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April 1992

Final Evaluation Report

DLIFLC Computer Assisted Study (CAS) And Video Teletraining (VTT) Pilot Tests

Defense Language Institute, Foreign Language Center in cooperation with Fort Lewis, Fort Ord and Washington National Guard

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University of Central Florida
Division of Sponsored Research

IST-CR-91-10
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# Table of Contents

**EXECUTIVE SUMMARY** ................................................................. v

**Section I.**  **INTRODUCTION** ......................................................... 1

A. Background/History ................................................................. 2
B. Purpose of Project ................................................................. 4
C. Discussion of Potential VTT and CAS Technologies ......................... 6

**Section II.**  **METHODOLOGY** .......................................................... 11

A. Description of Instructional Approach ........................................ 11
B. Evaluation Design ................................................................. 21
C. Procedures ................................................................. 26

**Section III.**  **RESULTS** ................................................................. 29

A. Baseline Data ................................................................. 29
B. Computer Assisted Study Component ........................................ 35
C. Video Teletraining Component ................................................ 58
D. Combined CAS/VTT Approach .................................................. 71
E. Unit Receptivity to CAS and VTT Training .................................... 72
F. DLIFLC VTT Teacher Interviews ................................................ 77
G. Evaluation Results Summary .................................................... 82

**Section IV.**  **LESSONS LEARNED** .................................................. 89

A. Identified Strengths of VTT and CAS .......................................... 89
B. Potential Limitations of VTT and CAS ......................................... 90
C. General Lessons Learned ....................................................... 90

**Section V.**  **SUMMARY AND CONCLUSIONS** .................................... 97
### Section VI. REFERENCES

105

### Section VII. APPENDICES

107

<table>
<thead>
<tr>
<th>A.</th>
<th>CAS Lessons</th>
<th>A-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.</td>
<td>VTT Lessons</td>
<td>B-1</td>
</tr>
<tr>
<td>C.</td>
<td>Sample Evaluation Instruments</td>
<td>C-1</td>
</tr>
<tr>
<td>D.</td>
<td>List of Acronyms</td>
<td>D-1</td>
</tr>
</tbody>
</table>
EXECUTIVE SUMMARY

This report presents the results of a series of pilot tests conducted by the Defense Language Institute (DLIFLC) during FY 91. The pilot tests investigated the potential use of Computer-Assisted Study (CAS) and Video Teletraining (VTT) to address the language training needs of practicing military intelligence (MI) linguists. The training was developed and provided by the DLIFLC. The participants in the pilot tests were military linguists stationed at Fort Lewis, Washington, and Fort Ord, California, and members of the Washington Army National Guard (ARNG). Participating units included the 107th MI Bn, 201st MI Bde, 2/9 AVN Bn, 199th MI Bn, and the 341st ARNG MI Bn. Assistance was provided by staff from the I-Corps Language Training Facility at Fort Lewis, the 107th MI Bn at Fort Ord, and the 341st Washington National Guard MI Bn.

Three types of training technology were employed in the tests. These included CAS, VTT, and combined CAS/VTT. Languages addressed were Korean, German, Russian, and Japanese. The focus of the training varied somewhat depending upon the precise needs of the units involved, but generally included language refresher/enhancement training for MI linguists whose military occupational specialty (MOS) was voice interpreter or interrogator. In addition to the foreign language objectives of the training, military content and current events/cultural topics were included. In VTT courses addressing the MOS-related needs of interrogators, practice in interrogation skills was included.

A summary of the courses included in the pilot tests is as follows:

<table>
<thead>
<tr>
<th>Language</th>
<th>Unit</th>
<th>Start Date</th>
<th>End Date</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korean CAS</td>
<td>107th MI Bn</td>
<td>9/90</td>
<td>12/90</td>
<td>5 lessons</td>
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<tr>
<td></td>
<td>201st MI Bde</td>
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<td></td>
<td>2/9 AVN Bn</td>
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</table>
Course development was undertaken by the appropriate schools and departments at the DLIFLC with assistance from relevant educational technology, curriculum, staff development, evaluation, distance education, and program coordination staff. Efforts were made to assure that the instruction was developed in accordance with accepted pedagogical principles, although proportionally more time was available for VTT course design and development than for CAS. Efforts were undertaken to coordinate the development of the courseware with the participating units to assure that the training met both the units' needs and the needs of the individual MI linguists participating in the courses. CAS development occurred during the period April-May and August-September, 1990. VTT course development typically occurred during the 2-3 weeks prior to course delivery, but was conducted by a larger team than was available for CAS development.

The technologies used in the tests were selected based upon their potential effectiveness for language instruction and on the basis of feasibility and cost. In the case of CAS, the Apple Macintosh SE computer was selected as the instructional platform. With the addition of Macrecorder and a Korean character font, the computer was able to deliver instruction using audio, graphics, and text. Lessons were developed using Hypercard. This both facilitated ease of development and provided an excellent
presentation format. CAS instruction was provided in the language training classrooms of the 107th MI Bn at Fort Ord and the 201st MI Bde at Fort Lewis, via six computers provided by the DLIFLC. VTT utilized the Army's Teletraining Network (TNET) which employs compressed video technology. The network uses Compression Labs' Rembrandt II and provides interactive communications via Ku-band satellite links. VTT included fully interactive audio, video, and graphics. VTT instruction originated from the DLIFLC VTT facility at the Presidio of Monterey, California, and was received at the Foreign Language Training Facility, operated by the I-Corps Language Program and located at North Fort Lewis, Washington. The DLIFLC provided CAS and/or VTT site coordinator training to the participating language training staffs at Fort Ord and Fort Lewis to enable them to manage the equipment and training on-site.

The evaluation of the pilot tests was conducted by the DLIFLC Evaluation and Research Division with assistance from the Defense Training and Performance Data Center in Orlando, Florida, and the Institute for Simulation and Training, University of Central Florida. Intensive evaluations (including evaluator site visits) were conducted for the Korean CAS, German VTT, and Korean CAS/VTT courses. Separate reports were developed to describe the results of these three tests. The DLIFLC also collected data for the Russian VTT and Japanese VTT courses and these results are included in this report as appropriate.

The project evaluation addressed a number of objectives. The objectives were divided into two areas: (1) objectives related to the technology and (2) objectives related to the instruction provided.

Objectives related to delivery technology included determining the following: appropriateness of the media used in the pilot tests; viability of the technology as a means for access to the target training, reliability of the equipment and communications;
cost of providing the training; and acceptability of the delivery approach to the training communities. Objectives related to instruction included determining the following: effectiveness of the training in meeting the established training objectives; effective instructional techniques in the context of the training systems; effectiveness of the training systems in facilitating and maintaining student motivation; relationship of the training to student variables; and the overall effectiveness of the training in supporting annual language training requirements of the participating units.

Evaluation data were obtained from a variety of sources. Sources included the course participants (students), site coordinators, and DLIFLC staff, including instructors, course developers, technical staff, and field services staff. Data collection instruments included the following: student background questionnaires; current language program description forms; VTT and CAS instruction logs; student questionnaires; student interview forms; site coordinator and unit training personnel interview forms; DLIFLC VTT teacher interview forms; DLIFLC VTT course description forms; and student achievement tests.

The evaluation results are presented in the body of this report and in the individual evaluation reports describing the Korean CAS, German VTT, and Korean CAS/VTT pilot tests. The results are summarized here to provide the reader an overview of the general results obtained in the set of five pilot tests (the three tests listed above plus the Russian VTT and Japanese VTT pilot tests).

**Student Achievement** - Each of the five courses, except for the Russian VTT course, included pre-post testing of student achievement. In all cases where achievement gain was measured, students improved as a result of participating in the training.
Student Ratings and Comments - Students were favorably impressed with the forms of technology (CAS and VTT) used in the pilot tests. Students gave high ratings to the technical quality, utility, and motivational quality of the computer-assisted instruction and video teletraining technologies. They stated that the training rated well in comparison with other training technologies with which they were familiar and that the training was helpful in improving MOS-related skills. Students felt that the rate of learning and the quality of training exceeded that which was available through local language training programs. They stated that CAS strengths appeared to be individualization, ease of use, and flexibility of use. They felt that CAS best addressed reading and listening proficiency and specific language skills such as vocabulary, grammar, reading, and listening comprehension. Students felt that VTT strengths were in projecting the strengths of expert DLIFLC language instructors, allowing for complete interactivity, and in transmitting videotape, audiotape, and graphics presentations (e.g., authentic materials, word lists, photos, charts, etc.). They felt that VTT effectively addressed speaking, listening, and reading skills, and that it was especially effective in addressing speaking skills. They felt that both technologies assisted in learning military content and that VTT assisted with interrogation skills. Students offered a number of suggestions for improving the use of CAS and VTT in the future.

Site Coordinator Comments - Management and implementation of the project on-site was conducted in a highly competent and professional manner. Site coordinators generally felt that DLIFLC support in providing both CAS software and VTT instruction could improve the language skills of MI linguists. They felt that this type of support was a valuable addition to local language training programs. At sites where well established language programs exist, the coordinators felt that the technologies could enhance and improve local offerings. At sites where local programs are less established, or where linguists in lower density languages
are not well served, site personnel stated that CAS and VTT could provide vehicles for primary, rather than supplementary, instruction. They praised the quality of instruction received from the DLIFLC and the willingness of the DLIFLC to provide this type of assistance to local programs. The site coordinators felt that they and the DLIFLC staff experienced some coordination and technical problems in the early phases of the pilot tests, but that these problems were resolved as the tests progressed and could be avoided in the future. Significantly, Fort Lewis personnel are planning future participation in CAS and VTT projects and are using DLIFLC CAS templates to produce additional language training courseware in Chinese and Korean.

**DLIFLC Staff Comments** - The management, development, and implementation of the pilot project was generally adequate. For the most part, the DLIFLC did a competent job of dealing with the technical, instructional, and field coordination activities. VTT instructors praised the VTT system as a means to offer instruction at a distance. Although the technology was new to them and they experienced some growing pains in adjusting to the new medium, instructors felt that the versatility of the system offered an excellent means to provide distributed language training. Teachers generally enjoyed the experience of using the medium. Instructors in the earlier VTT sessions experienced some frustration with VTT equipment outages, but this lessened as the reliability of the equipment improved in later courses in the pilot test.

**Technical Considerations** - CAS instruction, once the software was thoroughly debugged, had high reliability and was judged as easy to use and manage at the local level. The computer hardware had few problems and those that did occur were easily remedied. VTT required a higher level of technical sophistication to operate and maintain. Adequate site personnel training and local and network troubleshooting are needed to maintain VTT reliability at an acceptable level for effective training. As the
projects progressed, the VTT staff at all levels acquired the necessary expertise and VTT operated quite reliably. Methods of effective staff training and preparation were identified through the project. VTT courses must be thoroughly designed in advance. CAS development requires the participation of computer professionals, instructional designers, and subject-matter specialists. The resultant CAS and VTT courseware compared well with the quality of instruction provided by normal classroom instruction. CAS and VTT can be feasibly combined to provide enhanced training opportunities. However, care must be taken in the design process to identify the specific roles of each and design segments which are mutually enhancing across the two technical delivery systems.

A number of lessons were learned from the CAS and VTT pilot tests. These are documented in the body of this report and in the reports presenting the results of individual CAS and VTT pilot tests. In general, however, the pilot tests demonstrated the potential of the CAS and VTT technologies to provide outstanding resources for on-site language training for military linguists. The central role of the DLIFLC in developing and delivering the courseware to MI units via these technologies was amply demonstrated. The results provide support for expanded development of these technologies by the DLIFLC in the future.
Section I. INTRODUCTION

The Defense Language Institute, Foreign Language Center (DLIFLC) was charged at the January 1990 General Officer Steering Committee meeting with exploring the feasibility of assisting MI units in maintaining and enhancing MI linguists' foreign language skills via computer assisted study (CAS) and video teletraining (VTT). This action resulted in the design and implementation of pilot tests involving CAS and VTT technologies during the September 1990 to July 1991 time frame. The current comprehensive report describes the results of the evaluation of five CAS and VTT pilot tests conducted during this period. Previous reports (see Bramble, 1991a, Bramble and Bauer, 1991a,b) have presented pilot test results for individual courses. An earlier draft of this report was presented to the DLIFLC in August, 1991, in order to provide timely information upon which to base program modifications. The present document, in its revised and final form, is provided as a reference which both integrates and documents the final pilot test findings.

Language courses were developed and delivered for four languages: Korean, German, Japanese, and Russian. The first course, Korean via CAS, involved the 107th MI Bn, 201st MI Bde, and 2/9 AVN. Korean CAS was tested from September of 1990 until December of 1990 and included 5 lessons. A German language course via VTT involved the 341st Washington ARNG MI Bn and was delivered during ten work days in April 1991. The course included 60 hours of training delivered from the DLIFLC VTT Center to the Language Training Facility at North Fort Lewis, Washington. A Korean language CAS and VTT (combined) course involved the 341st ARNG MI Bn and the 199th MI battalion and was delivered to the same site during April/May of 1991. In this course the CAS component included the original five lessons developed for the initial Korean CAS course. The VTT portion of the course included 60 hours of training, again originating from the DLIFLC. The Russian VTT
A refresher course involved the 341st ARNG MI Bn was held during June of 1991 and included 60 hours of training. The Japanese VTT course included the 341st ARNG MI Bn during June/July of 1991 and offered 60 hours of training. A summary of the five pilot tests is as follows:

<table>
<thead>
<tr>
<th>Language</th>
<th>Course Type</th>
<th>Unit</th>
<th>Duration</th>
<th>CAS</th>
<th>VTT</th>
</tr>
</thead>
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<tr>
<td>Korean CAS</td>
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<td>11/90-12/90</td>
<td>5 lessons</td>
<td></td>
<td></td>
</tr>
<tr>
<td>German VTT</td>
<td>341st ARNG MI Bn</td>
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<td>60 hours</td>
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</tr>
<tr>
<td>Korean CAS/VTT</td>
<td>341st ARNG MI Bn 199th MI Bn</td>
<td>4/91-5/91</td>
<td>60 hours</td>
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<tr>
<td>Russian VTT</td>
<td>341st ARNG MI Bn</td>
<td>6/91</td>
<td>60 hours</td>
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<tr>
<td>Japanese VTT</td>
<td>341st ARNG MI Bn</td>
<td>6/91-7/91</td>
<td>60 hours</td>
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</table>

Although not a part of the original Educational Technology Needs Assessment (ETNA) project being conducted by the DLIFLC, the task of assisting the DLIFLC External Evaluation unit with the pilot test evaluations was added to the workscope of the Defense Training and Performance Data Center (TPDC)/the Institute for Simulation and Training (IST), University of Central Florida ETNA team.

A. Background/History

The DLIFLC has, for over three years, been developing and testing the use of video teletraining for foreign language instruction. During 1989 and 1990, the DLIFLC offered several courses to MI linguists using the Department of Defense Communications Teleconferencing Network (DCTN), most notably for Arabic language instruction. More recently, beginning in the fall of 1990, the DLIFLC began to test the use of two-way compressed
video teletraining with the ATSC/TRADOC-assisted installation of this equipment at several CONUS U.S. Army installations. The communications network employed in the teletraining is the Army's Teletraining Network, TNET (see Schall, 1991).

The DLIFLC has also, for a number of years, been developing and testing (and to a limited degree distributing) computer assisted language learning software/courseware and interactive videodisc courseware. Such products have been developed for a number of languages taught at the DLIFLC and for various computer platforms available at the institute (e.g., SONY SMC-70, SONY View, EIDS, and Macintosh). Current plans call for development of courseware on the DeskTop3.

Recent surveys of FORSCOM and USAREUR command language programs conducted by ETNA project researchers, determined that distance learning and computer-assisted language learning (CALL) technologies are not commonly available for the maintenance and enhancement of the language skills of practicing military linguists. FORSCOM MI units are increasingly developing the capability to receive satellite-delivered foreign video programming.

1. In discussing the CAS instructional materials, we make a distinction between software and courseware. Under software we include such items as authorware, programming languages, and code. In the case of CAS developed for the Macintosh computer, this includes Hypercard, the cards and stacks developed, the language text font, and any other code written to implement the program. By courseware we mean the software, plus the specific material inserted for the lessons, i.e., the computer-based course as the student sees it. We find that distinguishing between software and courseware allows for a clearer discussion of evaluation results and have chosen to employ this distinction in this writing.
from Satellite Communications for Learning Associated (SCOLA). However, the video received from SCOLA is intended to supplement or enhance training and does not presently include formal courses of instruction.

While language courses via video teletraining are not commonly available to MI units, the ETNA surveys revealed a substantial degree of interest on the part of these units to utilize distance education technologies to meet the language training needs.

Likewise, there are few computers currently available at military bases to support language learning, but there is considerable interest expressed by language training managers in developing the capability to capitalize upon computers for language training.

Given the experience of the DLIFLC in applying modern technologies to language instruction, the needs being expressed by MI units, and the emerging results of the DLIFLC Language Skills Change Project (which point to the rapid decay of basic language skills in the absence of intensive practice), it appears desirable to assess the potential of modern language learning technologies to assist with nonresident language training.

B. Purpose of Project

The overall goal of the pilot tests for the five language courses was to assess the potential of computer-assisted study (CAS) and video teletraining (VTT), either individually or in combination, as a means to provide foreign language refresher training to MI linguists at U.S. military installations. A further purpose of the study was to make recommendations regarding future training using these technologies.
Following guidance in the distance education literature (see Bramble, 1990a) on evaluating the results of distance education projects, the evaluations addressed two separate, but related, issues. These are (1) the technology used to provide the instruction and (2) the actual instruction provided. The evaluation objectives for the project are documented in the evaluation plan and the individual pilot test data collection notebooks (Bramble, 1990b-d and 1991a-d). They are as follows:

1. Objectives related to delivery technology

   a. Determine the appropriateness of the chosen media mix (CAS and/or VTT) to facilitate the target training.

   b. Determine the success of the CAS and/or VTT approaches in providing a viable means for access to the target training.

   c. Determine the reliability of the equipment and transmissions used in the pilot test.

   d. Determine the cost of providing the CAS and/or VTT training and compare with Mobile Training Teams (MTTs) or other approaches which could be taken. (Note: This objective is addressed in a separate report.)

   e. Determine the acceptability of the delivery approaches to the target communities.

2. Objectives related to instruction

   a. Determine the effectiveness of the training in meeting established learning objectives.

   b. Identify effective instructional techniques for using CAS and/or VTT for maintenance and enhancement language training for practicing MI linguists.
c. Assess the effectiveness of the technologies in facilitating and maintaining student motivation.
d. Relate the effectiveness of the training to student variables.
e. Determine the overall effectiveness of the instruction in supporting annual language training requirements of National Guard and Active MI linguist battalions.

The DLIFLC Evaluation and Research Division, External Evaluation unit was assigned the responsibility for conducting the pilot test evaluation. The division contracted with the Defense Training and Performance Data Center (TPDC) in Orlando, Florida, for assistance in completing this task. TPDC, in turn, subcontracted with the Institute for Simulation and Training, University of Central Florida (IST/UCF) to conduct specific evaluation tasks.

C. Discussion of the Potential of VTT and CAS Technologies

Video teletraining may have the potential to serve many nonresident language training needs. VTT has the potential to project the expertise at the DLIFLC to linguist units both in and out of the continental United States. As stated in Bramble (1990a), distance learning, in this case video training, has the potential to provide such services as:

1. Language short courses
2. Full length language courses
3. Language tutorials
4. Delivery of media and materials to enhance local program offerings
5. Local program improvement workshops or courses
6. Inservice training to local language instructors
7. Technical assistance to local programs

The VTT pilot test language refresher courses fall into category 1 above, language short courses. As it happens, the DLIFLC also utilized the VTT equipment to provide services in category 6 above to personnel of the Language Training Facility at Fort Lewis, Washington. The DLIFLC also used the system experimentally for oral proficiency testing. While the evaluator received a number of very positive comments about teacher inservice training efforts during site visits, the success of this service was not formally evaluated. Thus, the success of oral proficiency testing via VTT is not known to the evaluators.

