made of the computer, but they will not be treated here).

Details of a recent experiment on the automatic production of lexicographics are given in an article in the May 1965 issue of The Finite String,* newsletter of the Association for

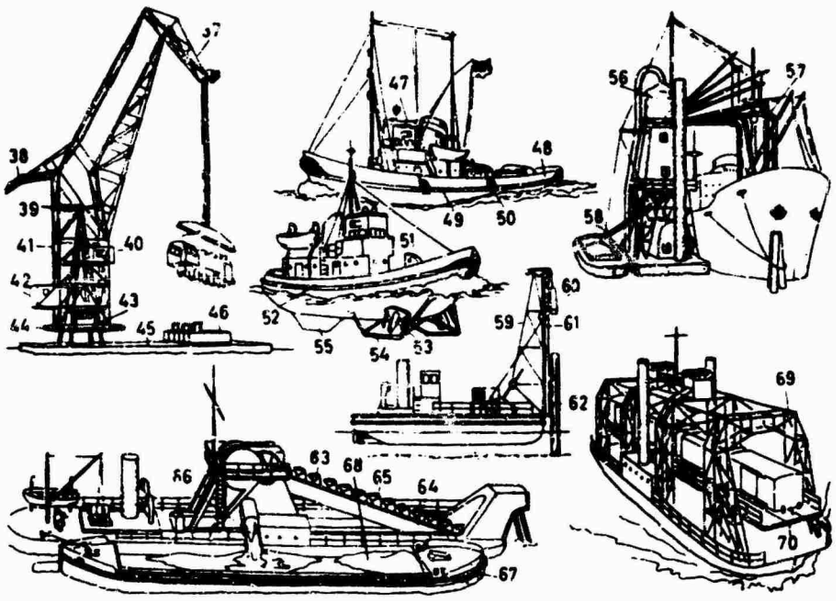
*See Attachment No. 1, Appendix A.



1 la clef plate (clef à fourches *f*, clef à deux encoches *f*)
2 la clé en col *m* de cygne *m*
3 la clé à molette *f*
4 les leviers *m* démonte-pneus:
5 le démonte-pneu
6 le démonte-pneu à fourchette *f*;
7 la clé à ergots *m*
8 la clé à bougies *f*
9 la clé anglaise
10 la clé à tube *m*
11 le coin pour l'entretien *m* des valves *f*
12 le lève-soupape
13 l'outil *m* de montage *m* des segments *m* de pistons *m*
14 la pince plate réglable (pince à écartement *m* variable)
15 la pince coupante à plat *m*
16 le grattoir creux
17 le maillet en caoutchouc *m*
18 le marteau à boule *f* ou à panne *f* sphérique
19 l'enclumette *f* (l'embossoir *m*)
20 le cliquet
21 le cliquet interversible
22 et 23 pinces *f* pour fusibles *m*:
22 pour fusibles *m* intérieurs
23 pour fusibles *m* extérieurs;
24 la pince à becs *m* minces allongés
25 la clé dynamométrique
26 le dévisse-bouchon de réservoir *m*
27 le compte-tours
28 la pince à ressort *m* de frein *m*
29 la clé Allen
30 le tournevis coudé
31 l'écarte-pneu *m*:
32 la manille pour le levage du moteur;
33 le taraud tire-goujon
34 le dispositif de réglage *m* du parallélisme des roues *f*
35 la caisse pour l'assortiment *m* de petites pièces *f*

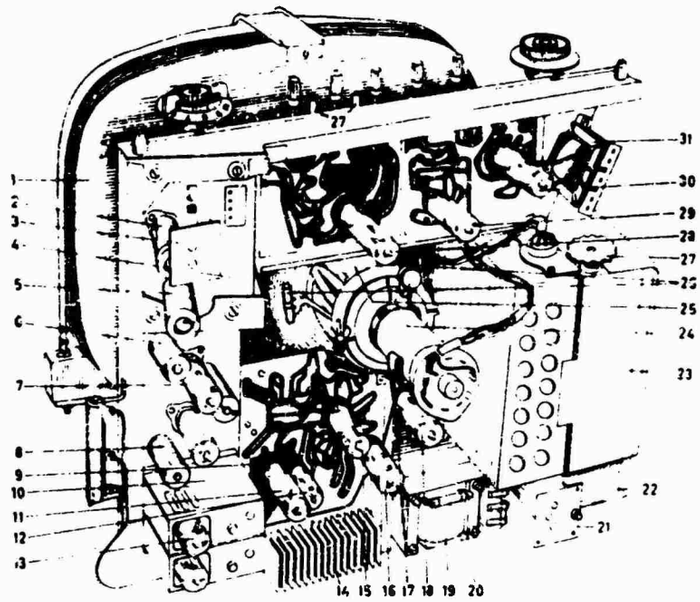
A page from Duden Francais, Mannheim: Des Bibliographischen Instituts, 1962.

FIGURE 1



35 l'estampille *f* (la marque)
36 la pile (le tas);
37-70 navires *m* de port *m* spéciaux,
37-46 la grue flottante (le ponton bigue):
37 la flèche (la volée) de grue *f*
38 le contrepoids
39 le pivot de réglage *m*
40 la guérite du conducteur de grue *f*
41 la charpente de la grue
42 la cage de tambour *m* de hissage *m*
43 la passerelle de commande *f*
44 la plaque tournante
45 le ponton flottant, une prame
46 la chambre du moteur;
47-50 le remorqueur de haute mer *f*:
47 la toile abri de pavois *m* (le cagnard), un prélart
48 le liston de défense *f*
49 le côté bâbord [bâbord = à gauche]
50 la défense mobile (la ceinture);
51-55 le remorqueur de port *m*:
51 le bordé à rivolins *m*
52 le côté tribord [tribord = à droite]
53 le propulseur Voith-Schneider à pales *f* verticales
54 le cadre de protection *f* des pales *f*
55 l'aileron *m* (le stabilisateur);
56-58 l'élévateur *m* à grains *m*:
56 le silo
57 la buse d'aspiration *f*
58 la buse de chargement *m*;
59-62 le ponton-sonnette:
59 les poutrelles *f* d'armature *f* (le bâti)
60 la masse tombante (le mouton)
61 le rail de guidage *m*
62 le pilotis à foncer;
63-68 la drague à godets *m*, une drague:
63 la chaine des godets *m*
64 le convoyeur à godets *m*
65 le godet (le louchet) de drague *f*
66 la glissière
67 la marie-salope (l'allège *f* de décharge *f*)
68 la vase;
69 et 70 le ferry-boat, un bateau transbordeur:
69 le portique d'embarquement *m*
70 la plate-forme de levage *m*

FIGURE 1 - continued



1-31 le récepteur de télévision *f* [vue *f* intérieure]:

1 le tube *m* à rayons *m* cathodiques (tube de l'image *f*)
2 le préamplificateur *m* à HF (haute fréquence *f*)
3 la plaque de connexion *f* d'antenne *f*
4 le sélecteur de canaux *m* (le choix d'émission *f*)
5 le tube mélangeur et l'oscillateur *m*
6 le filtre d'image *f* à moyenne fréquence *f*
7 l'amplificateur d'image *f* à moyenne fréquence *f*
8 la résistance-self
9 le circuit imprimé
10 le détecteur-vision à moyenne fréquence *f*
11 l'amplificateur *m* vidéo
12 le réglage à main *f* et la lampe de contraste *m*
13 l'inverseur *m* d'interférences *f*
14 le redresseur au sélénium
15 le synchronisateur avec le séparateur d'interférences *f*
16 l'amplificateur *m* acoustique de moyenne fréquence (le canal son)
17 l'aimant-piège *m* à ions *m*
18 le démodulateur de son *m* et le préamplificateur à basse fréquence *f*
19 le self de choc *m*
20 le thermorupteur
21 la plaque de connexion *f* de la télécommande
22 le transformateur de sortie *f* du balayage vertical
23 le blindage
24 le centreur d'images *f*
25 la bobine de déviation *f*
26 les redresseurs *m* de distorsions *f*
27 le rotacteur
28 le stabilisateur vertical et la mise au point *m* du balayage vertical
29 le stabilisateur horizontal
30 la mise au point de basse fréquence *f*
31 le transformateur de sortie *f* du son (BF)

FIGURE 1 - continued

Machine Translation and Computational Linguistics. The paper is reproduced as an attachment to this Appendix.

(3) Use illustrated special dictionaries and glossaries for highly technical material. An example of such a reference work is Duden Francais, Dictionnaire en images, Mannheim: Bibliographisches Institut, 1960. This is an illustrated dictionary with words grouped into 15 major headings and 368 sections. Other editions of the same book exist for English and German. The user of this type of dictionary can work either from the illustrations to the bilingual glossary or vice versa (Fig. 1 is a page from the French Duden, shown here to illustrate this type of dictionary).

c. Long term assistance for future translation efforts. One classification of types of material to be translated might be based on the rapidity with which a translation needs to be made and on the anticipated number of users of such a translation.

(i) Ephemeral documents. These documents might be characterized by the urgent nature of their contents whose usefulness rapidly diminishes with the passage of time. Captured documents which need to be analyzed by our intelligence teams as soon as possible would form a large part of the documents in this category. Typically, use of these translations will be limited to a relatively small number of analysts in the intelligence community. This being the case, it would be foolhardy to try to have these translations be anything more than a "quick-and-dirty" translation, since every minute spent in polishing the style and fiddling with the syntax reduces the value of the translation. The method of publication also must contribute to the rapid dissemination of the translation. Low quality reproduction can be tolerated if speed is thereby gained.

(ii) Archival documents. These are documents which do contain information that will continue to be useful over a relatively long period of time and which will have a wide readership. Typical

examples of archival documents would be field and technical manuals. Since these translations will be used by a relatively large number of individuals over a long period of time, it is important that they be done with considerable care and in a suitable quality of reproduction.

This bipartite classification is, admittedly, somewhat oversimplified; however, it is useful to make these distinctions. What emerges from this classification is the observation of the likelihood that much of the ephemeral translation will be from Vietnamese to English, whereas perhaps the bulk of the archival translation will be from English to Vietnamese. If this observation is true, then it will affect any proposed reorganization of a translation system.

From the ALPAC* study it is clear that the three requisites in a translator, in order of importance are as follows:

(1) Good knowledge of the target language.