Language training short courses via video teletraining have the following potential advantages:

- Local language programs can gain access to high quality DLIFLC instructors not normally available to provide language instruction on-site.
- The VTT allows for a high level of interaction between students and DLIFLC VTT teachers.
- DLIFLC instructors can be utilized for nonresident instruction without the need for extensive and costly travel.
- Remote access can be provided to DLIFLC staff expertise, instructional materials, and media for effective course design and delivery.
- Access can be provided for MI linguists to sophisticated language training on-site, without the requirement for costly TDY to distant training sites.
- Articulation and coordination between local program curriculum and DLIFLC curriculum is possible.
- Potential long-run cost savings are possible.
Language training short courses via video teletraining have the following potential limitations:

- The reliability of the current VTT equipment is less than 100%.
- Currently, equipment operation and program support functions at the local instruction sites are complex.
- There is a potential for mismatch between local needs and course design, if not properly coordinated.
- Current VTT media (especially audio and video switching) available for the instructional process have some functional limitations.
- The initial cost of equipment procurement and equipment operation, maintenance, and communications may be viewed by some managers as high.

Note that the above potential advantages and limitations are presented for illustrative purposes. They are not intended to constitute a justification for using or not using VTT in the future. A number of issues related to the above advantages and limitations are addressed in the present evaluation report.

Computer-assisted study may have the potential to supplement instruction offered through the local language program or via the VTT to better serve the needs for nonresident maintenance/enhancement training of military linguists. As envisioned, CAS has the following potential advantages:

- High quality instruction designed and developed by experts in target language training.
- Portability, flexibility, and ease of use.
- Incorporation of several media (audio, text, graphics) in the instructional approach.
- Features of computer-based instruction such as immediate feedback, repetition, diagnosis and prescription, self-paced instruction, and learner independence.
• Relatively low cost when amortized across a number of training years.

Some potential limitations are:

• Lack of compatible equipment in the field.
• Lack of on-site familiarity with the use of the computers for language training.
• Perceived lack of the "human element" in computer-based instruction.
• Technical expertise required for high quality course development.
• Instruction at higher proficiency levels may be limited to receptive skills.

In conducting the pilot tests, DLIFLC managers felt that the advantages of the technologies potentially outweigh their limitations - at least for portions of the training required by practicing military linguists. It was felt that the combined use of the two technologies may offer advantages over their separate use. It was hoped that the pilot test results would offer insights into the future application of the technologies for nonresident language training. It was envisioned that the results would identify some of the factors contributing to optimum design and usage of CAS and VTT courseware.
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Section II. METHODOLOGY

A. Description of Instructional Approach

1. Pedagogical Rationale

For most of the courses in the pilot test, general information was available about the CAS and VTT students, but precise information about the language learning needs of the students was not known to the teachers ahead of time. To develop the CAS materials, meetings were held with MI unit personnel to identify appropriate topics for inclusion in the lessons. In VTT courses, while the course activities were planned ahead of time, adaptations were made to fit the needs of the students as the teachers became familiar with the students. For most courses, the typical student proficiency levels were at the 1+ to 2 ILR levels in listening and reading and 0+ to 1 in speaking. Course objectives typically included moving language skills in listening and reading towards the 2 level or above and/or speaking skills towards the 1 level or above. Specific military vocabulary and content, culture and current events, and MOS-related skills (e.g., interrogation skills) were also addressed by various courses.

The goals of the individual courses in the pilot tests, as stated by the course developers, were as follows:

a. Korean (KP) CAS

The Korean CAS developer designed the instructional components and content to address linguists' needs at the 1+ to 2 ILR proficiency levels in reading and listening, and the 0+ to 1 levels in speaking. The instruction consisted of five lessons organized by topical themes. The topics included the following: Military 1 (Korean position toward the U.S.); Military 2 (training and tactics); Weather (broadcasts and forecasts); Travel (transportation); and Health (medicine and public health). Within
topical domains, the Korean CAS courseware consisted of the following activities: Authentic text (scanning); Controlled Level Paraphrase (vocabulary in context); Vocabulary Study (memorization); Grammar Exercise; Conversational Exercise; and Lesson Evaluation. Two optional lessons, Hangul refresher and number drills, were also available with the CAS courseware. This course is described in more detail in Bramble, 1991e.

b. German (GM) VTT

The overall goal for the German VTT course was to "train interrogators how to interrogate (at a level 2 proficiency) in German and to train them to understand and take notes on messages received during interrogations." The German VTT course focused upon the following:

Language-related areas:
- Listening comprehension
- Speaking proficiency
- Reading comprehension
- Vocabulary
- Grammar

Interrogator-related areas:
- Interrogation skills (establishing rapport, encouraging the subject to talk freely, phrasing questions to obtain specific information, understanding answers sufficiently to formulate follow-on questions, and capturing the essential information from responses to questions)
- Related vocabulary (e.g., political, military)
- Dialects
- Specific grammar skills
- Culture, context, current events
This course is described in more detail in Bramble and Bauer, 1991a.

c. Korean (KP) CAS/VTT

The Korean CAS/VTT course was designed to improve the language skills of five MI linguists whose most recent language DLPT proficiency levels ranged from 1/1 to 2/2 in listening and reading. Recent speaking scores were not available, but scores for three of the students at the time of DIIFLC graduation were all 1+.

The stated overall goal of the VTT portion of the course was "to provide maintenance, remediation, and enhancement training to Army Reserve Component students, whose proficiency levels in listening, and reading range between 1+ and 2. By the end of the VTT training, the students will demonstrate an improvement in the post-test over the pretest by interacting in level 1+ and 2 activities." The final objectives for the course were contingent upon implementation of the VTT instruction and the determination of actual student needs. Flexibility and modification of syllabus and course curriculum was required throughout. The CAS lessons were the same as those employed in the Korean CAS course, described above. The Korean CAS/VTT course is described in more detail in Bramble and Bauer, 1991b.

d. Russian (RU) VTT

The goal of the Russian VTT course was to refresh the students' previous language proficiency, as well as increase their capabilities as interrogators - language, culture, etc. Course objectives included the following: refresh previous language learning; increase cultural awareness; improve abilities needed for successful interrogation such as asking questions, note taking, selective listening, etc.
e. Japanese (JA) VTT

The goal of the Japanese VTT was to prepare reservists "to conduct routine interviews with native speakers and glean specific information from the responses to their interview questions."

In summary, the Korean CAS, German VTT, and Japanese VTT incorporated course objectives that included grammar, vocabulary, reading comprehension, translation, listening comprehension, interrogation skills, military topics, and speaking. Korean CAS/VTT emphasized grammar, vocabulary, translation, listening comprehension (LC), interrogation skills, and military topics. The Russian VTT course objectives were in vocabulary, reading comprehension (RC), listening comprehension, interrogation skills, and speaking.

The objectives stressed in the five pilot test courses are summarized in Table 1.

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Course Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korean CAS</td>
<td>German VTT</td>
</tr>
<tr>
<td>Objectives:</td>
<td></td>
</tr>
<tr>
<td>1. Grammar</td>
<td>✓</td>
</tr>
<tr>
<td>2. Vocabulary</td>
<td>✓</td>
</tr>
<tr>
<td>3. Reading Comprehension</td>
<td>✓</td>
</tr>
<tr>
<td>4. Translation</td>
<td>✓</td>
</tr>
<tr>
<td>5. Interrogation Comprehension</td>
<td>✓</td>
</tr>
<tr>
<td>6. Interrogation Skills</td>
<td>✓</td>
</tr>
<tr>
<td>7. Military Topics</td>
<td>✓</td>
</tr>
<tr>
<td>8. Speaking</td>
<td>✓</td>
</tr>
</tbody>
</table>

14
2. Lesson design

The technical equipment used for CAS and VTT instruction was as follows:

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Capabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS - Macintosh SE w/</td>
<td>Audio/</td>
</tr>
<tr>
<td>2Mb internal memory and</td>
<td>Graphics</td>
</tr>
<tr>
<td>40 Mb hard disk.</td>
<td>Text</td>
</tr>
<tr>
<td>Macrecorder</td>
<td>Audio play/</td>
</tr>
<tr>
<td>Hypercard</td>
<td>record</td>
</tr>
<tr>
<td>Korean language font</td>
<td></td>
</tr>
</tbody>
</table>

2. VTT - CLI Compressed video, Ku-band satellite links: Interactive Video, Audio and Graphics

All of the primary pilot test equipment was furnished to the remote training sites by the DLIFLC.

The CAS lessons were developed using Hypercard templates designed by DLIFLC. Lessons were arranged by topical domains and lesson subparts were run under consistent templates. Thus the topical domain changed from lesson to lesson, but the form of the learning activities (authentic text, controlled level paraphrase, etc.) remained consistent. Topical domains were selected in cooperation with one of the units participating in the CAS instruction (Risse, 1990). Faculty from the DLIFLC Korean School with assistance from staff of the DLIFLC Educational Technology Division and Language Program Coordination Office developed the software and templates and the specific content of the lessons.
VTT lessons were more similar to resident instruction at the DLIFLC in that they included live teacher presentations, albeit to a remote classroom at Fort Lewis, Washington. The lessons incorporated proven principles of effective language instruction. There were typically three primary VTT instructors for each course, although additional DLIFLC teachers were utilized for special presentations (e.g., as "mystery guests" for the interrogation activities). The VTT medium allowed a great deal of flexibility in that presentations could be made which employed near full-motion video, complete audio and video interactivity, and transmissions (to or from the classroom site) of various supporting graphics (charts, maps, authentic newspaper or magazine articles, photographs, vocabulary lists, etc.). It was also possible, using the system, to transmit audiotaped or videotaped material from the teaching site to the classroom. Various instructional strategies were employed in the courses, including teacher presentations; viewing or listening to pre-taped materials; questions to students about authentic text, charts or maps; teacher-student interaction in the target language; student pair or group learning activities; simulated interviews/interrogations of native speakers; etc.

VTT teachers found that they required prerequisite training in the use of the technology and the development and teaching of effective VTT lessons. The VTT lessons were prepared ahead of time and in greater detail than classroom lessons. This preparation was necessary in order that the lessons be effective and dead air time avoided. Likewise, printed course materials were often prepared and sent ahead of time. Interactive formats were designed in advance. Practice was required in order to accommodate to the audio switching required by the VTT equipment. Audiotape and videotape segments were selected ahead of time. Tapes of high quality were required, suitable for presentation over VTT. Graphics were designed and selected for their instructional value and suitability for transmission.
Alternative course designs are illustrated below by the Korean CAS/VTT and German VTT courses. The Korean CAS/VTT course utilized both the computer-assisted instruction and video teletraining technologies. Thus it serves to illustrate the use of both of the major technologies employed in the pilot tests. The remaining four courses utilized a single technology, CAS or VTT, but the individual components generally followed the same plan as the components in the Korean CAS/VTT course. The German VTT course activities are listed to illustrate the design of a video teletraining course.

a. Korean CAS/VTT

In Korean CAS/VTT, six hours of VTT instruction were provided daily during the ten class days, 29-30 April, 1-3 May, and 6-10 May, 1991. Classes were taught from the DLIFLC VTT Center. The Korean Refresher instruction was conducted in a classroom at the Language Training Facility, North Fort Lewis, Washington. Instruction began at 08:30 and concluded at 15:30, with time out for breaks and lunch. The daily schedule of instruction is presented in Appendix B. Activities of a typical instructional day are illustrated by the following:

<table>
<thead>
<tr>
<th>Topic</th>
<th>Lesson</th>
<th>Setting for Topic</th>
<th>VTT Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Events</td>
<td>CAS Review</td>
<td>At home/game site</td>
<td>Cultural realia presentation &amp; questions</td>
</tr>
<tr>
<td>Sports/Leisure</td>
<td></td>
<td>On vacation/at home</td>
<td></td>
</tr>
<tr>
<td>Accidents/Natural</td>
<td></td>
<td>At scene of accident</td>
<td>Role play, Q&amp;A; audio/videotapes;</td>
</tr>
<tr>
<td>Disasters</td>
<td></td>
<td>fire, flood, drought</td>
<td>LC/RC/speaking; reinforcement; student generated</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>activities; informal evaluation and feedback.</td>
</tr>
<tr>
<td>CAS-Homework</td>
<td></td>
<td>N/A</td>
<td>computer activities</td>
</tr>
<tr>
<td>Assignment</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The teaching/learning activities included in the VTT portions of Korean CAS/VTT course were designed to optimize the use of the VTT media components, lessen the perceived distance between the instructors and the students, optimize the level of student/teacher and student/student interaction, and facilitate the learning of the specific instructional content and objectives selected for the course.

Korean CAS lessons were provided during 16:00 - 17:00 on 29-30 April, 1-3 May, and 6-8 May. CAS lessons were introduced during VTT segments and discussed in follow-up VTT sessions. Selected frames from the CAS lessons are included in Appendix A of this report.

b. German VTT

For the German VTT course, six hours per day of instruction were provided during ten class days, April 1-5 and 8-12, 1991. Classes were taught from the DLIFLC VTT Center. VTT technologies included two-way, compressed video, graphics transmissions, and occasional FAX delivery of materials not already available on site. Most hard copy materials were prepared ahead of time and delivered to the site prior to the first class. Instruction began at 08:30 and concluded at 15:30. There was time out for lunch and for regular breaks. A typical instructional day is illustrated by day five below:

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30</td>
<td>Short song and SCOLA news, &quot;Bundeswehr&quot;, with question and answer session</td>
</tr>
<tr>
<td>09:10</td>
<td>Reporting back about German historical personality. Students give details.</td>
</tr>
<tr>
<td>09:20</td>
<td>Listening Comprehension Exercise &quot;Name This Job&quot; with multiple choice question. And discussion of vocabulary.</td>
</tr>
<tr>
<td>09:40</td>
<td>Break</td>
</tr>
</tbody>
</table>
09:50 Students ask for a list of items to be sent, grammar modules and maps, etc.
10:00 Video segment with True/False questions and discussion of vocabulary.
10:50 Break
11:00 Grammar review. Verbs and prepositions.
11:30 Lunch
12:30 Guessing game. "Who am I?" Students try to identify a person by asking yes/no questions.
12:45 Continue with questionnaire about professions. How to ask questions.
13:15 Break
14:00 Video segment "Amateur Ham Radio Operators" with true/false questions.
14:30 Break
14:40 Interrogation of mystery guest (A DLIFLC German instructor as communist).
15:20 Student feedback session.

The German VTT activities were designed to optimize the use of the VTT media components and to lessen the perceived distance between the instructors and the students. The activities were designed to optimize the level of student/teacher and student/student interaction and to facilitate the learning of the specific instructional content and objectives of the course. Example learning activities are described as following:

- Interrogating mystery guests; interacting and posing questions to the guests, formulating follow-up questions, then answering specific instructor-posed questions about and summarizing the guest responses to questions.
• Interviewing student partners to determine essential information about them, question and answer practice.
• Using new vocabulary to obtain information about interviewees in specific areas.
• Viewing news and current events video segments and answering specific questions about the presentations.
• Listening to audiotape presentations; gisting, translating, and answering specific questions about the content.
• Presentation of specific elements of German grammar, e.g., verb forms, prepositions, etc.
• Games and simulations, e.g., "Who Am I?", completing a job application, describing a famous personality.

Three teachers alternated (singularly or in teams) in offering the various instructional components each day. This made the teaching job manageable for the instructors and offered variety to the students. However, all three teachers were present in the studio during the entire instructional day to assure continuity, to assist the on-camera instructor, and to offer suggestions for lesson improvement. The teaching team and project coordinator regularly discussed the progress of the course. Mid-course corrections and improvements were made as needed.
B. Evaluation Design

1. Project Participants

The following is a list of participants in the five pilot test courses.

<table>
<thead>
<tr>
<th>Participating Units</th>
<th>Number of Students</th>
<th>PMOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korean CAS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>107th MI Bn</td>
<td></td>
<td></td>
</tr>
<tr>
<td>201st MI Bde</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2/9 AVN Bn</td>
<td>71</td>
<td>Mixed</td>
</tr>
<tr>
<td>German VTT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>341st ARNG MI Bn</td>
<td>6</td>
<td>Interrogator</td>
</tr>
<tr>
<td>Korean CAS/VTT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>341st ARNG MI Bn</td>
<td>5</td>
<td>Voice-interceptor</td>
</tr>
<tr>
<td>199th MI Bn</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Russian VTT</td>
<td>6</td>
<td>Mixed</td>
</tr>
<tr>
<td>Japanese VTT</td>
<td>6</td>
<td>Interrogator</td>
</tr>
<tr>
<td>341st MI Bde</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Although prior proficiency levels varied, students selected for the VTT courses and those selected for intensive study via computer during the initial Korean CAS course generally had prior DLPT proficiency scores of 1+ to 2 in listening and reading and 0+ to 1 in speaking. Participants were from both active and reserve components in order to assess the potential of the approaches to language training for the two groups. Additional information on the language proficiency levels of the course participants is given in the results section of this report.

2. Evaluation Instruments

Table 2 presents a list of evaluation instruments utilized in the five pilot tests.
Table 2
Evaluation Instruments Used in the Five Courses

<table>
<thead>
<tr>
<th>Evaluation Instruments</th>
<th>KP</th>
<th>GM</th>
<th>KP CAS</th>
<th>RU</th>
<th>JA</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Baseline Data</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>b. Current Language Program</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>c. Student Background Questionnaire</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>d. CAS Instruction Log</td>
<td>/</td>
<td>N/A</td>
<td>/</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>e. VTT Instruction Log</td>
<td>N/A</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>f. Student Questionnaire</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>g. Student Interviews</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>h. Site Coordinator Interview/Questionnaire</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>i. VTT Teacher Interview/Questionnaire</td>
<td>N/A</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>j. Pre-Post Achievement test</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>k. Course Description Form</td>
<td>N/A</td>
<td>/</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
</tbody>
</table>

Copies of sample evaluation instruments are included in Appendix C. The following is a description of the instrumentation developed for the project:

a. Baseline Data - Language Proficiency. On the baseline data form, the site coordinator (person responsible for the day-to-day operation of the on-site program) was asked to list and describe the MI linguists participating in each of the pilot test courses.

b. Current Language Program Description. On the current language program description form, the site coordinator was asked to provide information about the language training program normally available to the linguists in the participating units. This form
was completed for each group participating in the pilot tests and provided information about the context in which the pilot test training took place.

c. Student Background Questionnaire. A background questionnaire was completed by the VTT students on the initial day of class. On this form they recorded information about attendance at the DLIFLC and/or elsewhere, DLPT scores, specific language skills to address in language training, the progress hoped for in the course, the level of personal priority they placed on language training, and the amount of language training they had received in the previous year.

d. Student CAS Instruction Log. The CAS instruction log was designed to collect data about the use of the CAS lessons employed in two of the pilot test courses (Korean CAS and Korean CAS/VTT). On this form, students recorded their progress on the CAS lessons and the lesson test scores.

e. VTT Instruction Log. A class leader was selected and asked to complete the VTT instruction logs for each morning and afternoon VTT session during the ten days of instruction. On this form the senior class member listed the students in attendance, the teachers who presented, topics covered, problems encountered with audio and video portions of the system, and the perceived quality of instruction. Instructional quality was rated on the following aspects: presentation quality; student enthusiasm (motivation); quality of interaction; use of graphics and charts; relevancy of presentation; and wise use of available time.

f. CAS/VTT Student Questionnaire. This form, adapted from a questionnaire in TRADOC Circular 351-87-1 pertaining to interactive courseware, was completed by each of the students at the conclusion of the training program. The questionnaire addressed the issues of the appropriateness and value of the
training, specific strengths and weaknesses of CAS and/or VTT, specific problems encountered with the technology, and overall impressions of the training.