(2) Comprehension of the subject matter.

(3) Adequate knowledge of the source language.

From the preceding assessment of the situation, certain conclusions would seem to follow:

(1) The translation of most of the ephemeral matter (since it would be from Vietnamese to English) should be done by persons whose native language is English.

(2) The translation of most of the archival matter should be done by persons whose native language is Vietnamese and, furthermore (in the case of archival documents whose substance is apt to be technical) whose comprehension of the subject matter is at least adequate.

If one accepts the validity of (1) then it would seem logical to recommend the training of the number of additional U.S. personnel necessary to meet the translation requirements for ephemeral matter.

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*Automatic Language Processing Advisory Committee, National Academy of Sciences, Final Report (in press).

If one accepts the validity of (2) then one will need to recommend that the services of Vietnamese who are competent in various subject matter fields be secured. Since it will, no doubt, not be an easy matter to find these people, it might be wise to see what assistance could be given to these translators by means of specialized glossaries or text-related glossaries after the manner of the West German Federal Armed Forces Translation Agency.*

A thorough analysis of the present system would seem to be called for in which the following questions (among others) would be asked:

> What is the present average output of the in-house translators, thousands of words per day?
>
> What is the average cost per thousand of words?
>
> What are the users' reactions to the translation with regard to quality and timeliness?
>
> What is the ratio between time spent solely in translating and time spent in preparation for publication?
>
> Is effective system of priorities in use?
>
> What reference works are needed by the translators?

d. Fully automatic translation. Since most people have heard, from time to time, various claims about mechanical translation (MT), someone might ask whether or not MT could help solve the present English-Vietnamese, Vietnamese-English translation problem. The answer to such a question would be completely negative. The most recent and definitive study of the current status of MT has just been made by the Automatic Language Processing Advisory Committee (ALPAC) of the National Academy of Sciences--National Research Council. This Committee concludes that we do not now, after a dozen years of research, have useful machine translation and, further, that there is no immediate or predictable prospect of useful machine translation. A similar view of the prospects for MT was set forth by Dr. H. T. Hookway of the (U.K.) Government Department of Education and Science

*Krollman, F., et al. (Ref. 31), "Production of Text-Related Technical Glossaries by Digital Computer," a procedure to provide an automatic translation aid, undated, mimeographed.

in his article "The Office of Scientific and Technical Information," Nature, 17 July 1965, p. 234:

> It has become clear in recent years that the problem of handling information by machine methods is much more difficult than was once thought. The application of computers to information problems has raised tantalizing possibilities--of mechanical translation, of storing whole texts on magnetic tape and of retrieving information selectively in packages of convenient size--but experience has shown that these goals cannot be reached by computer technology alone. It is necessary to conduct more fundamental research into the nature of the language in which scientific information is expressed in order that satisfactory means can be found of manipulating data and ideas by machine with the minimum of human intervention. Thus, for example, machine translation cannot progress far beyond its present crude achievements until much more is understood about the grammar and semantics of language.

These "present crude achievements" are Russian to English translations. Since research has been done in this field now for a dozen years, since much more is known about Russian than is known about Vietnamese, and since researchers with a knowledge of Russian are more plentiful than scholars who know Vietnamese, any proposal to develop a Vietnamese-English or English-Vietnamese system of mechanical translation would be viewed by responsible persons with competence in this area as utter folly.

3. Other Recommendations

The nature of the documents being submitted for translation should be determined as to target and source language and as to number of users and degree of urgency. An analysis of the present system would be called for with subsequent recommendations for improvement. Furthermore, if it turns out that there is a great quantity of technical, archival documents which needs to be translated, then inquiries should be made into the possible usefulness of a modification of the West German approach. There needs to be much more systematic screening of documents submitted for translation to the MACV agencies. There should also be an authority established to which translation agencies

can appeal unjustified requests. Study of the value of selective translation of portions of documents, e.g., only illustrated parts lists, should be done.

In conclusion, the first step taken should be that of having a MACV representative (preferably on a high level) contact the JPRS to see what assistance it can lend to helping with the problem of existing backlog. Since we do not really know what the extent of their helpfulness might be, any other action might at this time be unwarranted and premature.

ATTACHMENT #1

EXPERIMENT IN AUTOMATED LEXICOGRAPHY*

Wieslaw Arlet

This report describes an experiment performed by the Lexicographic and Terminology Section, Aerospace Technology Division, Library of Congress, and demonstrates that automated lexicography is faster and more economical than traditional methods of processing lexical materials.

For the first time in compiling bilingual Russian-English dictionaries, the Section performed automatically the primary processing of a Soviet-published English-Russian dictionary, i.e., its reversal, translation by machine and printing out, in order to obtain Russian-English lexical raw material for its lexicographers.

The experiment involved the processing of two recently published English-Russian dictionaries.

1. Processing of Astronautics Dictionary. Anglo-russkiy slovar' po kosmonavtike (English-Russian Astronautics Dictionary), compiled by F. P. Suprun and K. V. Shirokov and published by Voyenizdat in Moscow, 1964, was received by the L & T Section, ATD, on April 29, 1964, and processed in accordance with traditional work pattern.

The entire dictionary was Xeroxed and single entries were cut out and mounted on 3 x 5 cards. Seven thousand five hundred and fifty (7,550) entry cards were then hand-filed in the alphabetic sequence of the Russian equivalents of the English entries, and blocks of cards by individual letters were assigned to the lexicographic staff.

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*From The Finite String, May 1965.

Lexicographers compared each entry with the Russian Master Dictionary (RMD). When an Astronautics Dictionary entry was missing, lexicographers supplied the new one. They also corrected and rewrote entries already in RMD for which more satisfactory translations were given by the Astronautics Dictionary, or deleted from RMD entries which appeared wrong or superfluous when compared with the new material. Finally, all entries were reviewed, adjusted, coordinated, and edited by senior lexicographers. The lexicographic step of the production process was completed on 9/4/64.

Typing of final entries by the clerical staff constituted the next processing step. All cards produced were hand-filed in Russian alphabetic sequence, duplicates were eliminated, shipments were made up and statistics prepared. After entries and deletions had been keypunched and printed out at the IBM Thomas J. Watson Research Center, Yorktown Heights, N. Y., proofreading of printouts by L & T Section personnel concluded the operation.

The processing of the 7,550 entries required a total of 1,227 lexicographer-hours and yielded 3,620 new entries and 100 deletions from RMD. Thus, during a working hour each lexicographer processed an average of 6.3 entries from the source and wrote 3 new entries. He also deleted from RMD an average of 1 entry per 12 hours.

2. Processing of Aviation Dictionary. In contrast to this traditional handling of the Astronautics Dictionary was the new and heretofore untried method of automated primary processing employed in the case of the Anglo-russkiy aviatsionyy slovar' (English-Russian Aviation Dictionary), published by Voyenizdat in Moscow, 1963. The dictionary was keypunched in reversed Russian-English order at the IBM Research Center, processed on the 1011 converter (flexo tape to mag tape) and the 7044 computer (mag tape to mag tape in Russian alphabetic sequence), then translated on the IBM RLP*-3 at Kingston. The printouts contained the Russian entry in Cyrillic, its English equivalent taken

*Research Language Processor.

from the Aviation Dictionary, and the machine-translated English version of the Russian entry. The printouts listed all entries in Russian alphabetic sequence.

The product of this automated primary processing of approximately one-third of the dictionary in the form of 300 printout pages with 8,660 entries, was received by the L & T section, ATD, on Oct. 22, 1964. On Oct. 26, 1964, L & T section lexicographers, using printout pages as working sheets, began the selection, writing and editing of new entries from RMD and the replacement of old entries for which the Aviation Dictionary supplied improved translations.

This activity, completed on December 1, 1964, was combined with the primary steps in output analysis of machine-translated Russian entries. When a purely lexical solution was impractical, when a machine error of repetitious nature appeared in the printouts, or when a machine-translation routine that should have solved a given translation problem failed to work, lexicographers completed a special form (5 x 11 card), identifying the entry, stating the problem and proposing a solution when applicable.

Complete processing of the 8,660 entries required a total of 520 lexicographer-hours and yielded a gross total of 2,455 new entries and 200 deletions from RMD. Thus, during a working hour each lexicographer processed an average of 16.6 source entries and wrote 4.7 new RMD entries. He also deleted from RMD an average of one entry per two and a half hours, while identifying and preparing for complete output analysis an average of one problem entry per three hours.

The final clerical processing of the Aviation Dictionary entries did not differ from that applied to entries and deletions from the Astronautics Dictionary, except that it required about one-third less working time.

3. Manual and Automated Procedures. The brief descriptions above of the processing of the Astronautics Dictionary and the Aviation Dictionary do not adequately present the lexicographic task involved in the production of new entries for RMD, and especially gloss over

certain aspects of this work not readily apparent to persons familiar only with the preparation of glossaries, terminology lists and dictionaries intended for conventional use and not for machine translation. It may therefore be appropriate to give a more detailed presentation of the procedures followed in the traditional and automated methods of processing dictionary materials for machine translation.

It should be emphasized that the two-level, sequential processing of the Astronautics Dictionary, i.e., the initial selection and production of new entries by lexicographers, followed by review, coordination and editing by senior lexicographers, had always been practiced in preparing lexical materials for MT operations.

At both levels, individual entries mounted or typed on cards were compared with those in RMD. At the production level, the purpose was to ascertain whether a given entry had been included in RMD from other sources, thereby avoiding duplication. At the review level, the final determination had to be made as to the existence of possible conflicts with other entries already in RMD. Based on such a determination, the new entry was either approved, adjusted or rejected, or the old entry rewritten or deleted.

Confronted with a compound entry or a phrase, the lexicographer had to visualize how the machine would translate such an entry using components already in RMD. In a sense, he had to substitute his knowledge of the two languages involved, as well as his knowledge of the machine translation system and its routines, for the actual operation of the translating machine, as if a given phrase or compound entry were being fed into the machine as a portion of the input text. An additional variant of this situation occurred when only one of the components was in RMD and the lexicographer had to "mentally machine-translate" combinations of existing entries and those to be added. More often than not, he had to write down the proposed compound entries or phrases and figure out their machine translation by simulating the pertinant MT routines.