**g. Student Interview Form.** The student interview form was used for interviewing the pilot test course participants at the conclusion of each course. The open-ended questions address such issues as the relevance and appropriateness of the training for the student, understanding of the goals and purposes of the training, problems encountered, validity of the training, level of opportunity for interaction with the DLIFLC instructors (VTT courses), and the aspects of local language training to which CAS and/or VTT are best suited.

**h. Site Coordinator Interview Form.** The site coordinator interview form was used in interviewing the site coordinator at the conclusion of the training period. The open-ended questions on the form addressed such issues as the appropriateness and value of the training relative to unit needs, adequacy of the training and documentation provided by DLIFLC to prepare the site coordinator for site management, identification and resolution of problems that occurred during training, and issues in local coordination and coordination with the DLIFLC. The site coordinators were also asked to rate the quality of services from DLIFLC staff on a number of dimensions. The site coordinators were asked about their likes and dislikes for aspects of the training and about the potential of CAS and/or VTT to serve future unit language training needs. For the Russian and Japanese VTT courses, a parallel questionnaire was employed in place of on-site interviews.

**i. DLIFLC VTT Teacher Interview Form.** The DLIFLC video teletraining course instructor data were collected by Mr. John Neff of the DLIFLC External Evaluation Unit after the completion of each course. In many cases, where scheduling of interviews was difficult, teachers simply completed the form on an individual
basis. Questions addressed the media and equipment, the instructional strategies selected for the courses and the success of each, suggestions for improving future VTT courses, the amount of preparation time and teacher training required, the technical support provided to the instructors during the course delivery, the relationship of student variables to instructional effectiveness, the strengths and weaknesses of the VTT and CAS technologies, and suggestions for future VTT course developers and instructors.

j. Pre-Post Achievement Test. Achievement tests were developed by the proponent DL/FLC departments or DLIFLC external evaluation staff to measure the effectiveness of the language courses. Tests were developed for Korean CAS, German VTT, Korean CAS/VTT, and Japanese VTT. No test was developed for Russian VTT. The Korean CAS achievement test was objective-based and utilized a completion format which tested reading and translation skills. German VTT utilized a self-assessment approach in which students rated their skill/proficiency levels in speaking, listening, and interrogation. The objective-based Korean CAS/VTT achievement test had multiple choice and completion subtests. It tested translation and listening comprehension skills related to the VTT portion of the course. Japanese VTT utilized objective-based, multiple choice items testing both reading and listening comprehension.

k. DLIFLC VTT Course Description Form. The Course Description Form provided a means for each of the DLIFLC VTT course coordinators to describe the courses. Included are items such as: development team members, instructors, goals and objectives of the course, presentation/learning strategies employed, outline of the daily schedule of activities, listing of learning materials used, methods to optimize the use of interaction in instruction, methods to ensure that the course met the specific needs of students, and techniques to maximize the use of the media available for VTT instruction.
C. Procedures

1. Data Sources

The pilot test evaluations required data from three sources. These included the DLIFLC, the participating military units, and the site visit by the evaluator (Korean CAS, German VTT and Korean CAS/VTT courses only). The categories of data obtained from each source are listed below.

   a) DLIFLC
      a) Course description form (VTT)
      b) Copy of daily course schedule (VTT)
      c) Development of pre-post achievement tests
      d) Teacher interviews (VTT)
      e) CAS development process
      f) Cost data

   b) Participating Units
      a) Baseline data - language proficiency
      b) Current language program description
      c) Student background questionnaire
      d) VTT instruction logs
      e) CAS instruction logs
      f) CAS/VTT training questionnaire
      g) Pre-post achievement test
      h) Equipment/transmission trouble log
      i) Cost data

   c) Site Visits
      Evaluator site visits were made by Dr. William Bramble of IST for the first three pilot test courses (Korean CAS, German VTT and Korean CAS/VTT). They included the following:
a) Site coordinator interview
b) Student interviews
c) Other site personnel interviews
d) Classroom observations

Although the CAS and VTT data collection instrumentation varied somewhat in order to assess the specific features of each technology, common core items were included in the evaluation of each pilot test in order that common data were available for the summative analyses presented in this report.

2. Scheduling

The Korean CAS training was held in the language training classrooms of the 107th MI Bn at Fort Ord, California and the 201st MI Bde at Fort Lewis, Washington. The VTT portions of the pilot test courses were held in a classroom at the I-Corps Language Training Facility at North Fort Lewis, Washington. Both Fort Lewis active personnel and personnel from the Washington National Guard, 341st MI Bn received VTT training at this site. VTT training originated from the VTT Center on the campus of the Defense Language Institute, Foreign Language Center at the Presidio of Monterey, California.

Evaluation Data Collection Notebooks (Bramble, 1990c,d; 1991a-c) and copies of the necessary evaluation forms were provided to the site coordinators at Fort Ord (Korean CAS only) and Fort Lewis (all five courses). Training in data collection procedures was provided by Mr. John Neff of the DLIFLC and/or Dr. William Bramble of IST. At Fort Lewis, data collection assistance was provided by the Language Training Facility Director, Ms. Yvonne Pawelek; the 341st training officer, Captain Mary Forbes; CW2 Timothy Jones of the 201st MI Bde; and members of the language contractor's (Central Texas College) staff. At Fort Ord the
The IST evaluator, Dr. William Bramble, conducted CAS classroom site visits in September, October, November, and December of 1990. He visited the German VTT classroom in April 1991 and the Korean CAS/VTT classroom in May 1991. During his visits, he conducted the classroom observations, conducted interviews, and collected other site data as needed.

Supervision of the project data collection at the DLIFLC and coordination with Fort Ord and Fort Lewis personnel were provided by Mr. John Neff, director of DLIFLC External Evaluation.
Section III. RESULTS
A. Baseline Data
1. Linguist Proficiency and Other Student Background Information

The Federal Interagency Language Roundtable (ILR) language proficiency levels (listening, reading, and speaking) as measured by the most recent scores on the appropriate Defense Language Proficiency Tests (DLPT) are depicted in tables 3 through 5. For the Korean CAS, students are broken out according to location (Fort Ord and Fort Lewis). Columns 1 and 2 in each table show the frequency distribution for Fort Ord and Fort Lewis Korean linguists participating in Korean CAS for whom DLPT scores were available. In the remaining columns are the frequency distributions of DLPT scores for the participants from the four courses involving VTT instruction. In all cases, except the Korean CAS/VTT course (which had five students), there were six students enrolled in each VTT course. One Japanese VTT student did not report DLPT scores.

Table 3
DLPT Listening Proficiency Frequency Distribution

<table>
<thead>
<tr>
<th>KP CAS Ord</th>
<th>KP CAS/VTT</th>
<th>GM VTT</th>
<th>KP CAS/VTT</th>
<th>RU VTT</th>
<th>JA VTT</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>2+</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>11</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1+</td>
<td>10</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>0+</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>27</td>
<td>6</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
Table 4

DLPT Reading Proficiency Frequency Distribution

<table>
<thead>
<tr>
<th>KP CAS</th>
<th>GM VTT</th>
<th>KP CAS/VTT</th>
<th>RU VTT</th>
<th>JA VTT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ord</td>
<td>Lewis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2+</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>12</td>
<td>12</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>1+</td>
<td>9</td>
<td>6</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>0+</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>27</td>
<td>6</td>
<td>5</td>
</tr>
</tbody>
</table>

Due to the nature of and service policy regarding DLPT testing of speaking proficiency, only six recent speaking scores were available for the course participants. Those which were available are summarized in Table 5.

Table 5

DLPT Speaking Proficiency Frequency Distribution

<table>
<thead>
<tr>
<th>KP CAS</th>
<th>GM VTT</th>
<th>KP CAS/VTT</th>
<th>RU VTT</th>
<th>JA VTT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ord</td>
<td>Lewis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2+</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1+</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>0+</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

On the Student Background Questionnaire, the VTT course participants were asked to rate (on a five-point scale) the priority they personally placed upon improving their language skills. Of the 23 persons in all video teletraining courses, 11 stated that they placed a "very high priority," 8 placed a "high priority," and 4 placed "some priority" on this improvement. Students (voice interceptors vs. interrogators) listed the following areas they needed to address in language training (percentage of responses in parentheses):
Interrogators (16)  Voice Interceptors (7)

- **Proficiencies**
  - Speaking 10 (63%)  6 (86%)
  - Listening 10 (63%)  5 (71%)
  - Reading 7 (44%)  4 (57%)
  - Writing 1 (6%)  1 (14%)

- **Skills**
  - Vocabulary 10 (63%)  2 (29%)
  - Grammar 6 (38%)  4 (57%)
  - Special Characters 4 (25%)  2 (29%)
  - Conversation 3 (19%)  1 (14%)
  - Listening 2 (12%)  4 (57%)
  - Comprehension
  - Reading 1 (6%)  1 (14%)
  - Comprehension
  - Idiomatic Expression 1 (6%)  1 (14%)
  - Cultural/Political 1 (6%)  0 (0%)

2. **Training Options Available**
   a. **Fort Ord**

During the period of the Korean CAS pilot test for the 107th MI Bn, the unit’s contract with Ask, Inc. (the contract language training provider) had lapsed. Thus, for the duration of the pilot test, contract language instruction was not available for the military linguists in the battalion. When the contract had been in effect, it was stated that on average about 50% of the unit’s Korean linguists participated in an average of eight hours per week of Korean language training. The training was conducted at the battalion’s Learning Resource Center, Building 1951, Fort Ord, California. CAS training was conducted at this same site. CAS and self study were the only options for language training during the period of the pilot test.
Korean language training materials available at the learning center included the following:

- DLIFLC Korean Basic Course, PDPEC, Refresher, and FLAMRIC
- Satellite reception for SCOLA foreign language video broadcasts
- Korean videotapes and audiotapes
- Miscellaneous Korean periodicals

Equipment for language instruction included forty audiotape players and one videotape player. It was reported that only three of the audiotape players were used on a regular basis for instructional activities. Twenty one of the Korean linguists in the unit were enrolled in the FORSCOM Language Refresher Program developed by Technical Language Services, Inc. (TLSI) and had been issued these materials for self-study.

b. Fort Lewis

Language training at Fort Lewis is available at the unit and Corps level. The 201st M1 Bde maintains Korean and Chinese classrooms in building 3121 at the Brigade headquarters on the main post of Fort Lewis. The unit training program is directed by CW2 Timothy Jones. It is coordinated with, and assisted by, the I-Corps language training program and the instructional staff of the Language Training Facility. The 201st training facility houses SCOLA foreign language video satellite reception equipment. Staff from the 201st videotape programming for later instructional use. During the Korean CAS and Korean CAS/VTT courses the Macintosh computer equipment was housed at this facility. CW2 Jones was trained to operate and maintain the computer equipment and courseware.
The I-Corps Language Training Program is managed by Ms. Yvonne Pawelek. The contractor providing the training is Central Texas College and the contract training manager is Ms. Cathy Grism. The program provides language training in all major languages required by I-Corps and attempts to serve other low-incidence languages. Under the terms of the contract, each instructor must be 1) an educated native speaker (at least a high school graduate), 2) score a 3/3 or better on the DLPT in the target language, 3) pass an interview with the DLIFLC, 4) have some prior teaching experience, 5) understand English grammar, and 6) attend 80 hours of prescribed training prior to teaching.

The Fort Lewis Language Training Facility provides year-round training for Fort Lewis active MI linguists and Reserve Component (RC) personnel stationed in the immediate area. The program addresses the ongoing training needs of the soldiers. In addition, it provides two- and four-week intensive refresher courses needed for annual training. An option for the soldiers is to attend a two-week refresher course at Brigham Young University. The I-Corps language training program is designed to address all levels of relevant language proficiency. A variety of language training materials is available at the facility. For example, Korean language training materials available at the facility include the following: DLIFLC Gateway, FLFRIC, and Basic Courses. A modest amount of technology is available at the center to support instruction including audiotape and videotape players and several EIDS computers. Access to SCOLA satellite video programming is available through the downlink located at the 107th MI Bde. The video teletraining equipment was placed in a first floor classroom at the Language Training Facility on North Fort Lewis.

Information on the training options available to the members of the 341st Washington National Guard MI Battalion was provided by Ms. Yvonne Pawelek and Captain Mary Forbes of the 341st MI Battalion. Each linguist receives language training six hours per
month (for 11 months of the year) during monthly weekend duty. During two weeks per year of active duty, each soldier receives 10 days of language training, approximately six hours per day (total of 60 hours). Language training is provided to 341st MI linguists by instructors from the I-Corps Language Training Facility. Some of the 341st linguists have attended the Brigham Young University language refresher course during their two weeks of annual training.

Only a portion of the 341st MI Battalion linguists are DLIFLC-graduates and there is a wide range of language proficiency represented in the battalion. Non-DLIFLC-graduates have typically received some type of preparation or instruction in their target language, but depend upon the unit training to improve their skills. Guard linguists are rarely able to attend the DLIFLC as part of their National Guard service. Some are able to attend Fort Huachuca, Arizona for interrogator training.

At the 341st MI Battalion headquarters, located a few blocks from the Language Training Facility at North Fort Lewis, there are language training materials available for the soldiers to check out for study. These include DLIFLC refresher courses, FLAMRIC, dictionaries, military-related language training materials and other miscellaneous materials. The battalion has ordered additional dictionaries and reference guides for lower density languages. These materials are more available for the four Pacific Rim languages of primary focus for the unit. Soldiers can request DLIFLC nonresident training materials after they have taken the DLPT. The unit has some videotaped materials, e.g., Russian language material related to treaty activities and developed by Brigham Young University (BYU). It also has access to SCOLA video through the I-Corps satellite dish.

The 341st considers the I-Corps language training program, to which it has access, to be excellent. The Guard representatives
feel fortunate to have such a language training resource so close at hand, at least for personnel stationed in the Seattle/Tacoma area. Those who live in the Spokane area in the eastern part of the state of Washington are less fortunate in this regard. Since the target languages for MI linguists at Fort Lewis and the 341st MI Battalion are Korean, Chinese, Russian, and Tagalog, the training resources for these languages are greater than for other languages. There is some opportunity for grouping students in more commonly represented languages. Language instruction is available from I-Corps on a contract basis for both weekend and annual training.

Instructional equipment available to the 341st MI Bn includes the following: 30 audiotape players; 12 videotape players; three EIDS computers and one Zenith computer; two camcorders; and three large-screen (45") television sets.

B. Computer Assisted Study Component

1. Equipment Reliability
   a. Korean CAS Student Questionnaire

Several questions on the User Training Questionnaire asked students in the initial Korean CAS course about hardware and software reliability. The results from these questions are displayed in Table 6 on the following page.

As seen in Table 6, the students ranked the ease of use of CAS equipment and materials very high (item 3, means of 4.50 and 4.68 on a five-point scale). CAS reliability was also rated quite high (item 6, means of 4.00 and 4.42) as well. Items 15-20 indicated areas for improvement desired for some specific features of the software. Some of the lower ratings for these items probably resulted from the abbreviated period for courseware development and limited opportunities for lesson validation and review.
Table 6
Hardware and Software Reliability Items
User Training Questionnaire
Korean CAS

<table>
<thead>
<tr>
<th>Item Responses on a 5-Point Scale with 5 Highest</th>
<th>Fort Ord (N = 6)</th>
<th>Fort Lewis (N = 26)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Item 3. Equipment and course materials are easy to use</td>
<td>4.50 1.22</td>
<td>4.68 .90</td>
</tr>
<tr>
<td>Item 6. CAS reliability</td>
<td>4.00 1.10</td>
<td>4.42 .81</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item Responses to Yes/No Questions</th>
<th>Fort Ord Percent Yes (N = 6)</th>
<th>Fort Lewis Percent Yes (N = 26)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 15. Gave right answer but computer said you were wrong</td>
<td>33%</td>
<td>65%</td>
</tr>
<tr>
<td>Item 16. CAS ever do something that surprised you</td>
<td>50%</td>
<td>27%</td>
</tr>
<tr>
<td>Item 17. Clicked on button and nothing happened</td>
<td>33%</td>
<td>31%</td>
</tr>
<tr>
<td>Item 18. Needed to ask for help</td>
<td>33%</td>
<td>4%</td>
</tr>
<tr>
<td>Item 19. Noticed errors in text or characters</td>
<td>13%</td>
<td>46%</td>
</tr>
<tr>
<td>Item 20. Problems with audio</td>
<td>33%</td>
<td>46%</td>
</tr>
</tbody>
</table>

b. Student Interview Form

The Student Interview Form included one question pertaining to the CAS reliability. "Did you experience technical problems with the CAS equipment or software? Please explain."
The participants praised the work of the Fort Lewis and Fort Ord training personnel in providing assistance with the technology and technical problems that were encountered. The following are some of the problems that were cited by the CAS participants in the two Korean language courses utilizing the CAS materials.

- Problems with audio quality/recording
- Lack of mouse pads, cursor pointing problems
- Component failures - one CDT and one Macrecorder unit
- Sometimes keyboards locked
- Cursor wasn't blinking
- Small size of screen (especially in CAS/VTT after viewing the video all day)

c. Korean CAS/VTT Student Questionnaire

Table 7 depicts data from the Korean CAS/VTT (third course) Student Questionnaires regarding the reliability of the CAS computer equipment. Average responses are given in the table for items rated on a five-point scale (5 = highest). In the case of items with yes/no answers the figure listed is the percentage of "yes" responses.

As seen in Table 7, the CAS equipment (item 5) was rated as easy to use (average rating of 4.0). The reliability of CAS computer equipment (item 8) was rated as somewhat better than other computer equipment (average rating of 4.0). Only one of the five students (item 30) reported problems using the CAS computer equipment. All five students (item 33) reported that the computer equipment was available and operational when they were scheduled to use it. Several students (item 30) commented that two of the computers would not accept keyboard input in some grammar sections. All five students (item 34) reported that the 201st MI Bde representative assisting them with the CAS equipment was helpful and knowledgeable about the technology.
Table 7
CAS Equipment Reliability
Korean CAS/VTT
N = 5

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Average</th>
<th>Stand. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.</td>
<td>CAS equipment and course material ease of use (Five point scale)</td>
<td>4.0</td>
<td>1.22</td>
</tr>
<tr>
<td>8.</td>
<td>Reliability of CAS computer equipment (Five point scale)</td>
<td>4.0</td>
<td>.71</td>
</tr>
<tr>
<td>30.</td>
<td>Experienced no problems with computer equipment or software in CAS (Yes/No)</td>
<td>80%</td>
<td></td>
</tr>
<tr>
<td>33.</td>
<td>Computer equipment available and operational (Yes/No)</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>34.</td>
<td>Knowledgeable person available at computer learning center assisting with technical difficulties of CAS (Yes/No)</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

2. External Review of Korean CAS
   a. Pedagogical Review

A subcontracted external review of the courseware was conducted by Mr. Kim Smith, an experienced Hypercard Computer Assisted Language Learning (CALL) expert from Brigham Young University and Dr. Han-Kon Kim, a respected BYU professor of Korean. Mr. Smith and Dr. Kim were asked to provide an analysis of the courseware including general pedagogical quality.

The researchers reviewed a copy of the Korean CAS courseware provided to IST by the DLIFLC in mid-October, 1990. It was one of the initial versions fielded at Fort Ord and it contained some
software bugs that were later corrected. The number drills and Hangul refresher components were not included. The efforts of the external courseware evaluators focused upon testing and analyzing the CAS lessons in a user mode. This was done both by the researchers and by an advanced Korean language student at the university.

The Korean CAS was prototype courseware. The amount of content in the lessons (especially in lessons 3 and 4) was quite limited. Due to the short time available for the development process, a detailed, systematic instructional development approach was not used in designing and developing the courseware. Rather, general guidance in terms of topics and targeted proficiency levels (1+ to 2) was provided to a DLIFLC Korean instructor who served as the courseware developer. This topical guidance assisted the developer to appropriately target the instruction. Student and site coordinator comments tended to verify that the content (topics) and targeted proficiency levels were generally consistent with their needs.

Regarding the overall difficulty levels of the lessons, Mr. Smith judged that the proficiency level of the text included in the lessons was appropriate to instruction at the 1+ to 2 levels (listening and reading), as was the intent. Given the points raised by Dr. Ray Clifford (12 September 90 memorandum) regarding the distinction between the level of presenting information and the level of the FL interactions required in the courseware, the reviewers were asked to judge the level of the latter as represented in the CAS courseware. However, due to the prototype nature of the courseware and lack of pedagogical documentation, Dr. Kim was not able to determine the proficiency levels of the instructional interactions from the information provided. Dr. Kim did, however, offer a number of suggestions regarding specific elements of the courseware.
b. Software Review and Analysis

The software was developed quickly as a means to explore the use of the authoring capability of Hypercard and the Macintosh sound capability. The DLIFLC avoided complex and costly courseware development processes and employed an affordable computer platform. Smith and Kim examined the software in their laboratory. The following are examples of their comments and suggestions.

The CAS software for the project was developed using Apple Computer's Macintosh Hypercard and is organized by lessons, each of which addresses a topic suggested by one of the targeted MI linguist units. The courseware consists of five lessons, including Military 1 (Korean position toward the U.S.); Military 2 (training and tactics); Weather (broadcasts and forecasts); Travel (transportation); and Health (medicine, public health).

Each lesson contains the following instructional components: authentic text/scanning; controlled level paraphrase; vocabulary study; grammar study; conversation exercise; and lesson evaluation. Software is organized by stacks and is menu driven. Input from the student is provided by either mouse, voice, or keyboard.

The general organization of the stacks is consistent across lessons. This appears to be a good approach in that it allows for the rapid design of additional lessons.

The individual lessons are virtually identical in layout. The subject matter changes from lesson to lesson, but there are no significant changes in the format.
The released version of the Korean stacks should have some printed documentation telling how to install the stacks and how to use them.

The use of compressed speech at 4:1 compression in the stacks is good. It appears that the original recording was done at a 22 KHz sampling rate which provides the best quality after compression. The developers should be aware of revisions that will be required with newer and future models of the Macintosh computers.

In developing future CAS products, where more time is available for development, a more systematic development process and careful bench testing prior to field release would be helpful. More specific help features are needed to assist students in completing the lessons.

The computer responses used in the Korean CAS are non-judgmental and encouraging. The feedback at the end of the lesson evaluation is good.

There is no apparent provision for individual differences during CAS instruction other than that the students can choose individual lessons or portions of lessons for study and can work at their own pace. The lesson segments are linked together through the Lesson Startup stack and all return there. The student may then go to any part of the lesson. (Note that in a later version of the software, students were recycled back into the lesson if they did not reach a criterion level of performance (80%) on the lesson evaluation.)
c. Lesson Review and Analysis

The BYU researchers conducted a review and analysis of the five lessons contained in the Korean CAS. Mr. Smith commented from the perspective of CALL design and implementation. His comments include:

The lesson presentation is straightforward and not overly complex. Sound is used appropriately and is effective, even though there are a few errors in translation and/or transcription.

The material is interactive, and requires frequent student responses. Some of the questions don't require much thinking. A good guesser can do well on some of the questions, even without Korean language abilities. On the lesson evaluations, students are told that they must get 80% or better to pass the evaluation. There are drills for each segment to prepare the student for the lesson evaluations.

In terms of classroom use, the lack of printed documentation is a problem. Some of the materials needed for running the lessons were missing in the materials we received. This could cause confusion.

The CAS lessons could be used during the classroom instruction period, but I feel that the teacher could spend the time more productively working on interaction with the students. The students could be required to spend study or homework time on the lessons. The teacher could follow up with a discussion on the topics.

Dr. Kim also commented from the perspective of the instructional quality and accuracy of the lessons. He offered a number of specific suggestions for improving the Korean lessons.
These suggestions are documented in the Korean CAS Evaluation Report (Bramble, 1991e).

3. CAS Lesson Completion Times and Achievement
   a. CAS Completion Times

   In the Korean CAS pilot test (first pilot test course) the number of students completing each lesson and the average time required in minutes to complete each lesson was determined from the student instruction logs returned to the evaluator. The results are depicted in Table 8.
Table 8
Average Reported Time in Minutes for CAS Lesson Completion

<table>
<thead>
<tr>
<th>Lesson</th>
<th>Fort Ord Mean</th>
<th>Fort Ord SD</th>
<th>N</th>
<th>Fort Lewis Mean</th>
<th>Fort Lewis SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>109.8</td>
<td>70.9</td>
<td>31</td>
<td>114.3</td>
<td>62.1</td>
<td>19</td>
</tr>
<tr>
<td>2</td>
<td>107.5</td>
<td>83.1</td>
<td>24</td>
<td>104.5</td>
<td>42.5</td>
<td>19</td>
</tr>
<tr>
<td>3</td>
<td>90.6</td>
<td>67.4</td>
<td>18</td>
<td>59.4</td>
<td>32.8</td>
<td>19</td>
</tr>
<tr>
<td>4</td>
<td>69.91</td>
<td>62.4</td>
<td>11</td>
<td>84.84</td>
<td>58.1</td>
<td>19</td>
</tr>
<tr>
<td>5</td>
<td>113.4</td>
<td>167.8</td>
<td>9</td>
<td>98.68</td>
<td>87.9</td>
<td>19</td>
</tr>
<tr>
<td>Total</td>
<td>491.3</td>
<td>249.1</td>
<td>37</td>
<td>455.7</td>
<td>186.1</td>
<td>19</td>
</tr>
<tr>
<td>Average</td>
<td>98.3</td>
<td></td>
<td></td>
<td>91.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 8 shows that 37 Fort Ord students and 19 Fort Lewis students completed the student instruction logs. The 37 Fort Ord students completed a total of 93 lessons or 2.51 lessons per student. The 19 Fort Lewis students completed a total of 95 lessons or an average of 5.00 lessons per student. The average time spent per lesson was 98.3 minutes at Fort Ord and 91.1 minutes at Fort Lewis. Most Fort Lewis students and several Fort Ord students repeated one or more lessons as time permitted. The time spent repeating lessons is not included above. The time to complete individual lessons varied between 1-2 hours. This is less than the four hours per lesson estimated by the courseware developer. However, it is not known how completely the students worked the items in each lesson and students felt they benefitted from repeating the lessons. Lessons 1 and 2 took longer to complete than lessons 3-5. Lesson 3 took the least amount of time to complete. This correlates with the amount of material the developers inserted into the individual lessons.

Because the distributions of study time were positively skewed, it is instructive to look at the median and range for
lesson completion time as a more representative gauge of the typical time to complete each lesson and the dispersion. These results are depicted in Table 9.

Table 9
Median Reported Time for CAS Lesson Completion

<table>
<thead>
<tr>
<th>Lesson</th>
<th>Fort Ord Median</th>
<th>Range</th>
<th>Fort Lewis Median</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>100</td>
<td>23-315</td>
<td>94</td>
<td>30-250</td>
</tr>
<tr>
<td>2</td>
<td>94</td>
<td>30-356</td>
<td>100</td>
<td>30-195</td>
</tr>
<tr>
<td>3</td>
<td>80</td>
<td>20-268</td>
<td>50</td>
<td>10-145</td>
</tr>
<tr>
<td>4</td>
<td>53</td>
<td>15-180</td>
<td>70</td>
<td>15-225</td>
</tr>
<tr>
<td>5</td>
<td>48</td>
<td>10-510</td>
<td>65</td>
<td>20-405</td>
</tr>
</tbody>
</table>

When the effects of "browsers" (15-20 minutes of study time) and the "extremely thorough" students (5-8 hours of reported study time) are lessened in representing the typical study time (using the median time to lesson completion), the typical lesson completion time is about one to one and one-half hours. This figure includes taking the lesson evaluation twice (pre-and-post instruction). This estimate of completion time was later verified during the Korean CAS/VTT pilot test.

b. CAS Achievement Tests

Two measures of student performance were used in the Korean CAS pilot test. The first was the 20-question lesson evaluation built into the courseware for each of the five lessons. These tests were available to students at both Fort Ord and Fort Lewis. However, the lesson tests were not specifically designed to measure overall achievement. The lesson test results are reported only for Fort Ord, where they were the only achievement measures available.
Lesson test results were self-reported by the students on the student instruction logs. Not all students recorded the scores for all lessons attempted. The second measure of student performance was a 50-question paper and pencil test (completion format) developed by the External Evaluation unit at the DLIFLC. This test was designed as a test of the concepts and vocabulary presented in the CAS lessons (with the exception of listening/speaking exercises). The 50-item test was available only for the Fort Lewis portion of the test. It was taken by students before and after they completed the CAS instruction.

The results for the four-part lesson evaluations included in the CAS courseware were reported on the Student Instruction Logs. The four lesson subtests were listening, key words, phrase identification, and paragraph comprehension. These results served as the only indicator of achievement gain for the Fort Ord students. The Fort Ord lesson evaluation results are summarized in Tables 10 and 11.
<table>
<thead>
<tr>
<th>Lesson</th>
<th>1 5-items Listening</th>
<th>2 5-items Key Word Test</th>
<th>3 5-items Phrase Identification</th>
<th>4 5-items Paragraph Comprehension</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Pre</td>
<td>70.6</td>
<td>69.3</td>
<td>71.1</td>
<td>61.6</td>
</tr>
<tr>
<td>Post</td>
<td>87.3</td>
<td>88.0</td>
<td>92.7</td>
<td>86.0</td>
</tr>
<tr>
<td>Gain</td>
<td>16.7</td>
<td>18.7</td>
<td>21.6</td>
<td>24.4</td>
</tr>
<tr>
<td>2 Pre</td>
<td>77.9</td>
<td>66.4</td>
<td>60.0</td>
<td>59.4</td>
</tr>
<tr>
<td>Post</td>
<td>91.4</td>
<td>98.6</td>
<td>91.4</td>
<td>87.1</td>
</tr>
<tr>
<td>Gain</td>
<td>13.6</td>
<td>32.1</td>
<td>31.4</td>
<td>27.7</td>
</tr>
<tr>
<td>3 Pre</td>
<td>65.0</td>
<td>78.4</td>
<td>70.0</td>
<td>63.5</td>
</tr>
<tr>
<td>Post</td>
<td>88.9</td>
<td>91.1</td>
<td>93.3</td>
<td>86.9</td>
</tr>
<tr>
<td>Gain</td>
<td>23.9</td>
<td>12.7</td>
<td>23.3</td>
<td>23.4</td>
</tr>
<tr>
<td>4 Pre</td>
<td>77.5</td>
<td>72.5</td>
<td>75.0</td>
<td>80.0</td>
</tr>
<tr>
<td>Post</td>
<td>100.0</td>
<td>94.3</td>
<td>100.0</td>
<td>97.1</td>
</tr>
<tr>
<td>Gain</td>
<td>22.5</td>
<td>21.8</td>
<td>25.0</td>
<td>17.1</td>
</tr>
<tr>
<td>5 Pre</td>
<td>42.5</td>
<td>75.0</td>
<td>77.5</td>
<td>65.0</td>
</tr>
<tr>
<td>Post</td>
<td>87.5</td>
<td>100.0</td>
<td>97.5</td>
<td>97.5</td>
</tr>
<tr>
<td>Gain</td>
<td>45.0</td>
<td>25.0</td>
<td>20.0</td>
<td>32.5</td>
</tr>
<tr>
<td>Av. Pre</td>
<td>66.7</td>
<td>72.3</td>
<td>70.7</td>
<td>65.9</td>
</tr>
<tr>
<td>Post</td>
<td>91.0</td>
<td>94.4</td>
<td>95.0</td>
<td>90.9</td>
</tr>
<tr>
<td>Gain</td>
<td>24.3</td>
<td>22.1</td>
<td>24.3</td>
<td>25.0</td>
</tr>
</tbody>
</table>
Table 11
Fort Ord CAS Lesson Test Summary Results:
Average 20-Item Lesson Test Scores
(Percent Correct)

<table>
<thead>
<tr>
<th>Lesson</th>
<th>Pre</th>
<th>Post</th>
<th>Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Military 1</td>
<td>58.2</td>
<td>88.5</td>
<td>20.3</td>
</tr>
<tr>
<td>2 Military 2</td>
<td>55.9</td>
<td>92.1</td>
<td>26.2</td>
</tr>
<tr>
<td>3 Weather</td>
<td>59.2</td>
<td>90.1</td>
<td>20.8</td>
</tr>
<tr>
<td>4 Travel</td>
<td>76.2</td>
<td>97.9</td>
<td>21.6</td>
</tr>
<tr>
<td>5 Health</td>
<td>65.0</td>
<td>95.6</td>
<td>30.6</td>
</tr>
<tr>
<td>Total</td>
<td>68.9</td>
<td>92.8</td>
<td>23.9</td>
</tr>
</tbody>
</table>

Tables 10 and 11 indicate the following: On the average, the students were able to answer 68.9% of the 20 questions on the lesson pretests. After completing the lessons their average score was 92.8%, an average gain of 23.9%. Average pre-post performance did not vary greatly across the five lessons, nor across the four parts of the lesson evaluations. It should be noted that the gain from pre to post testing on the lesson evaluations was measured by taking the same test twice (items in the same exact order) in a very short space of time. Feedback regarding correct answers was provided following each administration of the test. When interviewed, students commented that they were able to memorize some of the correct answers from the pretest for later use when taking the post test.

Table 12 summarizes the results for the Fort Lewis students on the 50-item pre-post Korear. CAS (first course) achievement test. The achievement pretest was administered during the week prior to CAS instruction and the post test (same test) was administered within several days to three weeks following the completion of the four week pilot test period. In all, 27 students took the pretest.
and 17 took the post test. For the 27 students, the average pretest score was 35.6% (SD 19.0). The average post test score for the 17 students was 64.9% (SD 2.4). Average gain was thus 29.3%. However, given the differing number of students taking the pre and post achievement test and the existence of two distinct groups of students involved in the Fort Lewis CAS pilot test ("LTP" and "Other" groups), a further analysis of these data was conducted. The "LTP" group participated in CAS as a supplement to a four-week intensive Language Training Program. The "Other" group received only CAS instruction during this period. To reduce selection bias in the analysis, we have included only students for which there were complete pre and post test data. Further, we analyzed the data separately by group (LTP vs. Other). The number of cases was not large, but the results are illustrative.

Table 12
Fort Lewis Pre-Post 50-Item Achievement Results:

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest Mean (Percent)</th>
<th>Posttest Mean (Percent)</th>
<th>Gain Mean (Percentage Points)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Others</td>
<td>38.67%</td>
<td>59.50%</td>
<td>30.83%</td>
</tr>
<tr>
<td>N=6</td>
<td>19.19</td>
<td>21.73</td>
<td>12.61</td>
</tr>
<tr>
<td>LTP</td>
<td>25.05%</td>
<td>54.00%</td>
<td>28.95%</td>
</tr>
<tr>
<td>N=7</td>
<td>7.38</td>
<td>19.90</td>
<td>20.14</td>
</tr>
<tr>
<td>Total</td>
<td>37.33%</td>
<td>51.15%</td>
<td>29.82%</td>
</tr>
<tr>
<td>N=13</td>
<td>15.19</td>
<td>21.43</td>
<td>16.32</td>
</tr>
</tbody>
</table>

Because of the small sample sizes involved, statistical group comparisons are not possible. In general, as shown in Table 12, the 13 students appeared to improve as a result of completing the CAS lessons (average gain 29.82 percentage points) and both groups appeared to make approximately the same amount of gain. The apparent size of the gain was not greater for the LTP group, which received six hours per day of intensive language training during
the test period and had a native speaking instructor present during the CAS portion of the instruction (one hour) each day. However, the Other group both started and finished about 15 percentage points above the LTP group. It appears that the skills that students in the Other group brought to the instructional process were better developed than those of the LTP group.

Corroboration for this is found in the distribution of DLPT proficiency scores for the two groups. LTP students were chosen because they scored at about the 1+/1+ or 1+/2 level and the purpose of the LTP training was to qualify these linguists at the 2/2 level. The Other students usually scored above the 2/2 level.

The relationship of the amount of gain to the time devoted to CAS study was considered. Again, the amount of available data was limited (complete data were available for only 12 students), but an analysis was performed to see if there was any indication of a trend which might verify the value of time on task in CAS training. In conducting the analysis, students were divided into three groups on the basis of the amount of time spent in instruction across all five of the lessons. The pre-post gain for these groups on the achievement test was calculated. The results of this analysis are depicted in Table 13.

<table>
<thead>
<tr>
<th>Instruction Time (minutes)</th>
<th>Number</th>
<th>Average Gain</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>201-400</td>
<td>5</td>
<td>26.6</td>
<td>17.5</td>
</tr>
<tr>
<td>401-600</td>
<td>4</td>
<td>30.5</td>
<td>6.2</td>
</tr>
<tr>
<td>&gt;601</td>
<td>3</td>
<td>45.0</td>
<td>26.2</td>
</tr>
</tbody>
</table>
To the extent that this small number of cases accurately reflects reality, it appears that the amount of gain is greater for students who spent a greater amount of time in the CAS instructional process. As indicated by the large size of the standard deviations for groups 1 and 3 above, there is wide variability within the groups.

4. CAS Students Interviews and Student Questionnaires

Students were generally very positive about the CAS hardware and software. They commented that the hardware was easy to use. Students felt that the instructions for the lessons (contained within the courseware) were generally adequate to explain its use. They liked the flexibility of computer assisted study. Some of the information reported by the students about hardware and software problems was redundant to that already presented. However, the following additional points were made during the student interviews. Most students liked the Macintosh computers and HyperCard format. Two students, however, stated that they were more familiar with IBM (DOS)-type machines and would prefer to use that type of computer for training. There was concern about the quality of the audio on the Macintosh SE speakers. Some students commented that they could not clearly understand some of the recorded Korean passages due to the speaker quality. Some students indicated that the passages were easier to understand if headphones were used.

A number of students indicated that the number drills included with the CAS lessons were too slow. The comment was made that it was sometimes difficult to accurately place the pointer on the correct buttons on the screens or that sometimes the computer did not respond to certain mouse clicks. This may have resulted from the lack of mouse pads at the computer stations for the majority of the test period. The participants felt that the
character font used in the courseware adequately represented the Korean text.

The student interviews identified areas for future improvement of CAS courseware including the following:

- Making the file layout (stacks) and the procedures for moving between lessons or parts of lessons easier for the students to understand
- Allowing more flexibility in accepting alternative definitions and terms as item responses
- Eliminating inconsistencies between portions of the recorded segments and the corresponding text displays
- Increasing the capability for the computer to compare student speech to the recorded speech and to provide feedback for the speaking portions of the instruction
- Adding more material to CAS and providing for random selection of questions and random presentation of answer foils to lessen the possibility to memorize correct answers, rather than learn the material
- Eliminating spelling and grammar errors in the English text and errors in representing Korean text
- Eliminating incorrect answers for some items
- Providing more specific feedback and help options within the lessons
- Including a female voice for female students to pattern speech after
- Correcting logic problems in the Grammar sections of some lessons
- Eliminating the use of non-standard "?" button in listening/speaking portions of the instruction

Students filled out the User Training Questionnaire after the completion of CAS training. Some of the results from this questionnaire have been included in the previous section of the
report. Additional data from this form are summarized in Table 14. These items relate to user perceptions of CAS training.