When the source dictionary was automatically reversed and then translated by machine, it was possible to eliminate all of this time-consuming activity in which the individual characteristics of lexicographers and their degree of familiarity with the innumerable intricacies of input and output languages and the MT system at times affected adversely the uniformity of the final product. The machine removed this portion of the lexicographer's work from the realm of informed guessing, speculative evaluation and individual interpretation, substituting actual automatic translation. The lexicographer was relieved of the preliminary selection and decision-making properly belonging to the computer.

The resultant product reflected not only the lexical characteristics of the source material, but often showed where existing MT routines needed to be improved or supplemented.

4. Speed and Economy of Automated Lexicography. From the viewpoint of speed, the superiority of this method of primary processing of lexical source material was self-evident, but additionally the method ensured high quality, completeness and evenness in the product.

The lexicographer was freed from the time-wasting and frustrating drudgery of fingering individual entry cards while attempting to retain them in strict alphabetic sequence. The method dispensed too with the old-fashioned way of turning pages in RMD and looking down or up the page for single entries in order to check the availability of a component of a compound entry or a phrase. Substituting rapid, automated electronic dictionary lookup for the slow traditional system, it transferred to the computer this heretofore manual and intellectually sterile routine of the lexicographer's work.

However, the most striking advantage of automated lexicography was its economy. With properly organized, machine-translated lexical material, it became possible and indeed practical to abandon the traditional two-level lexicographic process (selecting and producing, followed by reviewing and editing) and to consolidate the entire lexicographic step into one production operation.

As a result, while lexicographers processed one Astronautics Dictionary entry every 9.5 minutes of their working time and simultaneously produced a new RMD entry from this source every 20 minutes they processed an Aviation Dictionary entry every 3.65 minutes and produced a new entry for RMD every 13 minutes. The saving of lexicographers' working time amounted to 62 percent and 35 percent, respectively.

The lower percentage of time saved in the actual production of new RMD entries, as compared with the processing of source entries, resulted from the relatively large number of aviation entries already present in RMD. Consequently, while every second entry in the Astronautics Dictionary yielded an addition to RMD, two out of three entries in the Aviation Dictionary proved to have been included in RMD from earlier sources.

APPENDIX B

THE FSI LANGUAGE PROFICIENCY RATING SYSTEM*

1. Background

Since 1958, testing of foreign language skill has been mandatory for all Foreign Service Officers in the U.S. Department of State. Testing is done at the time a man enters the Foreign Service, at the end of formal language training courses, and following each overseas tour. The system of rating developed by the Foreign Service Institute has been adopted as the standard of language measurement by the U.S. Information Agency, the Peace Corps, the Agency for International Development, the Department of Agriculture, and the Defense Language Institute.

2. Rating System

Both speaking and reading proficiency are measured. Each is assessed on a five-point scale ranging from 1 to 5, although plus (+) ratings may also be assigned at all but the highest levels, i.e., S-5 or R-5. Thus, the scales actually contain nine points.

The scales are described in general terms, i.e., they can be applied to every language. However, the amount of training and time required to reach a given level will vary widely between languages. Thus, a person rated S-3 in French and Chinese will have equivalent

*Some of the material in this Appendix is based on a paper, "Language Proficiency Testing," by Claudia Wilds, Head, Testing Unit, Foreign Service Institute, Department of State. Miss Wilds' paper appears in a larger document, edited by Allan Kulakow, Peace Corps Language Coordinator, entitled Foreign Language Training in the United States Peace Corps, October 1965.

speaking ability in both languages, although he might have spent many more hours attaining this level in the latter language compared with the former.

Although it is not part of the FSI scale, the zero level is sometimes used to designate people who claim to have linguistic skill but, in fact, do not have any measurable proficiency. Sometimes an "S-0+" rating is given if as few as 30 spoken words can be handled in context.

3. Definitions of Ratings*

ELEMENTARY PROFICIENCY (Speaking Proficiency)

S-1 Short definition: Able to satisfy routine travel needs and minimum courtesy requirements.

Amplification: Can ask and answer questions on topics very familiar to him; within the scope of his very limited language experience can understand simple questions and statements if they are repeated at a slower rate than normal speech; speaking vocabulary inadequate to express anything but the most elementary needs; errors in pronunciation and grammar are frequent, but can be understood by a native speaker used to dealing with foreigners attempting to speak his language; while topics which are "very familiar" and elementary needs vary considerably from individual to individual, any person at the S-1 level should be able to order a simple meal, ask for a room in a hotel, ask and give street directions, tell time, handle travel requirements and basic courtesy requirements.

S-1+ Exceeds S-1 primarily in vocabulary, and is thus able to meet more complex travel and courtesy requirements. Normally his grammar is so weak that he cannot cope with social conversation, because he frequently says things he does not intend to say (e.g., he may regularly confuse person, number

*From "Language Proficiency Testing," by Claudia Wilds, Foreign Service Institute, U.S. Department of State.

and tense in verbs). Pronunciation and comprehension are generally poor. Fluency may vary, but quite voluble speech cannot compensate for all the other serious weaknesses.

LIMITED WORKING PROFICIENCY

S-2 Short definition: Able to satisfy routine social demands and limited work requirements.