Table 14 on the following page, includes the following results: CAS was rated positively in terms of its usefulness and relevance to the linguists' jobs. CAS was rated as effective in holding students attention. Responses to the final three items in Table 14 indicate that CAS was targeted at appropriate levels of proficiency for the student population. Specifically, on item 10, an average near 3.00 corresponds to the response "about right."
### Table 14
Results from the User Training Questionnaire
Korean CAS Students

<table>
<thead>
<tr>
<th>Items on 5-Point Scale with 5 Highest</th>
<th>Fort Ord Mean</th>
<th>Fort Lewis Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Help me perform job better</td>
<td>3.00</td>
<td>3.80</td>
</tr>
<tr>
<td>2. Make me more proficient in my MOS</td>
<td>3.00</td>
<td>3.54</td>
</tr>
<tr>
<td>4. CAS ranks high compared to other army training received</td>
<td>3.67</td>
<td>4.04</td>
</tr>
<tr>
<td>5. How much could be applied on job?</td>
<td>3.33</td>
<td>3.38</td>
</tr>
<tr>
<td>11. Appropriate content for MOS</td>
<td>3.50</td>
<td>3.09</td>
</tr>
<tr>
<td>13. How effectively did CAS hold your attention?</td>
<td>3.67</td>
<td>3.81</td>
</tr>
</tbody>
</table>

For the following three items a response of 3 is the optimum, 5 is more than, harder than, or faster than and 1 is less than, easier than, or slower than.

| 9. How much time did you spend on CAS compared to other students | 3.00 | 3.04 |
| 10. Compared to your proficiency level, how hard is CAS? | 2.67 | 3.31 |
| 12. How fast were you able to learn in comparison to classroom instruction? | 3.20 | 3.17 |
Two questions on the Use::: Training Questionnaire asked what the students liked and did not like about CAS. The available results for 32 respondents from Fort Ord and Fort Lewis Korean CAS are summarized below. The number of students listing each comment appears in parentheses. The responses are valuable in pointing out perceived CAS strengths and weaknesses and identifying suggested areas for improvement.

"What did you like about the CAS?" (sample responses)

- User friendly, easy to use (12)
- Good for vocabulary study, like vocabulary emphasis (10)
- Flexible, convenient, self-paced (8)
- Good way to learn, interesting, enjoyable (7)
- Self-evaluations and/or capability to review sections (7)
- Activities included (e.g., vocabulary, scanning, paraphrase, translating exercises) (5)
- Interactive nature, feedback (3)
- Audio/speech features (3)
- Appropriate topics (3)
- Integrates vocabulary into lessons/text well (2)
- Grammar instruction, explanations (2)
- Military vocabulary driven, military orientation (2)
- Balance between military and everyday conversation (1)
- Can study language without a teacher (1)
- Privacy (1)
- Lessons consistent and easy to follow (1)
- Benefits reading and listening (1)
- Diverse range of topics/subject matter (1)
- Expandable, could be developed further by the (military) unit (1)
"What did you not like about the CAS?" (sample responses)

- Number drills too slow, too easy (9)
- Computer can't correct your pronunciation, teach speaking, an unnecessary feature (6)
- Lesson length (too short), limited content, only has five lessons (4)
- Can't ask questions or get clarification, as with a live instructor (4)
- Grammar too simple, too low level (3)
- Cannot replace human interaction required in some aspects of language study (2)
- Not enough time allowed to record speech, or other technical problems in recording speech (2)
- Too easy to memorize lessons, lesson evaluations (2)
- Need to include more definitions of unfamiliar vocabulary (1)
- Some lessons too basic (e.g., Hangul refresher, Numbers) (1)
- Software should be debugged better before fielding (1)

Students in the Korean CAS course were asked in their interviews whether the content of the lessons was appropriate to their needs. "Yes" or "qualified yes" answers were provided by all 22 students interviewed. Students commented that they liked such features as the military and weather topics, vocabulary, grammar, reading and translating aspects. Suggestions for improvement included adding a dictionary of Korean terms, adding more difficult grammar, expanding the lessons, and adding greater diversity of topics.

When students were asked in the interviews how they were helped by the CAS, their responses emphasized vocabulary study. Student responses to this item were as follows:
• Vocabulary (13)
• Reading, reading comprehension (4)
• Military aspects and weather (2)
• Listening (2)
• Good refresher, convenient form (2)
• Vocabulary in context (1)
• Word usage (1)
• Contextual grammar comprehension (1)
• Reading longer text passages (1)
• Translation (1)
• Preparing for the DIPT (1)
• Motivation (1)
• Review of seldom used aspects of language (1)
• Self paced nature of instruction (1)
• Lesson evaluations (1)

Students were asked to suggest the specific language proficiencies/skills for which CAS would be helpful in the future. Their responses were as follows.

Proficiencies
• Reading (9)
• Listening (4)
• Writing (2)
• Speaking (1)

Skills
• Vocabulary (11)
• Grammar (8)
• Military topics, terminology (6)
• Basic proficiency (3)
• Pronunciation (1)

From the items in the two lists above, it is apparent that students felt that CAS was best at improving reading skills,
particularly the aspects of vocabulary, grammar, and military topics and terminology. They also valued CAS as a means for improving listening proficiency and basic language skills. They were less optimistic about the potential of CAS to improve speaking and pronunciation skills because the exercises lacked specific corrective feedback.

C. Video Teletraining Component

1. VTT Equipment/Transmission Reliability

   a. Reported outages

VTT reliability and outages for the four courses employing this technology are shown in Table 15 below. A prior Korean language course designed to prepare Fort Lewis personnel for a "Team Spirit" deployment was scheduled for January-February, 1991 delivery and was to have been included in the pilot test evaluations. Technical problems precluded its successful delivery and it is noteworthy that the results shown in Table 15 depict the results of a concerted effort on the part of the DLIFLC Distance Education Staff and ATSC to resolve these technical problems.

Table 15
VTT reliability and Number of Outages Across Four 60-Hour Courses

<table>
<thead>
<tr>
<th></th>
<th>RELIABILITY</th>
<th>OUTAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>German VTT</td>
<td>87%</td>
<td>7</td>
</tr>
<tr>
<td>Korean CAS/VTT</td>
<td>98%</td>
<td>3</td>
</tr>
<tr>
<td>Russian VTT</td>
<td>97%</td>
<td>1</td>
</tr>
<tr>
<td>Japanese VTT</td>
<td>78%</td>
<td>2</td>
</tr>
</tbody>
</table>
As seen in Table 15, the VTT reliability (percentage of scheduled time the system was operational and instruction could be provided) was quite high (87% to 98%) for all courses except the Japanese course. Major outages during the Japanese course were exceptions. They were different both in duration and cause from those experienced during the other courses. One lengthy outage was caused by a scheduling conflict in which the satellite frequencies allocated to the course were unexpectedly in use by another federal agency. The other outage occurred when the mother board burned out in the equipment at Fort Lewis. In that case, a day of instruction was lost while a replacement board was shipped and installed. It appears that reliability in the 95% to 100% range may be possible in the future if key spare parts are available on site and network scheduling conflicts are eliminated.

b. VTT Student Questionnaire Equipment and Transmission Items

Several items on the Student Questionnaire addressed the reliability and quality of VTT in other ways. Across the four VTT courses, a total of 20 students provided these ratings. The VTT equipment was rated quite easy to use (average rating of 4.00 on a five-point scale with 5 = highest). Compared with other training equipment that the students have used, the reliability of the equipment for VTT is rated (average of 3.80) as better than other training equipment. Ninety percent of the students indicated that they felt the site coordinator was able to operate and troubleshoot the VTT classroom equipment.

Only twenty percent of the students felt hampered or distracted by the compressed video used in the VTT. Some illustrative comments made concerning this item were as follows:

- The focus, the lag time in movement were distracting and hard on eyes; and it was difficult to get used to
• Headaches and tiredness were experienced in the afternoon hours
• Time delay was observed with the audio
• Freeze frame when graphics were being transmitted
• Sitting too close (small classroom) was a problem

c. Site Coordinator Interview - VTT Equipment Reliability

Several items on the site coordinator interview form addressed equipment reliability. Illustrative responses to the items (from the Korean CAS/VTT course) were as follows.

"What specific problems did you encounter in using the computer and VTT hardware during the training?"

"We experienced VTT outages several times. Sometimes we could see, but not hear. After an outage, we would fiddle with the Hughes (satellite) equipment and reboot the Rembrandt. The system worked then, but we don't know why. We go through the troubleshooting procedures and it works."

"How could these problems be avoided in the future?"

"We don't know enough about the VTT equipment yet. Maybe it is the humidity here. We should look at getting a contractor with the requirement to rove and troubleshoot. The technician from the TNET network contractor (Oklahoma State University-OSU) will come here in a week to check out the equipment. The OSU and the Ft. Eustis technical support services have improved. Various people have been helpful. Technical sophistication is improving here on site."

As time progressed, the VTT site personnel gained experience in both identifying problem causes and effecting remedies. By the
end of the pilot test, they had gained a great deal of confidence in their ability to deal with the equipment. However, they felt that the VTT equipment was complex and should be simplified, if possible.

2. VTT Student Questionnaires - General Items

A number of questions were asked on the student questionnaires about specific features of the VTT. A breakout of the responses to these items by course is presented in Table 16. Note - only three student questionnaires were completed by the students in the Russian course.
### Table 16

**Average VTT Instructional Ratings**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>GM VTT (n = 6)</th>
<th>KP CAS/VTT (n = 5)</th>
<th>RU VTT (n = 3)</th>
<th>JA VTT (n = 6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comfort with format</td>
<td>100%</td>
<td>80%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Sufficient opportunity to interact instructors</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Teacher competence and preparedness</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Teacher use of charts, maps, and visual aids</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Accurate and useful teacher responses</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Effective use of interaction</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Adequacy of print support materials</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>67%</td>
</tr>
<tr>
<td>Site coordinator ability to operate /troubleshoot equipment</td>
<td>83%</td>
<td>80%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Not hampered or distracted by type of video</td>
<td>83%</td>
<td>80%</td>
<td>67%</td>
<td>83%</td>
</tr>
<tr>
<td>VTT technical video or audio problems don't detract from effectiveness</td>
<td>67%</td>
<td>80%</td>
<td>100%</td>
<td>50%</td>
</tr>
<tr>
<td>Attendance</td>
<td>99+%</td>
<td>98%</td>
<td>97%</td>
<td>97%</td>
</tr>
</tbody>
</table>

The results in Table 16 are almost universally positive and require little explanation. The only variability appears to correlate with a trend in improving troubleshooting capability as the pilot tests progressed and the fact that a small percentage of the students (approximately 20%) felt somewhat hampered by the compressed video format.
Table 17 presents the results for nine items that address general perceptions about the course. Item ratings were on a five-point scale with 5 highest.

**Table 17**  
**Student Questionnaire Ratings:**  
**General Perceptions about the VTT Courses**

<table>
<thead>
<tr>
<th>Item</th>
<th>German VTT n=6</th>
<th>Korean CAS/VTT n=5</th>
<th>Russian VTT n=3</th>
<th>Japanese VTT n=6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Help me perform job better</td>
<td>4.33</td>
<td>3.60</td>
<td>4.00</td>
<td>4.33</td>
</tr>
<tr>
<td>Make me more proficient in my MOS</td>
<td>4.00</td>
<td>3.40</td>
<td>4.00</td>
<td>3.40</td>
</tr>
<tr>
<td>Ease of use of equipment &amp; course materials</td>
<td>4.33</td>
<td>4.00</td>
<td>4.17</td>
<td>4.33</td>
</tr>
<tr>
<td>Ranking compared to other Army courses</td>
<td>3.50</td>
<td>3.80</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Applicability to job</td>
<td>4.50</td>
<td>3.40</td>
<td>4.33</td>
<td>3.67</td>
</tr>
<tr>
<td>Like to use for other language training</td>
<td>4.17</td>
<td>4.20</td>
<td>4.83</td>
<td>4.33</td>
</tr>
<tr>
<td>Advise a friend to take VTT course</td>
<td>3.83</td>
<td>N/A</td>
<td>4.33</td>
<td>4.67</td>
</tr>
<tr>
<td>Quality of VTT vs. locally available training</td>
<td>4.17</td>
<td>4.00</td>
<td>3.83</td>
<td>3.67</td>
</tr>
<tr>
<td>Speed of learning compared with local training</td>
<td>3.83</td>
<td>3.60</td>
<td>3.33</td>
<td>4.00</td>
</tr>
<tr>
<td>Effectiveness in holding attention</td>
<td>3.67</td>
<td>3.40</td>
<td>3.33</td>
<td>3.67</td>
</tr>
<tr>
<td>Difficulty level</td>
<td>3.50</td>
<td>4.00</td>
<td>3.67</td>
<td>2.67</td>
</tr>
</tbody>
</table>
For most of the items in Table 17, a rating approaching the highest rating (5) was most positive. For these items there is generally some variation across courses. The item averages for these items tend to center on the rating of 4. This is an indication that VTT was viewed very favorably by the students participating in the pilot test-courses. Students felt that the courses were related to their jobs and would both help them perform their jobs better and make them more proficient in their MOSs. They felt that the equipment and materials used in the courses were easy to use, that the courses ranked well with respect to other Army courses with which they were familiar, and that VTT instruction was effective in holding their attention. They stated that they would like to receive future training using VTT and would advise others to do so as well.

For three items in Table 17, the 5-point responses asked the students to draw particular comparisons. In these cases the highest response was 5, but 3 was "the same as" and thus formed something of an anchor point for the scale. For these items the average responses were as follows. Students felt that the training was of better quality than locally available training and that their speed of learning was somewhat faster than in local training. With the exception of the Japanese VTT course, the students indicated that the difficulty level of the courses was equal to or greater than locally available instruction. Again, in comparing individual item responses across courses, it should be noted that the small sample sizes do not allow for statistical comparisons among group means.

3. VTT Log Results

Table 18 depicts the average quality instructional ratings on the VTT instruction logs. Items were rated by a selected class leader on a 1 to 5 scale from low to high respectively. Table 18 presents overall item averages for each of the four VTT courses.
Table 18
Ratings of Specific Features of VTT Instruction

<table>
<thead>
<tr>
<th></th>
<th>G1 VTT</th>
<th>KP CAS/VTT</th>
<th>RU VTT</th>
<th>JA VTT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presentation quality</td>
<td>4.67</td>
<td>3.05</td>
<td>4.9</td>
<td>5.0</td>
</tr>
<tr>
<td>Student enthusiasm</td>
<td>4.67</td>
<td>3.42</td>
<td>4.7</td>
<td>5.0</td>
</tr>
<tr>
<td>Quality of interaction with DLIFLC instructors</td>
<td>4.18</td>
<td>3.42</td>
<td>4.9</td>
<td>5.0</td>
</tr>
<tr>
<td>Instructor's use of graphics/charts</td>
<td>3.71</td>
<td>3.16</td>
<td>4.8</td>
<td>5.0</td>
</tr>
<tr>
<td>Relevancy of presentation</td>
<td>4.66</td>
<td>3.05</td>
<td>5.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Wise use of available time</td>
<td>4.61</td>
<td>3.05</td>
<td>5.0</td>
<td>5.0</td>
</tr>
</tbody>
</table>

Typical responses reported in Table 18 center on "above average" to "excellent" ratings (4 or 5 on a five point scale with a rating of 5 highest). The highest ratings concerned interaction with the DLIFLC instructors. The Russian and Japanese courses were rated higher than the preceding two courses. It should be noted, however, that these ratings were provided by a single class member chosen as the class leader. Thus they are only partially representative of the perceptions of all the class members and comparisons across courses are questionable.

4. Pre-Post Achievement Tests

Pre-post achievement tests were administered in three of the VTT pilot test courses (German VTT, Korean CAS/VTT, and Japanese VTT). The form of the tests varied across courses and is depicted in Table 19 below.
Table 19

<table>
<thead>
<tr>
<th>Course</th>
<th>Test</th>
<th>Items</th>
<th>Students</th>
<th>Measure</th>
<th>Pre</th>
<th>Post</th>
<th>Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>GM VTT</td>
<td>Listening</td>
<td>9</td>
<td>6</td>
<td>Proficiency level 1+.2</td>
<td>1+.2</td>
<td>.125</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Speaking</td>
<td>20</td>
<td>6</td>
<td>Proficiency level 1</td>
<td>2</td>
<td>.92</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Interrog.</td>
<td>5</td>
<td>6</td>
<td>Total rating</td>
<td>9.51</td>
<td>12.5</td>
<td>31.4%</td>
</tr>
<tr>
<td>KP CAS/VTT</td>
<td>Sentence</td>
<td>10</td>
<td>5</td>
<td>Percent.</td>
<td>70%</td>
<td>82%</td>
<td>12%</td>
</tr>
<tr>
<td></td>
<td>Transl.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Listening</td>
<td>10</td>
<td>5</td>
<td>Percent.</td>
<td>42%</td>
<td>62%</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>Comp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JA VTT</td>
<td>Listening</td>
<td>24</td>
<td>6</td>
<td>Percent.</td>
<td>N/A</td>
<td>53%</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Reading</td>
<td>25</td>
<td>6</td>
<td>Percent.</td>
<td>47%</td>
<td>52%</td>
<td>5.0%</td>
</tr>
</tbody>
</table>

The results of the pre-post testing in three VTT courses are depicted in Table 20. Since the form of the tests and the number of items varies, the results are converted to common metric (e.g., percentages, proficiency levels and steps) to assist in interpreting the results in the table.

Table 20

<table>
<thead>
<tr>
<th>Course</th>
<th>Test</th>
<th>Items</th>
<th>Students</th>
<th>Measure</th>
<th>Pre</th>
<th>Post</th>
<th>Gain</th>
</tr>
</thead>
<tbody>
<tr>
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<td>6</td>
<td>Proficiency level 1+.2</td>
<td>1+.2</td>
<td>.125</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Speaking</td>
<td>20</td>
<td>6</td>
<td>Proficiency level 1</td>
<td>2</td>
<td>.92</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Interrog.</td>
<td>5</td>
<td>6</td>
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<td>12.5</td>
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</tr>
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<td>Sentence</td>
<td>10</td>
<td>5</td>
<td>Percent.</td>
<td>70%</td>
<td>82%</td>
<td>12%</td>
</tr>
<tr>
<td></td>
<td>Transl.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Listening</td>
<td>10</td>
<td>5</td>
<td>Percent.</td>
<td>42%</td>
<td>62%</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>Comp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JA VTT</td>
<td>Listening</td>
<td>24</td>
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<tr>
<td></td>
<td>Reading</td>
<td>25</td>
<td>6</td>
<td>Percent.</td>
<td>47%</td>
<td>52%</td>
<td>5.0%</td>
</tr>
</tbody>
</table>
As seen in Table 20, pre-post testing for the German VTT course took the form of self-assessments of listening, speaking, and interrogating proficiency. Specific skills were represented on the tests which allowed for the estimation of the students' proficiency levels. Students were asked to rate their ability to perform tasks in each skill area on a three-point scale from 3 (easily) to 2 (sometimes) to 1 (seldom). Listening proficiency was found to increase by .125 levels within the range of 1+ to 2 proficiency. Speaking proficiency was found to increase, on average, .92 levels within the 1 to 2 range of proficiency. Five interrogation skills were included on the test. Scales similar to the ILR proficiency levels do not exist for these items. Thus the responses to the interrogation items were simply added together for each of the six students (highest possible score 5 items x 3 categories = 15, lowest possible score = 3). In the case of interrogation skills, the average scores changed from approximately 9.5 to 12.5 on the pre- and post-tests, a gain of some 3 points, or about a 31% increase.

A two-part achievement test was used for the VTT portion of the Korean CAS/VTT course, the third course in the series of pilot test courses. The two parts of the achievement test measured sentence translation (10 items) and listening comprehension (10 items). The pre-post test results (as depicted in Table 19) were as follows: 70% on the translation pretest and 82% on the post test (a gain of 12 percentage points) and 42% on the listening comprehension pretest and 62% on the listening comprehension post test (a gain of 20 percentage points).

No pretest was available for the Russian VTT course. A two-part achievement test (listening comprehension and reading comprehension) was utilized in the Japanese VTT course. Both subtests originally included 25 items, but one ambiguous item had to be dropped from the listening test resulting in a total of 24 available items. Further, because of a significant VTT outage on
the first day of class, the listening portion of the pretest was lost. Thus, only the post test listening scores are available for analysis. The average scores obtained for the course (as shown in table 20 were 47% on the reading comprehension pretest and 52% on the post test (a gain of 5 percentage points) and 53% on the listening comprehension post test.

In summary, wherever complete pre and post testing results were available for the VTT pilot test courses, substantial pre to post gains were observed. Because of the small sample sizes within each course, no tests of statistical significance were possible. However, the consistency of the pre-post gains supports the perceived pedagogical effectiveness of the courses.

5. VTT Classroom Observations

The IST evaluator, Dr. William Bramble, visited the Fort Lewis VTT classroom during two of the VTT pilot tests (German and Korean). Some illustrative observations from the VTT classroom visits and informal discussions with the students were as follows:

- Students stated that they enjoyed the classes and commented upon the excellent quality of the DLIFLC VTT instructors.
- They generally felt that the difficulty level of the instruction was about right, although slower students felt a bit stretched at times.
- VTT students commented positively about the presentation of graphics (text, pictures, video, etc.), related to the target language and culture.
- Students assisted each other in the interactive sessions (e.g., with vocabulary, etc.). They felt that this was a positive aspect in keeping everyone involved.
- The video and graphics were generally reported to be clear. Some videotaped segments were less clear.
The use of the VTT system to present voiced segments for the tests of listening comprehension was effective.

Some VTT students stated that they tended to get headaches in the afternoon sessions due, they felt, to the long and intense instructional days and the extended viewing of the compressed video images.

Some students were intimidated by being called upon to participate, especially with the presence of observers both in the Fort Lewis classroom and in the studio at the DLIFLC.

Students suggested identifying alternative learning activities such as games (e.g., pictionary, trivial pursuit, etc.) as backups for when the VTT system is down.

Some students suggested grouping more by language ability levels. They also felt that level 2+/3 proficiency students are not often well served in the local program and could benefit from higher level VTT instruction from DLIFLC.

6. Student Interviews

The IST evaluator conducted interviews of students in the Korean CAS, German VTT, and Korean CAS/VTT courses. A summary of the responses to key questions is given below.

Students stated that the goals and objectives of the VTT lessons were generally made clear to them. They felt that the lesson content was appropriate to their needs. They felt that they were helped by the training. The type of gain they felt they had made varied by course, but was generally consistent with the course objectives. Guard members seemed grateful just for the high quality, in language conversational opportunities in the courses, something they stated that they rarely experienced in civilian life.
Students commented that VTT is a valid way to obtain language training, despite the fact that the instructors were not physically on site. Like most distance learning students, they would have preferred the (same quality) instruction to be delivered on-site, but they felt that the opportunity to receive such high quality instruction via VTT compensated for the lack of on-site instructors. Virtually all of the VTT students stated that they would like to participate in additional VTT training in the future.

Students commented about a number of technical features of the VTT courses. In earlier courses the students worried about the reliability of the VTT system. Students especially liked the opportunity in VTT courses to access a broad variety of authentic materials through audio, video, and graphics transmissions. However, they stated that in cases where the course instructors had recorded passages on audio tape for play over the VTT system, they would rather have had live voicings of the passages. They enjoyed the opportunity to interact with outstanding teachers from the DLIFLC, although they commented that problems with microphone switching sometimes detracted from the interactive activities. Students felt that the classroom, which was in a room in a converted World War II barracks, should be improved. Students liked interviewing the mystery guests and many other learning activities designed for the courses.

Attendance at the VTT course sessions was excellent. Students were absent only in cases of special circumstances or to attend to medical needs. The VTT students tended to vary in initial language proficiency and this sometimes made targeting of the instructional level difficult for the instructors. Some slower students felt that they didn't get enough chances to participate. Some faster students felt that the courses were slowed down to accommodate slower students.
D. Combined CAS/VTT Approach

The third course in the pilot test series, Korean CAS/VTT, tested the concept of combining VTT and CAS technologies in offering language training to practicing MI linguists. VTT was the primary medium of instruction in the course and CAS was used to provide supplemental learning activities. Sixty hours of VTT instruction in Korean were provided to five students, three from the 341st Washington National Guard MI Bn and two from the 199th MI Bn at Fort Lewis. After VTT instruction on each of the first eight days of the course, the students utilized the five CAS lessons designed for the Korean CAS course. CAS lessons were introduced during prior VTT class sessions and then discussed at subsequent VTT class sessions.

The concept of supplementing VTT courses with off-line CAS instruction appears to hold considerable promise. However, neither the level of integration of the two technologies in the Korean CAS/VTT course, nor the achievement test was specifically designed to determine the specific effects of adding CAS supplemental instruction. Thus, the evaluators were unable to fully test the concept of combined CAS/VTT instruction.

Students commented during their interviews that they felt the combination of the two technologies had advantages over the exclusive use of one of them. However, they and the site coordinator were quick to point out that the lack of integration of the technologies in the current test did not really demonstrate this advantage. Students felt that the particular teaching/learning advantages of each technology should be considered in determining the role each should play. They stressed the role of CAS in reading instruction and of VTT in listening and speaking instruction. Students also commented that the use of CAS during the last hour of the day, when they were already fatigued from six hours of VTT was not optimal. They suggested that shorter VTT
class days and, perhaps, interspersed CAS and local instruction might be a more effective option.

E. Unit Receptivity to CAS and VTT Training

Several items on the Site Coordinator Interview Form addressed the issue of the adequacy of DLIFLC remote (CAS and VTT) training. A summary of these responses, from Fort Ord and I-Corps Language training personnel, appears below.

The site personnel felt that the VTT courses were of excellent quality and generally met the needs of the students. They stated, however, that the local program has a number of strong areas and that VTT should try to address training needs not covered, rather than duplicate existing services available on site. Site personnel reported that the VTT reliability improved as the testing progressed. In early courses local instructors were "standing by" in case of system failures. As the VTT improved, local training personnel felt more confident and did not feel the strong need for backup instructors. Local personnel also felt that prior preparation for DLIFLC instructors in the use of VTT was critical. They felt that the DLIFLC instructors' sophistication in the use of and confidence with the technology improved as the tests progressed, presumably as a result of instructor training provided at the DLIFLC.

Site personnel felt that the students generally liked the VTT training and benefitted from it in terms both of their language and their MOS-related skills. They felt that the students were fatigued at the end of the day and suggested shorter VTT instructional days with local training interspersed. As the pilot tests progressed, site personnel expressed enthusiasm about joining with DLIFLC in future VTT and CAS efforts and working to integrate the two types of offerings (technology-based and local instruction)
to better serve MI linguists in the area. When asked about the expenditure of local funds for CAS or VTT instruction, the representatives indicated that they are already planning some investments in additional learning technologies. Relative to VTT, however, the price for the monthly lease of equipment and communications appeared to be prohibitive unless external funding could be obtained to offset this cost.

During the site coordinator interview for the Korean CAS/VTT course the site personnel responded as follows to the question, "What do you like most about this form of training?":

"We're excited about many possibilities with the technology, not only language training. There are plans to install VTT at Ft. Huachuca; this will open other opportunities for training in interrogation skills."

"A real enhancement. It gives us entry to DLIFLC resources. We like VTT teacher training and oral testing (it worked very well with Arabic). The technology provides diversity for students. They are not in front of live teachers all time."

Responses to other items from this same interview follow.

"How could this type of training best be used to complement your existing language training program?"

"Enhancing existing courses, for 3/3 linguists, instructor training, oral testing, less-commonly-taught (LCT) languages."

"For developmental MOS-related capabilities in intelligence (e.g. 98G listening or 98E interrogation) or deployments (e.g., 201st MI Bde Team Spirit). With CAS, we want to take advantage of available computer capabilities for briefing slides, CALLIS, and teaching teachers to author. We need
computer training for teachers (reported to be an external program reviewer recommendation)."

"Which of your training needs do you feel are best facilitated by the following types of training?"

a. **Self study**- "Our classrooms are always open, units come in and use them. The computer can help here."

b. **On-post classroom instruction**- "Mission-related languages, RC and Active, Special Forces, and Civil Affairs. The 24-week Arabic course at Fort Lewis worked well."

c. **Computer-assisted study**- "Enhancing self-study, in-unit training, tracking mechanism for self-study, aid to classroom instruction, homework, remedial, accelerated learning."

d. **Video teletraining**- "Special-purpose training and training integrated with the local program. We need the infrastructure to support this. Within a unit, it is not as easy. Extra duties and military priorities come and go."

e. **Travel to a training program at another site**- "Available programs are sometimes overrated and expensive- the quality is sometimes good, but it varies. Sometimes TDY is used as a reward to troops. We provide some special trips for language personnel (e.g., technical training, conferences, etc.)."

f. **Mobile Training Team (MTT) from the DLIFLC**- "We value this teacher support on-site, if expertise is not available here. Occasional, two-week courses are good. The use of MTTs shouldn't be negated by VTT. It's good for DLI representatives to visit the field sometimes too, to see our program and become familiar with our needs."
The following general comments were also offered concerning the site's general experience with the CAS and VTT technologies:

"We appreciate the flexibility with which the DLIFLC has approached using these technologies and will adjust a (future) Russian course in this regard. We see advantages to team teaching (DLIFLC/I-CORPS). We will use CAS for 341st MI Bn training."

"VTT use is better in conjunction with a local teacher."

"I-Corps and DLIFLC representatives met this morning (10 May) to discuss VTT. We felt that 6-7 hours per day is too much on VTT. We feel that VTT is not a replacement for local language training. We plan in the future to try a couple of hours per day each (VTT, CAS, and local instruction), with grouping at the 1-2-3 proficiency levels. While some students are in the VTT class, others can be with our teachers or using computers.

"We appreciated the opportunity at 15:00 each day to provide VTT course feedback. The DLIFLC has been really responsive to the students. We need people at the DLIFLC who are problem-solvers. We are finding that our impression of VTT has changed as the VTT has improved. Most DLIFLC staff have been very helpful. Initially there was a problem with the DLIFLC understating the local requirements to operate VTT system."

"Do you feel that you were provided adequate training and documentation by the DLI to manage this sort of training?"

"We are getting better at this. We were all new to it at the beginning. The fact that the DLIFLC has been very open has helped."
"The technologies are becoming more manageable, but we need to decide on the roles they will play. We need to determine how they will help us to meet our requirements. The technologies have the potential to play a tremendous support role. We need to capitalize on their strengths, avoid their weaknesses."

"What specific problems did you encounter in the local management of the project?"

"Local management was smooth because of the language program coordination procedures already in place. Capt. Forbes (of the 341st) scheduled and observed the VTT initial training."

"What specific problems did you encounter in coordinating the CAS/VTT training with the DLIFLC?"

"We need a central point of contact (POC) and helpful problem solvers. We need to have a central POC, so we don't have to re-invent the wheel everytime someone new calls."

"How would you rate the efforts of the DLIFLC in each of the following aspects of the project? (Use 5 = highest, 1 = lowest)"

Addressing your specific language training priorities - 4
Course design - 4
Course delivery (instructional approach and execution - 4
Technical aspects (equipment, communication) - 4
On-going support during the project (from DLIFLC) - 5+
Responsiveness to trouble shooting requests - 5
Availability alternative materials/activities to be used in case of equipment failure - 5
F. DLIFLC VTT Teacher Interviews

After the course completion, the course coordinator and each of the VTT teachers were interviewed using this form or completed it on their own. A summary of their responses across the four VTT courses is included below.

"Considering the media available to you with the system (two-way video and graphics), how difficult was it to provide language training of similar quality to that which you could provide on-site at DLIFLC? Please comment on advantages and disadvantages of the media included with VTT."

DLIFLC VTT instructors felt that they could perhaps provide more intensive and faster paced instruction on-site, but that the VTT made possible high quality language instruction at a distance and was "the next best thing to being there." They commented that VTT is a somewhat slower mode and takes more advanced preparation, but the product is high quality refresher training that linguists have available on-site.

Advantages:

- The variety of media available with VTT -- audio, video and graphics as compared to normal classroom instruction
- Students concentrate on listening and speaking
- Quality is better than what DLIFLC could normally provide on-site (via MTTs)
- Students tend to pay greater attention to the instruction

Disadvantages:

- Audio switching, quality and delays in interaction
- Couldn't overhear general class conversations during pair
or group work
• No direct eye contact with the students
• Requires additional prior preparation
• Coping with mixed levels of student proficiency
• Various technical problems encountered

"Given the VTT equipment capabilities, how effective was the language training in meeting the objectives established for the two-week training session?"

The instructors generally felt that the VTT courses were effective in meeting the objectives established for them.

"Given the VTT capabilities and the particular learning strategies chosen for the training, how well were you able to encourage and maintain student motivation to learn the targeted language skills?"

The instructors felt that student motivation was high, partly because of the careful course design, multiple instructors, pacing, use of authentic materials, current events and cultural information, and variety of activities. The courses were designed to maximize student involvement and incorporated interactive activities and student pair and group work.

"Of the specific teaching/instructional strategies selected for the VTT course, which were particularly successful?"

• Use of authentic language materials and media
• Interrogation exercises
• Various presentations of material by the instructors
• Listening comprehension exercises and testing
• Use of advance organizers when introducing new materials
• Role play
• Cooperative writing based upon notes from video segments
• Various group activities and games
"Which were not successful?"

- Mini oral proficiency interviews (German)
- Unsuitable video or graphics
- Reading comprehension activities (inefficient via VTT)
- Instructor taped audio (students preferred live)
- Spontaneous and intense interaction (due to limitations in audio switching)
- Interrogation activities at language level too high for students
- Grouping students of varying abilities

"Given your experience with the VTT, which new strategies would you suggest to increase the effectiveness of a course such as the one you taught?"

- Use of FAX for sending and receiving instructional materials and student class work or homework
- More emphasis on creating a detailed instructional plan
- More student generated and student centered activities
- Various pedagogical strategies -- lead-ins, error-correcting strategies, vocabulary and grammar review, more cultural information, skill integration activities, and games.

"What specific types of training were provided to you at the DLIFLC to prepare you as a VTT teacher?"

The instructors commented that they were provided an overview of the system and given some training in the use of the technical features of the teaching classroom. Instructors in the earlier courses felt that the training was somewhat superficial. Some of the instructors participated in two-way VTT practice sessions utilizing the two DLIFLC VTT teaching classrooms. As the pilot
tests progressed, DLIFLC technical and curriculum staff gained experience with the system. Instructors in later courses felt that the training they received had improved and addressed effective VTT teaching strategies as well as the technology itself. Still, teachers suggested that the DLIFLC place a priority on developing a more formal approach to the training.

"What type of additional training would have been desirable to better prepare you as a VTT teacher?"

The instructors commented that they would like more formal training addressing the technology and the design and delivery of effective instruction over the system. They stated that they would like to receive this training in advance of commencing with course design and preparation activities.

"How many work days were you allotted to prepare for the VTT course? Was the time allotted for preparation adequate?"

The instructional team, typically a course coordinator and three instructors, were allowed two to three weeks of preparation time immediately prior to the start of the course. They generally stated that this amount of time was adequate, but felt that the preparation hours needed to be spread over a longer period of time because of the requirements to prepare/adapt media and materials for use in the VTT.

"How did student variables such as proficiency level, motivation, and aptitude affect students' individual and collective abilities to benefit from the VTT course? Were there problems for some students in mastering the course objectives?"

The instructors commented that they needed to know more about the skill levels and expectations of the participants in advance of the course planning period in order to maximize course
effectiveness. As it happened, the skills of the course participants were not known adequately prior to the start of the VTT courses. Typically there were one or more students struggling to keep up with the class and one or two students who would have preferred a faster pace. Teachers coped fairly well with the diversity of students, but they felt that tighter grouping would be helpful in the future. Motivation and interest levels of the students were generally high and most students mastered the course objectives established for them.

"In comparison to classroom teaching, how difficult was it to present instruction and manage interaction in the 'VTT Classroom'?" Cite specific problems and solutions."

In general the teachers felt it was somewhat more difficult to teach via VTT than to teach in the normal classroom. A greater degree of preparation was required and each interaction was mediated with varying degrees of difficulty. Specific problems cited included the following:

- Monitoring of student participation and progress
- Listening in on student pair and group work
- Audio interaction -- mikes and switching, slowness
- Using the equipment in the teaching classroom
- Maintaining eye contact with the students
- Writing practice (translation) at a distance
- Intensity of teacher role -- always have to be alert
- Inability to conveniently FAX materials (to and from site)
- Need for camera close-ups for some activities
Various solutions were cited to remedy these problems. Some examples are the following:

- More flexible seating and availability of a "classroom microphone," especially during group work
- Better microphones, sound transmissions and switching capability
- More training for the instructors
- Greater personalization of instruction and more group activities
- Availability of FtaX at both DLIFLC VTT center and classroom sites
- Cameras with remote switching capability and close-up lenses and/or technician to do this
- Development of teaching models and templates for VTT instruction
- Grouping of students by skill level

G. Evaluation Results Summary

1. Objectives related to delivery method

Determine the appropriateness of the chosen media (VTT and CAS) to facilitate the target training.

The VTT media, two-way interactive audio/video supplemented by audio graphics, provided an excellent means for the 60 hours of live teaching in the four courses in which they were tested. The teaching methods used by the instructors stressed interactive learning activities with substantial student participation. Instructors were able to present taped audio and video segments to the students and to display a variety of materials using the overhead projector (e.g., text, photographs, illustrations, etc.). CAS lessons were used both in a stand-alone mode and to supplement local classroom instruction. In one course, CAS was used to supplement the VTT lessons. The CAS lessons focused upon grammar,
vocabulary, listening, reading comprehension, and speaking. In the Korean CAS/VTT course, where VTT and CAS were combined to provide a multi-media approach to instruction, the level of integration of the CAS and VTT portions of the course was limited. It was not possible to determine the exact value of combining the two technologies for nonresident instruction. However, student comments were positive and the potential value of combining the two instructional formats was suggested.

Determine the success of the approaches in providing a viable means for access to the target training.

The VTT and CAS approaches appear to provide excellent means to address the training needs of practicing MI linguists from both active and RC units. The training was conveniently provided on-site, near where the students are stationed. It brought to the students both the excellent instructional resources available at the DLIFLC and applications of modern instructional technology to language training. The courses tested the use of an excellent system for real-time, interactive distance learning and the use of computer lessons which incorporated various input and response formats and drill and reinforcement techniques.

Determine the reliability of the equipment and transmissions used in the pilot test.

The reliability of the VTT equipment and the corresponding ability of the network and local site staff to operate and troubleshoot it increased throughout the period of the pilot testing. The ultimate reliability appears to be in the 95% to 99% range. However, the equipment is complex. Well trained and dedicated personnel are required for its operation and maintenance. It is suggested that backup instructional activities be available for VTT students in case of future system outages. Audio switching during interactive VTT sessions continues to be bothersome for both
the instructors and students. Technical improvements in this aspect of the VTT technology would enhance its instructional value. The computer equipment used for CAS had few technical problems. Those that did occur were easily corrected by swapping out components. However, this does suggest that backup equipment should be available on-site to prevent lost instruction time if computer problems should occur. Software problems can be more significant and need to be addressed on-site by trained supervisory personnel. The corresponding training requirements for the site coordinator appear to be rather straightforward. The cooperation of the local units at Fort Ord and Fort Lewis in learning about the technologies and providing technical support for CAS and VTT was excellent.