Amplification: Can handle with confidence but not with facility most social situations including introductions and casual conversations about current events, one's work, family, and autobiographical information: can handle with confidence but not with facility limited on-the-job requirements, e.g., simple instructions to students; simple explanations to co-workers; and descriptions of mechanical equipment; but may need help in handling any complications or difficulties in these situations. Can understand most conversations on non-technical subjects and has a speaking vocabulary sufficient to express himself simply with some circumlocutions (non-technical subjects being understood as topics which require no specialized knowledge); accent, though often quite American, is intelligible; can usually handle elementary constructions quite accurately but does not have thorough or confident control of the grammar.

S-2+ Exceeds S-2 primarily in fluency and in either grammar or vocabulary. Blatant deficiencies in one of these latter factors, or general weaknesses in both, usually prevent assignment of an S-3 rating. If a candidate is an S-3+ in vocabulary, fluency, and comprehension, and if his grammatical errors do not interfere with understanding, he should be awarded an S-3, not an S-2+.

MINIMUM PROFESSIONAL PROFICIENCY

S-3 Short definition: Able to speak the language with sufficient structural accuracy and vocabulary to satisfy all

normal social and work requirements and handle professional discussions within a special field.

Amplification: Can participate effectively in all general conversation; can discuss particular interests with reasonable ease; comprehension is quite complete for a normal rate of speech; vocabulary is broad enough that he rarely has to grope for a word; accent may be obviously foreign; control of grammar good; errors never interfere with understanding and rarely disturb the native speaker.

S-3+ Exceeds an S-3 primarily in vocabulary and in fluency or grammar. The kind of hesitancy which indicates uncertainty or effort in speech will normally prevent assignment of an S-4, though the candidate's way of speaking his native language should be checked in doubtful cases. Frequent grammatical errors must also limit the rating to an S-3+, no matter how excellent the pronunciation, fluency, vocabulary, and comprehension.

FULL PROFESSIONAL PROFICIENCY

S-4 Short definition: Able to use the language fluently and accurately on all levels normally pertinent to professional needs.

Amplification: Can understand and participate in any conversation within the range of his experience with a high degree of fluency and precision of vocabulary, but would rarely be taken for a native speaker; errors of pronunciation and grammar quite rare; can handle informal interpreting from and into the language, but does not necessarily have the training or experience to handle formal interpreting.

S-4+ Should be considered as just short of an S-5. Examiners should always be prepared to justify the awarding of an S-4+ rather than an S-5 by citing specific weaknesses.

Reminder: Native-born and educated Americans can conceivably

attain S-5. Performance in the test, not biographical information given, is what determines assignment of a rating.

NATIVE OR BILINGUAL PROFICIENCY

S-5 Short definition: Speaking proficiency equivalent to that of an educated native speaker.

Amplification: Has complete fluency in the language, practically equivalent to that of an educated native speaker. To attain this rating usually requires extensive residence in an area where the language is spoken, including having received part of his secondary or higher education in the language.

ELEMENTARY PROFICIENCY (Reading Proficiency)

R-1 Short definition: Able to read elementary lesson material or common public signs.

Amplification: Can read material at the level of a second-semester college language course or a second-year secondary school course; alternately, able to recognize street signs, office and shop designations, numbers, etc.

LIMITED WORKING PROFICIENCY

R-2 Short definition: Able to read intermediate lesson material or simple colloquial texts.

Amplification: Can read material at the level of a third-semester college language course or a third-year secondary school course; can read simple news items with extensive use of a dictionary.

MINIMUM PROFESSIONAL PROFICIENCY

R-3 Short definition: Able to read non-technical news items or technical writing in a special field.

Amplification: Can read technical writing in a special field or modern press directed to the general reader, i.e., news items or feature articles reporting on political,

economic, military and international events, or standard text material in the general field of the social sciences.

FULL PROFESSIONAL PROFICIENCY

R-4 Short definition: Able to read all styles and forms of the language pertinent to professional needs.

Amplification: Can read moderately difficult prose readily in any area of the social sciences directed to the general reader with a good education (through at least the secondary school level), and difficult material in a special field including official and professional documents and correspondence; can read reasonably legible handwriting without difficulty.

NATIVE OR BILINGUAL PROFICIENCY

R-5 Short definition: Reading proficiency equivalent to that of an educated native speaker.

Amplification: Can read extremely difficult and abstract prose, as well as highly colloquial writings and the classics, literary forms of the language; can draft good prose and make informal translations from English into the language.

4. Rating Procedure

Given the above definitions for the FSI scales, the actual procedure for applying them to an individual is based on a work sample interview. That is, two examiners spend about 30 minutes with each subject in an interview aimed at determining where, on the scale, the subject should be placed in terms of his ability to speak and understand a given language. The principal interviewer is a native speaker of the language, the other observer is a scientific linguist.

The test normally begins with routine greetings, introductions, and other remarks to make the examinee feel at home and give the examiners a sense of whether he is at the top, middle, or bottom of the range. The next step is usually to ask autobiographical questions

about home, family, past and current work, and future plans. If the answers to these questions come painfully or not at all, the rest of the test is conducted at an elementary level. If the answers come with reasonable ease and linguistic accuracy, the questioning usually probes the examinee's field of special interest in more technical detail, explores local current events of all kinds, and may go into quite complex and abstract issues pertinent to the examinee's experience.