Determine the cost of providing the CAS/VTT training and compare with Mobile Training Teams (MTTs) or other approaches which could be taken.

Complete cost data are not currently available to IST. The analysis of cost data will be presented in a future report that specifically addresses this topic.

Determine the acceptance of the delivery approach to the target community.

Students reported that they felt comfortable with the CAS and VTT technologies. Students felt that they benefitted from the instruction via both systems, although they stated that each system had its particular strengths. They generally felt that the DLIFLC used each to its best advantage. They particularly liked access to skilled DLIFLC language teachers, the audio graphics and interactivity of the VTT system, and the ability of VTT to provide instruction in listening, reading, and speaking proficiency. CAS was felt to have the advantages of flexibility and ease of use. Students stated that CAS provided excellent practice in language
instruction relating to listening and reading skills. Like most distance learning students, many course participants would have preferred a high quality classroom teacher for instruction, if available locally. However, given the excellent quality of the courses in comparison to that normally available to them, they expressed a great deal of satisfaction with the training. Students were excited about their participation in VTT and overwhelming stated that they would like to receive additional training through the media employed.

2. Objectives related to instruction

Determine the effectiveness of the training in meeting the established learning objectives.

The results of the pre-post achievement tests administered to the course participants indicated gains in skills addressed by the courses. Students also demonstrated pre-to post-test gains on the CAS lesson post tests. Students, DLIFLC instructors, site coordinators, and military training personnel cited a number of specific skill area improvements as a result of completing the courses. Heterogeneity of prior student proficiency in the courses was somewhat problematic in the VTT courses. However, the VTT instructors were generally able to adapt the instruction to meet the needs of most of the students enrolled in the courses.

Identify effective instructional techniques for using CAS/VTT for the specified language training.

The VTT courses effectively employed interactive activities of three types: teacher-student, student-teacher, and student-student. Listening and speaking activities were especially effective. The use of advance organizers in introducing authentic text, graphics, audiotapes, and videotapes was critical to the success of the students in working with these materials. CAS was effective for
reading and listening skills. Students commented upon the value of CAS for vocabulary, grammar, and number skills. The skill testing capability of CAS was effective and appears to hold potential for further development. While the majority of the CAS speaking exercises appear to hold great potential for further development, students felt that the current version of the speaking exercises did not provide feedback that was specific enough to allow students to correct pronunciation, etc.

Assess the effectiveness of the CAS and VTT in facilitating and maintaining student motivation.

Students commented positively upon the motivational value of CAS instruction. They felt that the variety of activities and the ability to work at their own pace and re-work activities, as necessary, were strong features of the system. The ability of the system to use both graphics and sound was judged to be a strong feature.

The VTT courses were fast-paced, the level of difficulty was challenging to the students, and the format of instruction and the VTT instructors typically rotated hourly, providing additional variety. Role-playing was used, particularly in segments in which students interviewed mystery guests from the DLIFLC. Interactive activities were stressed. These included interaction between teachers and students and among students (paired and group activities). Numerous audio, video, and graphics presentations were made over the VTT system. These both maximized the efficient use of the instructional day and added aural and visual presentation stimuli. As a result, based upon student reports, teacher comments, and classroom observations, students found the courses both challenging and interesting.
Relate the effectiveness of the training to student variables.

Efficient language instruction should target the specific proficiency levels of students. In a one-on-one tutoring situation this issue is easily addressed. When students are grouped in classrooms, problems can arise if the group is heterogeneous and group learning activities are employed. In the case of the VTT courses, the participating units attempted to select students at or near the 1+ proficiency levels in listening and reading and 0+ in speaking. Depending upon the linguists' available for training in the courses, the degree of heterogeneity around these target levels varied. The resultant levels of heterogeneity were, for the most part, manageable for VTT interactive learning activities. At times, however, the slowest one or two students tended to slow the overall rate with which materials could be presented, and these students had to work hard to keep up with the rest of the class. The instructors were concerned about class heterogeneity in some cases, but did as much as possible to adjust the activities and rate of presentation to compensate for it. In addition, more able students in the classroom assisted less able students (e.g., with needed vocabulary) during the VTT interactive learning activities. Instructors modified the course difficulty and content as they grew more familiar with the specific needs of the students.

CAS lessons were individualized and accommodated reasonably well to the diversity of proficiency present in the group. The CAS lessons were targeted to the same general proficiency range as the VTT lessons, but incorporated a sufficient variety of material to address the needs of linguists at a variety of skill levels. The CAS lessons required a basic level of understanding of the Korean language, and one linguist of near-native Korean language proficiency stated that the lessons were too easy for him. However, the lessons did appear to have a degree of depth in this regard. It should be recognized that flexibility must be designed
into CAS lessons from the beginning. CAS instruction cannot be re-directed during the training process as easily as can be done with VTT.

Determine the overall effectiveness of the instruction in supporting annual language training requirements of National Guard and Active MI linguist battalions.

Site training personnel and course participants felt that the use of technology-based language instruction from the DLIFLC has a definite place in their program. They stated that it was potentially valuable for the training of active and reserve MI linguists. They felt that the training was potentially useful for both monthly and intensive annual language training. Fort Lewis and DLIFLC staff plan to continue to work together in the future to more fully exploit VTT and CAS training technologies.
Section IV. LESSONS LEARNED
A. Identified Strengths of VTT and CAS

The results of the pilot test evaluation point to the following strengths of VTT as a nonresident language training technology:

- Can address most aspects of refresher training
- Especially effective with speaking and listening skills
- Can address grammar skills, vocabulary
- Allows real-time interaction with high quality instructors
- Can present current events, news, politics through a variety of media
- Can provide practice in interviewing/interrogation and MOS-related skills emphasizing listening and speaking
- Incorporates use of video and graphics
- Can provide intensive refresher training to active or RC military linguists
- Can assist in the testing of listening and speaking skills

The results of the pilot test evaluation point to the following strengths of CAS as a nonresident language training technology:

- Effective at vocabulary, grammar instruction
- Effective at reading comprehension instruction
- Effective for listening - translation, comprehension
- Effective for contextual grammar comprehension
- Flexible, convenient, self-paced
- Interactive nature, provides feedback to students
- Can present information on military topics
- User friendly, easy to use
- Can perform testing/diagnosis for reading and listening skills
- May address speaking at beginning levels
B. Potential Limitations of VTT and CAS

The results of the pilot test evaluation point to the following potential limitations of VTT as a nonresident language training technology:

- Technical reliability less than 100%
- Eye strain, fatigue with longer sessions
- Lack of physical presence of classroom teacher
- Physical limitations of current classroom
- More cumbersome protocols for interaction, participation
- Dealing with heterogeneity of students' prior skills
- Audio switching, quality, delays
- Problems with some videotape transmissions

The results of the pilot test evaluation point to the following potential limitations of CAS (as implemented) as a nonresident language training technology:

- Not specifically designed to supplement other instructional offerings (e.g., VTT, local courses)
- Limited scope, content of prototype lessons
- Imprecise feedback in speaking activities
- Limited user documentation
- Need for careful debugging to remedy technical problems
- Audio quality of current classroom equipment
- Lack of personal touch of a teacher
- Limited diagnostic and feedback alternatives
- Lack of student usage data recording capability

C. General Lessons Learned

A number of general lessons were learned from the overall pilot test. These can assist with future DLIFLC applications of
these technologies. Many of the lessons are presented in greater
detail in the body of this report and in the individual evaluation
reports for the three intensively evaluated courses. They are
summarized here by topical area.

1. Technology Lessons

- The operational requirements of the present CAS/VTT
equipment/networking configuration place a high
level of demand on network control, training
origination, and classroom sites. It takes
considerable effort to maintain network operability
at a sufficient level of reliability for training to
be successfully presented. The availability of
well-trained technicians at all levels is required.
System redesign or refinement may be indicated.

- Microphone switching constraints are a frequently
reported VTT problem. Problems in switching between
graphics and video occur as well. Additional user
training and/or alternative equipment are indicated.

- Specifications are required for facilities
modification and VTT classroom setup at the training
locations. In addition, there are requirements for
telephone, FAX, photocopying, and reliable
electrical power. Guidelines need to be developed
for staff support and staff training at these sites.
Careful planning and coordination are required to
assist with the development of successful VTT
training sites.

- The computer equipment for CAS appears to be
reliable and less prone to problems than the VTT
equipment. Trained site personnel are required,
however, to instruct students in the use of CAS, to provide instructional management, and to stand by for occasional troubleshooting and assistance.

2. Course Development/Lesson Planning

- Advance work is necessary with field units scheduled to receive VTT training to determine unit training priorities and the characteristics of the soldiers scheduled to receive the training. This work should commence with several months' lead time in order to allow course developers to spread their effort across a reasonable period of planning time. Approximately .5 days of team effort were sufficient to plan for a high quality two-week language course. However, these planning days would probably have been more effective if spread across several months' planning time.

- The first time a given VTT course is offered, more time is required for planning and preparation than for corresponding classroom teaching. This preparation includes specification of the course goals and objectives, specification of effective instructional strategies detailed daily lesson planning, development of materials to be shipped ahead of time to the training site, identification or development of appropriate pre-taped media, development of graphics presentation materials, and planning for alternative learning activities during potential system outages.

- Careful planning is required to optimize the features available in the VTT system. A fast-paced, highly interactive course with a variety of
motivating instructional activities appears effective in minimizing the perceived distance between instructors and students.

- A team effort involving curriculum staff, an instructional design specialist, a technology specialist, an evaluation expert, and experienced teachers appears to result in an optimum CAS or VTT course design.

- The CAS lessons used in the pilot test were prototypes with limited content. Fuller lessons are required for operational courses in the future. All features of CAS, with the exception of the speaking lessons, appeared to be quite useful in the pilot test.

- CAS lessons should be carefully developed to capitalize upon the unique strengths of CAS, whether used in stand-alone form or in the context of local instruction or VTT. In cases where CAS is combined with VTT, the integration of VTT and CAS portions of the training should be carefully articulated and operationalized in order to maximize the effectiveness of the overall instructional system. CAS instruction should be provided close to the VTT classroom, if possible.

- Fatigue and eye-strain are factors that need to be addressed in planning instructional days via VTT and CAS. Interspersing CAS and VTT activities appears preferable to six hours of VTT followed by an hour of CAS instruction. Shorter instructional days or combining CAS and/or VTT with other local training activities might be considered.
3. Course Delivery

- Careful coordination and maintenance of good rapport with local training site staff is required. A partnership with local staff, to the point of "joint ownership" of the training, may facilitate project success and prevent the perception of a perceived threat of CAS and/or VTT to local jobs or resourcing.

- Highly skilled instructors, who also have good camera presence, optimize the chances for success of a VTT course. Outgoing, energetic, personable instructors who can develop good rapport, motivate students, and appropriately use humor are optimal.

- Systematic prior orientation and training to VTT should be provided to course developers, instructors, and local training site staff to maximize course quality and facilitate smooth operation.

- System reliability in the 95% or greater range and responsive troubleshooting capability are suggested for optimum VTT course delivery. Ultimately, system reliability should approach 100%.

- A team teaching approach to VTT courses appears to offer significant advantages over a single instructor.

- The assistance of skilled local training staff with CAS familiarity is required for the effective implementation of computer-based instructional activities.
4. Evaluation and Record Keeping

- Student progress should be systematically recorded and appropriate feedback provided. As VTT offerings increase, an automated student record system will be needed.

- A pre-post measure of student achievement, carefully tied to course objectives, should be developed for each course. For VTT courses, since much of the instruction may be aimed at general proficiency maintenance or improvement, the pre-post measure could be the performance profile generated as a component of a face-to-face oral interview conducted via the VTT. The pre-post administration of these tests can assist in determining the success of the course and identify general areas needing improvement. A standard course questionnaire to identify strengths and areas for course improvement is also desirable.

- Feedback mechanisms should be built into the VTT courses to allow for mid-course corrections. Early feedback from the students can allow for important mid-course improvements.

- An automated student record keeping capability should be built into future CAS courseware which can record progress on the CAS lessons. An expansion of the CAS concept could provide for broader student testing and recording of progress in both VTT and CAS portions of combined CAS/VTT courses.
5. Recording Lessons Learned

- Numerous lessons were learned from the pilot test courses. These are documented in several sections of this and other pilot test evaluation reports and address a full range of issues including technical, field coordination, pedagogy, course and lesson development, selection of students, student motivation, etc. These lessons should be reviewed for applicability to future courses.

- As the DLIFLC implements additional CAS and VTT courses the documentation of additional lessons learned is essential. These can both provide general guidance for future development and serve as input to the development of formal training procedures and operations guidelines.
Section V. SUMMARY AND CONCLUSIONS

This report presents the results of a series of pilot tests conducted by the Defense Language Institute (DLIFLC) during FY 91. The pilot tests investigated the potential use of Computer Assistance Study (CAS) and Video Teletraining (VTT) to address the language training needs of practicing military intelligence (MI) linguists. The training was developed and provided by the DLIFLC. The participants in the pilot tests were military linguists stationed at Fort Lewis, Washington, and Fort Ord, California, and members of the Washington Army National Guard (ARNG). Participating units included the 107th MI Bn, 201st MI Bde, 2/9 AVN Bn, 199th MI Bn, and the 341st ARNG MI Bn. Assistance was provided by staff from the I-Corps Language Training Facility at Fort Lewis, the 107th MI Bn at Fort Ord, and the 341st Washington National Guard MI Bn.

Three types of training technology were employed in the tests. These included CAS, VTT, and combined CAS/VTT. Languages addressed were Korean, German, Russian, and Japanese. The focus of the training varied somewhat depending upon the precise needs of the units involved, but generally included language refresher/enhancement training for MI linguists whose military occupation specialty (MOS) was voice interceptor or interrogator. In addition to the foreign language objectives of the training, military content and current events/cultural topics were included. In VTT courses addressing the MOS-related needs of interrogators, practice in interrogation skills was included.

A summary of the courses included in the pilot tests is as follows:

<table>
<thead>
<tr>
<th>Language</th>
<th>Unit</th>
<th>Start Date</th>
<th>End Date</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korean CAS</td>
<td>107th MI Bn</td>
<td>9/90</td>
<td>12/90</td>
<td>CAS - 5 lessons</td>
</tr>
<tr>
<td></td>
<td>201st MI Bde</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2/9 AVN Bn</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

97
Course development was undertaken by the appropriate schools and departments at the DLIFLC with assistance from relevant educational technology, curriculum, staff development, evaluation, distance education, and program coordination staff. Efforts were made to assure that the instruction was developed in accordance with accepted pedagogical principles, although proportionally more time was available for VTT course design and development than for CAS. Efforts were undertaken to coordinate the development of the courseware with the participating units to assure that the training met both the units' needs and the needs of the individual MI linguists participating in the courses. CAS development occurred during the period April-May and August-September, 1990. VTT course development typically occurred during the 2-3 weeks prior to course delivery, but was conducted by a larger team than was available for CAS development.

The technologies used in the tests were selected based upon their potential effectiveness for language instruction and on the basis of feasibility and cost. In the case of CAS, the Apple Macintosh SE computer was selected as the instructional platform. With the addition of MacRecorder and a Korean character font, the computer was able to deliver instruction using audio, graphics, and text. Lessons were developed using Hypercard. This both facilitated ease of development and provided an excellent
presentation format. CAS instruction was provided in the language training classrooms of the 107th MI Bn at Fort Ord and the 201st MI Bde at Fort Lewis, via six computers provided by the DLIFLC. VTT utilized compressed video technology using the Compression Labs' Rembrandt II and communications via Ku-band satellite links. VTT included fully interactive audio, video, and graphics. VTT instruction originated from the DLIFLC VTT Center at the Presidio of Monterey, California, and was received at the Foreign Language Training Facility, operated by the I-Corps Language Program and located at North Fort Lewis, Washington. The DLIFLC provided CAS and/or VTT site coordinator training to the participating language training staffs at Fort Ord and Fort Lewis to enable them to manage the equipment and training on site.

The evaluation of the pilot tests was conducted by the DLIFLC Research and Evaluation Division with assistance from the Defense Training and Performance Data Center in Orlando, Florida, and the Institute for Simulation and Training, University of Central Florida. Intensive evaluations (including evaluator site visits) were conducted for the Korean CAS, German VTT, and Korean CAS/VTT courses. Separate reports were developed to describe the results of these three tests. The DLIFLC also collected data for the Russian VTT and Japanese VTT courses and these results are included in this report as appropriate.

The project evaluation addressed a number of objectives. The objectives were divided into two areas: (1) objectives related to the technology and (2) objectives related to the instruction provided.

Objectives related to delivery technology included determining the following: appropriateness of the media used in the pilot tests; viability of the technology as a means for access to the target training; reliability of the equipment and communications; cost of providing the training; and acceptability of the delivery
approach to the training communities. Objectives related to instruction included determining the following: effectiveness of the training in meeting the established training objectives; effective instructional techniques in the context of the training systems; effectiveness of the training systems in facilitating and maintaining student motivation; relationship of the training to student variables; and the overall effectiveness of the training in supporting annual language training requirements of the participating units.

Evaluation data were obtained from a variety of sources. Sources included the course participants (students), site coordinators, and DLIFLC staff, including instructors, course developers, technical staff, and field services staff. Data collection instruments included the following: student background questionnaires; current language program description forms; VTT and CAS instruction logs; student questionnaires; student interview forms; site coordinator and unit training personnel interview forms; DLIFLC VTT teacher interview forms; DLIFLC VTT course description forms; and student achievement tests.

The evaluation results are presented in the body of this report and in the individual evaluation reports describing the Korean CAS, German VTT, and Korean CAS/VTT pilot tests. The results are summarized here to provide the reader an overview of the general results obtained in the set of five pilot tests (the three tests listed above plus the Russian VTT and Japanese VTT pilot tests).

**Student Achievement** - Each of the five courses, except for the Russian VTT course included pre-post testing of student achievement. In all cases where achievement gain was measured, students improved as a result of participating in the training.
Student Ratings and Comments - Students were favorably impressed with the forms of technology (CAS and VTT) used in the pilot tests. Students gave high ratings to the technical quality, utility, and motivational quality of the computer-assisted instruction and video teletraining technologies. They stated that the training rated well in comparison with other training technologies with which they were familiar and that the training was helpful in improving MOS-related skills. Students felt that the rate of learning and the quality of training exceeded that which was available through local language training programs. They stated that CAS strengths appeared to be individualization, ease of use, and flexibility of use. They felt that CAS best addressed reading and listening proficiency and specific language skills such as vocabulary, grammar, reading, and listening comprehension. Students felt that VTT strengths were in projecting the strengths of expert DLIFLC language instructors, allowing for complete interactivity, and in transmitting videotape, audiotape, and graphics presentations (e.g., authentic materials, word lists, photos, charts, etc.). They felt that VTT effectively addressed speaking, listening, and reading skills, and that it was especially effective in addressing speaking skills. They felt that both technologies assisted in learning military content and that VTT assisted with interrogation skills. Students offered a number of suggestions for improving the use of CAS and VTT in the future.