In addition to this informal conversation the speaking test may include at least two other features. The first is a problem given by the linguist (usually in English) in which the examinee and the native speaker play roles. For example, "You have just been stopped by this policeman for having driven unintentionally the wrong way down a one-way street."

The second requires the examinee to serve as an interpreter between the linguist and the native speaker; for example, the linguist may play an American who needs to rent office space and requires special conditions because of certain equipment that must be installed. Such a situation permits elicitation of hard-to-get syntactic patterns, assessment of flexibility of vocabulary, and a detailed testing of comprehension. Through all these interchanges the examiners are constantly alert to the examinee's scope and limitations in the language: The success he has in choosing precise words and structures or in making circumlocutions, the demands he makes on his listener in decoding the message transmitted, the degree to which he understands what he hears. When they are satisfied with the speech sample collected, the speaking part ends, and they move to the assessment of reading ability, a relatively cut-and-dried procedure.

The reading part requires oral translation into English of passages of varying levels of difficulty, mainly taken unedited from newspapers, magazines, and non-fictional books. Topics are chosen from areas that are of interest to people in international affairs rather than to literary specialists.

The rating procedure is considerably less precise, in terms of reliability of measurement, than is implied in the above description. There is no standard or formatted interview and the direction taken in a test session depends entirely on the team of interviewer and observer. (One brief study was done in 1965 at the FSI in which the relative ratings of five teams were compared. Thirty taped interviews in Spanish were rated by each team independently. The scientific linguists were consistent to the extent that they always agreed on a given rating to within two points on the FSI scale; the native speaking judges showed about the same consistency but less proficient subjects received more varied ratings. It should be noted that these highly consistent ratings were probably due, in part, to the particular language involved. That is, the examiners had many years of experience with evaluating Spanish speakers; it is likely that the less frequently encountered languages would be less reliably measured.)

5. Distribution of FSI Ratings

For spoken language proficiency the S ratings are distributed among the population of Foreign Service Officers as follows:

10 percent receive S-0 to S-1+
23 percent are rated as S-2
42 percent are rated as S-3
19 percent are rated as S-4
6 percent are rated as S-5

These levels are not the result of any predetermined standard but, rather, are based on empirical findings over approximately seven years of testing. They do not show differential effects on specific languages, although such effects undoubtedly exist (e.g., Spanish speakers would receive more high ratings than Arabic speakers).

Recommendation: The FSI language proficiency rating system is a procedure that has become accepted as the standard of measurement in its field. The problem of reliability should be examined

systematically with a view toward tightening the procedure to eliminate inconsistencies. In the DOD setting it would be a fairly easy task to develop standard interviews for advisors, Special Forces personnel, and others.

APPENDIX C

THE TOTAL IMMERSION METHOD AND FOREIGN LANGUAGE LEARNING*

1. Total Immersion Defined

The combination of highly concentrated practice with psychological stress is a language training method given for ten to fifteen hours a day, five days a week, and usually for one or two weeks. Students in TI settings work individually with a succession of instructors. That is, a single student may have as many as three or four instructors working in rotation with him. Stress is induced in several ways; the student is not allowed to use his native tongue, he must respond to instructions and queries of the teacher in the target language, and is permitted no "warm-up"--the massed practice commences with the first lesson. The long duration sessions also tend to induce anxiety or psychological stress.

(The practice of intensive language instructions, e.g., four to six hours a day, in small groups and with the main emphasis on conversation skill, has been known since World War II.** Today this procedure is followed almost without exception in such centers as the Defense Language Institute, the Peace Corps, Special Forces predeployment training battalions, and the Military Assistance Training Advisor Division of the Army's Special Warfare Center. But, it is

**Most of the information contained in this section is based on "A Brief Review of Extreme Massing of Practice and Stress on Foreign Language Acquisition," by Eugene H. Rocklyn and William E. Montague, June 1965, Human Resources Research Office, Alexandria, Virginia (Ref. 46).

**See Paul F. Angiolillo's book, Armed Forces' Foreign Language Teaching, S. F. Vanni: New York, 1947, for an exhaustive review of this experience (Ref. 2).

important to recognize the essential differences between the approach of these groups and that advocated by TI adherents: instruction is given in groups, not to individuals; there is no rigid insistence on a "no English allowed" rule; sessions are comfortably spread through a four-to-six-hour day; and the total time involved in such courses is rarely less than six weeks and often extends to six months or more.)

The TI method has been alleged to produce startlingly impressive results: two native speakers of English learned to speak Italian in 48 hours; a 2500 word vocabulary can be acquired in one week; after two weeks of TI a beginner has learned 4500 new words and "the ability to think in the new language."* The method has been used with many languages, apparently with equal success: German, Swahili, Vietnamese, Hindi, Spanish, and English, for example. Understandably, achievements of the TI method have attracted wide popular interest, including some demands that TI be used to train U.S. military personnel instead of the more conventional foreign language techniques. As offered to the public, on an individual basis, the cost of TI is $685 for a one-week course, and $500 for each succeeding week.

2. Evidence on the Effects of Massed Practice

Interest in human learning under conditions of massed practice goes back at least eighty years among psychologists. In 1885 Ebbinghaus showed that distributed practice is more effective than highly concentrated practice. Many other studies in the intervening years report essentially the same conclusion: learning occurs more rapidly if time intervals are introduced between practice sessions than if practice is continuous; also, material learned under conditions with spaced practice is better retained than if it is presented in massed sessions. Thus, there is convincing evidence, obtained by many investigators using different types of material that massed practice,

*"How to Learn a New Language in Five Days," by Marianna Hassol, Parade, May 9, 1965; also, advertisements by the Berlitz School of Language, published frequently during 1965 in The Washington Post, (Ref. 24).

which is one of the essential elements of TI, does not produce efficient learning. Put another way, "...the extreme massing of practice such as exemplified by...(TI)...over a period of one or more days, will be less effective in learning efficiency than the same number of hours spread over two or three times as many days. This effect should be more pronounced as the number of days in which the 10-13-15 hours sessions take place are increased." (Rocklyn and Montague, op. cit.)

3. Effects of Stress on Learning

The evidence on stress indicates that it is generally detrimental to learning. Particularly if the stress is induced over long periods of time, performance deteriorates markedly and may result in physical breakdown as well. From a study over fifty years ago (Arai, 1912) the literature converges on the conclusion that the use of stress as a means of enhancing learning is not supported. Thus, the second component of TI--stress induced in a variety of ways--is not regarded as an efficient component of good teaching practice. The effect of stress on language learning, as differentiated from other skills, is still controversial, however. Some expert linguists hypothesize a facilitating effect for stress and cite anecdotal evidence in support.

4. Assessment of TI

At least two evaluations of TI as a language training method have been done. Early in 1965 a group of research neurologists and physiologists at the National Institutes of Health employed TI in studies of brain function. It is important to note here that language learning was not an objective of the NIH research: TI was used merely as a means of creating stress in order to study certain physiological and psychological effects. Subjects in one group learned Spanish and in a second group they studied Vietnamese. In both assessments the FSI language rating system was used by experienced examiners from the Foreign Service Institute (Appendix A).

The first evaluation, done on a group of 17 Navy and Marine Corps personnel who had been through a week of TI instruction in Spanish, produced the following results:

FSI Rating	Number
S-0	5
S-0+	8
S-1	2
S-1+	2

(It was later learned that two of the four men receiving S-1 or S-1+ had had previous Spanish instruction.)

The second evaluation was of five members of a medical team which had been given six individual nine-hour sessions of TI in Vietnamese. None of these people learned enough Vietnamese to be given other than S-0 ratings by FSI examiners. Further, although the team was scheduled to serve in Viet Nam, none of the group would agree to any more language training in Vietnamese. It was concluded that the stresses of TI experience produced a negative reaction toward language learning.

5. Conclusion

While TI has been widely advertised (we have no data on the number of people who have actually studied a foreign language by this method), there is no evidence to support the adoption of TI by the Department of Defense. In fact, the principles of extremely massed practice and induced stress have been shown to be detrimental to learning verbal material. In the two instances in which TI students' acquisition of a foreign language was assessed, results were both disappointingly low and the method tended to induce negative attitudes toward language instruction.

Language learning is a highly complex and difficult undertaking. There is no easy way or shortcut method that has been proven effective. Techniques such as "sleep learning" and Total Immersion have their adherents but, like most people who dispense colored sugar pills, they are more likely to have the motives of medicine men than those of genuine language teachers.

UNCLASSIFIED
Security Classification

DOCUMENT CONTROL DATA - R&D

(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

1 ORIGINATING ACTIVITY *(Corporate author)* Institute for Defense Analyses	2a. REPORT SECURITY CLASSIFICATION Unclassified 2b GROUP

3 REPORT TITLE

Foreign Language Training: An Investigation of Research and Development for Viet Nam

4 DESCRIPTIVE NOTES *(Type of report and inclusive dates)*

Study S-232 - March 1966

5 AUTHOR(S) *(Last name, first name, initial)*

Sinaiko, H. Wallace

6 REPORT DATE	7a. TOTAL NO. OF PAGES	7b. NO. OF REFS
March 1966	94	51

8a CONTRACT OR GRANT NO. SD-50 b PROJECT NO. c ARPA Assignment 14 d	9a ORIGINATOR'S REPORT NUMBER(S) 9b. OTHER REPORT NO(S) *(Any other numbers that may be assigned this report)*

10 AVAILABILITY/LIMITATION NOTICES

Distribution of this document is unlimited.

11 SUPPLEMENTARY NOTES	12 SPONSORING MILITARY ACTIVITY

13 ABSTRACT

This report describes foreign language requirements for U.S. military personnel going to Viet Nam and research to improve language training. The report examines the nature of the language problem in Viet Nam, the type of training now given in Vietnamese and research results on language training generally that might be applied to the present situation. A recently developed experimental course in Vietnamese is investigated, including a follow-up in Viet Nam of people who had taken the course. Two general types of remedial action are proposed: administrative or policy actions not involving research, and the initiation of new research projects that would be in direct support of Vietnamese language requirements.

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UNCLASSIFIED
Security Classification