Site Coordinator Comments - Management and implementation of the project on-site was conducted in a highly competent and professional manner. Site coordinators generally felt that DLIFLC support in providing both CAS software and VTT instruction could improve the language skills of MI linguists. They felt that this type of support was a valuable addition to local language training programs. At sites where well established language programs exist, site personnel felt that the technologies could enhance and improve local offerings. At sites where local programs are less established, or where linguists in lower density languages
are not well served, site personnel stated that CAS and VTT could provide vehicles for primary, rather than supplementary, instruction. They praised "the quality of instruction received from the DLIFLC and the willingness of the DLIFLC to provide this type of assistance to local programs. The site coordinators felt that they and the DLIFLC staff experienced some coordination and technical problems in the early phases of the pilot tests, but that these problems were resolved as the tests progressed and could be avoided in the future. Significantly, Fort Lewis personnel are planning future participation in CAS and VTT projects and are using DLIFLC CAS templates to produce additional language training courseware in Chinese and Korean.

**DLIFLC Staff Comments** - The management, development, and implementation of the project was generally adequate. The DLIFLC did a competent job of dealing with the technical, instructional, and field coordination activities. VTT instructors praised the VTT system as a means to offer instruction at a distance. Although the technology was new to them and they experienced some growing pains in adjusting to the new medium, instructors felt that the versatility of the system offered an excellent means to provide distributed language training. They generally enjoyed the experience of using the medium. Instructors in the earlier VTT sessions experienced some frustration with VTT equipment outages, but this lessened as the reliability of the equipment improved in later courses in the pilot test.

**Technical Considerations** - CAS instruction, once the software was thoroughly debugged, had high reliability and was judged as easy to use and manage at the local level. The computer hardware had few problems and those that did occur were easily remedied. VTT required a higher level of technical sophistication to operate and maintain. Adequate site personnel training and local and network troubleshooting are needed to maintain VTT reliability at an acceptable level for effective training. As the
projects progressed, the VTT staff at all levels acquired the necessary expertise and VTT operated quite reliably. Methods of effective staff training and preparation were identified through the project. VTT courses must be thoroughly designed in advance. CAS development requires the participation of computer professionals, instructional designers, and subject-matter specialists. The resultant CAS and VTT courseware compared well with the quality of instruction provided by normal classroom instruction. CAS and VTT can be feasibly combined to provide enhanced training opportunities. However, care must be taken in the design process to identify the specific roles of each and design segments which are mutually enhancing across the two technical delivery systems.

A number of lessons were learned from the CAS and VTT pilot tests. These are documented in the body of this report and in the reports presenting the results of individual CAS and VTT pilot tests. In general, however, the pilot tests demonstrated the potential of the CAS and VTT technologies to provide outstanding resources for on-site language training for military linguists. The central role of the DLIFLC in developing and delivering the courseware to MI units via these technologies was amply demonstrated. The results provide support for expanded development of these technologies by the DLIFLC in the future.
Section VI. REFERENCES


Clifford, Ray. Memorandum dated 12 September, 1990 stressing the importance of evaluating the level of the FL interactions contained in the CAS courseware. (see also Clifford article in 1987 CALICO Journal on this topic).


Section VII. Appendices

A. CAS Lessons
B. VTT Lessons
C. Sample Evaluation Instruments
D. List of Acronyms
Appendix A - CAS Lessons
This program was developed by the Educational Technology Division of the Defense Language Institute, Foreign Language Center. It is intended for use primarily in support of training military personnel as part of the Defense Foreign Language Programs (resident and non-resident) of the U. S. Department of Defense.

Inquiries concerning the use of this program, including requests for copies as well as permission to duplicate and/or modify should be addressed to:

Commandant,
Defense Language Institute Foreign Language Center
Attn: Educational Technology Division
Presidio of Monterey, CA 93944-5006
This CAS courseware has been developed for the sustainment, maintenance and enhancement of what they have learned at DLI for the field soldiers.
STEP 1 The pictures give you an introduction to the lesson. Scan through the Authentic Text. This is only a pre-study exercise. Then take the scanning test. This is not an evaluation, just take it once in order to understand the content.

STEP 2 You can study text in the Controlled Level Paraphrase exercise. Read it, study the vocabulary in it, most importantly, listen to it, at least two times. When you are ready for the vocabulary test, go to the next step.

STEP 3 Vocabulary Study is a form of test; the passing score is 90%; therefore before you take the test, try to memorize all the vocab. items underlined in step 1 and step 2. If you don’t get a passing score, go back to STEP 2 and study again. You may try several times, however, do not go to STEP 4 until you get a passing score.

STEP 4 Grammar 1 and 2 consists of Explanations, Examples and Exercises. Read the first two parts and try the exercises; you must try at least 20 random generated sentences and record your voice using the microphone.
STEP 5  Conversation Exercise is designed to increase your speaking ability in Korean; follow the instructions step by step. Again you must record your voice using the microphone and compare with model answers.

STEP 6  When you complete all the steps from 1 to 5, you are ready for the Lesson Evaluation. The passing grade is 80%. If you don't get a passing grade, please go back to the previous steps and study again. The last card shows you your weak points. Even if you get a passing score, go back to any weak points and study again.

After completion of the lesson, you must go back to the Authentic Text and see if you understand it better.

SYMBOLS

To see the explanations, or the MODEL Answer.

Click this to replay what you have just heard from computer.

DOUBLE click this to start recording your voice.

Click this to replay your recorded voice.

10 seconds of recording time will be appeared at this area.

Click this to go back to where you started from.
## Time and number of questions

<table>
<thead>
<tr>
<th>UNITS</th>
<th>Required time</th>
<th>Number of questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authentic Text</td>
<td>10 min.</td>
<td>-</td>
</tr>
<tr>
<td>Scanning</td>
<td>10 min.</td>
<td>5</td>
</tr>
<tr>
<td>Controlled Level P. (Reading)</td>
<td>20 min.</td>
<td>-</td>
</tr>
<tr>
<td>Controlled Level P. (Listening)</td>
<td>20 min.</td>
<td>-</td>
</tr>
<tr>
<td>Vocabulary Study</td>
<td>30 min.</td>
<td>25</td>
</tr>
<tr>
<td>Grammar Study (Explanation)</td>
<td>10 min. x 2</td>
<td>-</td>
</tr>
<tr>
<td>Grammar Study (Exercise)</td>
<td>20 min. x 2</td>
<td>40</td>
</tr>
<tr>
<td>Conversation Exercise</td>
<td>60 min. x 2</td>
<td>20</td>
</tr>
<tr>
<td>Lesson Evaluation</td>
<td>30 min.</td>
<td>20</td>
</tr>
</tbody>
</table>

Click this to go back to the previous card.

Click this to go to the next card.

To see the English text.

To see the Korean text.
1. (Name the hard disk as) **Macintosh HD**

2. (Make a folder with the name of HyperCard)  
   **HyperCard**

3. (Make another folder DLL inside the HyperCard folder.)  
   **DLL** (Distance Learning Lab)

   ![Diagram]
   - **Should start here.**
   - **Put nine units inside.**
   - **Never delete first card.**
   - **This blank form is the MASTER.**
## Module 1

<table>
<thead>
<tr>
<th>Lesson</th>
<th>Topical Domains</th>
<th>Class hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Military 1, Korean position toward U.S.</td>
<td>4 hr.</td>
</tr>
<tr>
<td>2</td>
<td>Military 2, Training, Tactics</td>
<td>4 hr.</td>
</tr>
<tr>
<td>3</td>
<td>Weather, Broadcasts, forecasts</td>
<td>4 hr.</td>
</tr>
<tr>
<td>4</td>
<td>Travel, Transportation</td>
<td>4 hr.</td>
</tr>
<tr>
<td>5</td>
<td>Health, Medicine, Public Health</td>
<td>4 hr.</td>
</tr>
<tr>
<td>Appendix</td>
<td>Number drill, Hangul Refresher</td>
<td>6 hr.</td>
</tr>
</tbody>
</table>

### Authentic text

행복은 건강으로부터 출발한다. 돈이 많고 직위가 높아도 건강이 망가지면 쓸모가 없다. 90년대 우리나라 사람들의 평균 수명도 80세를 넘다 보고 있다. 그러나 평균 수명 80세를 거저 넘어지는 것이 아니다. 이를 위해서는 국민 한 사람 한 사람이 자신의 건강을 잘 관리하는 일이 무엇보다 중요하다. 염의 건강관리는 어떻게 해야 할까? 월별로 신경써야 할 건강캘린더를 만들여 본다.

1월 - 차가운 날씨는 심장병을 일으키기 쉬운 요소이므로 40-50대, 특히 여성보다 남성은 동맥경화성 심장병에 주의해야 한다. 남자 가운데도 비만증인 사람, 앉아서 생활하는 시간이 많은 사람이 심장병 발병률이 높다. 호흡곤란, 다리부종, 졸드, 가슴의 통증은 심장의 적
Conversation Exercise - 20

Topic domains related to:
- Weather
- Health

Conversation exercise - 1
Cue: catching a cold; throat; fever

Conversation exercise - 2
Cue: be getting better; however; still must be careful

Conversation exercise - 3
Cue: hospital; to get a routine check up

Conversation exercise - 4
Cue: so-so; weather; getting cold; must be more careful

Conversation exercise - 5
Cue: fell down; wasn't; twist

Conversation exercise - 6
Cue: have a stomachache; intend to go to hospital

Conversation exercise - 7
Cue: yes; food poisoning; student; to be absent
Appendix B - VTT Lessons
Daily schedule of instruction used by German VTT team

First day
8:30 Introduction of students & instructors, introduction of course and daily schedule, question & answer session with students “What Are Your Expectations”
9:15 Interrogation of LaVelle & reporting back to Hutschneider about LaVelle
9:30 Break
9:40 LC exercise with multiple choice questions & subsequent partner Q&A practice
10:10 Interrogation of Olson & partner feedback about Olson
10:30 Break
Down - Interference from Ft. Eustis
10:55 Video segment with T-F questions & translation exercise. (This segment was temporarily replaced by handouts in care package due to technical interruption)
11:30 Lunch
Down - truck ran over satellite cable in Oklahoma
1:40 Exercises on how to inquire about family data
2:20 LC exercise with multiple choice questions & Q&A partner session
2:50 Interrogation of Col. Fischer & Hutschneider
3:15 Feedback on interrogations and on first day

Second day
8:30 Students report on partner
8:45 Scola news segment on RAF & Stasi involvement with Q&A session
9:10 Exercises on how to inquire about a person’s education, with new vocab
9:30 Break
9:40 LC exercise on military training & comprehension check, then Q&A w/partner
10:10 Video segment “Bundeswehrhochschule” with T-F questions
Interrupted by technical problems and replaced by discussion on character traits
10:55 Second attempt of video segment “Bundeswehrhochschule” Successful!
11:30 Lunch
12:30 Geography lesson with German nap
Technical interruption - open mike with Ft. Eustis - students busy with partner
1:15 LC exercise on campus protests with multiple choice questions
1:35 Break
1:45 Students ask partner about education using questionnaire
2:00 Video segment “Computers in German Schools” with T-F questions
2:30 Break
2:40 Interrogation of mystery guest (Ingrid Tower)
3:15 Feedback on Tower & exchange of German jokes

Third day
Satellite down all morning
12:30 Exercises on how to inquire about political affiliations - with new vocab
1:15 LC on military personnel inquiries with new vocab & comprehension check
1:50 Break
2:00 Video segment “750 Years Berlin” with T-F questions & translation exercise
2:30 Interrogation of mystery guest (Ciitta Wray)
3:15 Feedback on Wray & HW assignment - describe a person
Fourth day
8:30 Scola news - NVA and Q&A session
9:00 HW feedback - students describe their assigned person
9:30 Break
9:45 Video segment “NATO” with T F questions & translation
10:30 Break
10:40 LC exercise “Women in the German Army” with multiple choice ex.
11:10 Grammar review exercises - word order
11:30 Lunch
12:30 Exercise on how to inquire about professions & work experience
1:10 LC exercise “German Embargo” with multiple choice & Q&A session
1:30 Break
1:40 Video segment “EC” with T F questions and translation exercise
2:30 Interrogation of mystery guest: (Martin Metzger)
3:15 Feedback & HW assignment

Fifth day
8:30 Short song & Scola news “Bundeswehr” with Q&A session
9:10 Reporting back about Metzger - students give details
9:20 LC exercise “Name This Job” with multiple choice & discussion of vocab
9:40 Break
9:50 Students ask for list of items to be sent - grammar modules & maps etc.
10:00 Video segment with T F questions and discussion of vocab
10:50 Break
11:00 Grammar review - verbs and prepositions
11:30 Lunch
12:30 Guessing game - “Who am I?“ students ask yes/no questions only
12:45 Continue with questionnaire about professions - how to ask
1:15 Break
1:25 LC exercise “Applying for a Job” with fill-in-the-blanks job application form
2:00 Video segment “Amateur Ham Radio Operators” with T F questions
2:30 Break
2:40 Interrogation of mystery guest: (Sabine Atwell as communist)
3:20 Feedback

Sixth day
8:30 Scola news & discussion
9:00 Introduction of questions about weather & terrain
9:15 Scola news weather report with Q&A session
9:45 Break
9:55 LC exercise - military text on weather & terrain - students report to partner
10:20 Students report on climate of their hometown area
10:40 Break
10:50 Video segment on German village in winter with T F questions
11:15 RC exercise on illegal transport of salmon by military planes
11:30 Lunch
12:30 Guessing game “Who am I?“ - students ask yes/no questions only
12:45 RC exercise “New Structure of German Army” with Q&A session
1:10 LC exercise about weather with multiple choice questions
1:30 Grammar review - verb infinitives & tenses
1:40 Break
1:50 Grammar review - wo & da compounds
2:20 Break
2:30 Interrogation of mystery guest (Ernst Honigmann)
3:15 Feedback of subjective impressions of guest
### Seventh day

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30</td>
<td>Down - Rembrandt crashed</td>
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<tr>
<td>9:00</td>
<td>SCOLA news on Rohwedder assassination with Q&amp;A session</td>
</tr>
<tr>
<td>9:30</td>
<td>Wechselspiel #31 information gap exercise with partner</td>
</tr>
<tr>
<td>10:00</td>
<td>Break</td>
</tr>
<tr>
<td>10:15</td>
<td>Video on Rohwedder assassination with discussion in German</td>
</tr>
<tr>
<td>11:15</td>
<td>Interview feedback - students describe Honigmann</td>
</tr>
<tr>
<td>11:30</td>
<td>Lunch</td>
</tr>
<tr>
<td>12:30</td>
<td>Guessing game “Who am I?” students ask yes/no questions only</td>
</tr>
<tr>
<td>12:40</td>
<td>Wechselspiel #52 information gap exercise with partner</td>
</tr>
<tr>
<td>1:25</td>
<td>Break</td>
</tr>
<tr>
<td>1:40</td>
<td>Interrogation of Mystery Guest (Susanne Piccari)</td>
</tr>
<tr>
<td>2:20</td>
<td>Grammar review on verb tenses</td>
</tr>
<tr>
<td>2:30</td>
<td>Col. Fischer discussion on German newspapers</td>
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<tr>
<td>3:10</td>
<td>Students give description of imagined person</td>
</tr>
<tr>
<td>3:25</td>
<td>HW assignment</td>
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</table>

### Eighth day

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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</thead>
<tbody>
<tr>
<td>8:30</td>
<td>SCOLA news and discussion on German Army</td>
</tr>
<tr>
<td>9:00</td>
<td>HW feedback</td>
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<tr>
<td>9:10</td>
<td>LC exercise on paramilitary activities and drug investigation</td>
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<tr>
<td>9:30</td>
<td>Break</td>
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<tr>
<td>9:40</td>
<td>Video on health clinics for women with T/F questions and discussion</td>
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<tr>
<td>10:30</td>
<td>Break</td>
</tr>
<tr>
<td>10:40</td>
<td>Exercise on how to inquire about health problems and medical history</td>
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<tr>
<td>11:10</td>
<td>Video on paraplegics with T/F questions and discussion</td>
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<td>11:30</td>
<td>Lunch</td>
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<tr>
<td>12:30</td>
<td>LC Steinbauer interview and QA session</td>
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<td>1:30</td>
<td>Break</td>
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<tr>
<td>1:40</td>
<td>LC on AIDS with multiple choice questions</td>
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<tr>
<td>2:10</td>
<td>RC exercise with German newspapers</td>
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<tr>
<td>2:30</td>
<td>Break</td>
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<tr>
<td>2:40</td>
<td>Interrogation of Mystery Guest (Sigrun Seidel-Petry)</td>
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<tr>
<td>3:20</td>
<td>HW assignment</td>
</tr>
</tbody>
</table>
Ninth day
8:30 SCOLA news on German job market with discussion
9:10 Wechselspiel #45 information gap exercise to review passive voice
9:30 Break
9:40 Video "Sports for Health" with T F questions and discussion
10:10 LC on climbing Mt. Everest with multiple choice and partner QA session
10:30 Break
10:40 Grammar review - modals and infinitives
11:10 RC text from Spiegel on Gulf War with discussion
11:20 Video segment with grammar lead-in on compounds
11:30 Lunch
12:30 Students brainstorm with partner on sports activities and report back
1:00 LC with multiple choice on sports and tourism
1:30 Grammar refresher on compounds
2:10 Students describe a person and ask questions using compounds
2:30 Break
2:40 Interrogation of Mystery Guest (Karl Krueger)
3:20 Technical problem - visual images scrambled - students cannot see us

Tenth day
Rembrandt down
9:45 Briefing with Neil Granoien
10:00 Mini OPI's with Sabine Atwell
11:00 Disguised "new" instructors do spoof mini lessons with rock video
11:30 Lunch
12:35 Feedback on HW assignment - modals and verbs
12:45 RC text "Peace is serious subject in German Army" with discussion
1:00 Interrogation of Mystery Guest: (Gunther Bode)
1:50 Break
2:00 LC exercises on chemical factory and POW interrogation with QA session
2:40 Video "Back to Germany" on emigration with T F questions and discussion
3:00 Exercise on additional questions to use while interrogating
3:20 Debriefing with Pat Boylan and farewell to students!
**KOREAN VTT - CURRICULUM LAYOUT**

(*2-WEK TRAINING*)

<table>
<thead>
<tr>
<th>DATE</th>
<th>INSTRUCTORS</th>
<th>TOPIC/LESSONS</th>
<th>SETTING/ACTIVITIES</th>
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<td><strong>MONDAY</strong></td>
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<td>29 APRIL 1991</td>
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<td>1. KO, HYUNG C.</td>
<td>Pre-test</td>
<td>CULTURAL REALIA</td>
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<tr>
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<td>2. LEE, KAP SOON</td>
<td>Personal Data</td>
<td>Role Play, Q &amp; A</td>
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<td>Current Events</td>
<td>Audio / Video tapes</td>
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<tr>
<td></td>
<td>P.M.</td>
<td>Weather/Terrain</td>
<td>LC / RC/ Speaking Reinforcement</td>
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<tr>
<td></td>
<td>1. SMITH, SUN</td>
<td>CAS - Homework Assignment</td>
<td>Student - generated activities</td>
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<tr>
<td></td>
<td>2. EEHN, JOHN</td>
<td></td>
<td>Informal Evaluation &amp; Feedback</td>
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<tr>
<td><strong>TUESDAY</strong></td>
<td>A.M.</td>
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<td>30 APRIL 1991</td>
<td>1. EEHN, JOHN</td>
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<td>2. LEE, KAP SOON</td>
<td>Current Events</td>
<td>Role Play, Q &amp; A</td>
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<td>Health &amp; Welfare</td>
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<td>P.M.</td>
<td>Medicine / Ecology</td>
<td>LC / RC/ Speaking Reinforcement</td>
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<tr>
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<td>1. KO, HYUNG C.</td>
<td>CAS - ILW. Assignment</td>
<td>Student - generated activities</td>
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<td>2. SMITH, SUN</td>
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<td>Informal Eval &amp; Feedback</td>
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<tr>
<td><strong>WEDNESDAY</strong></td>
<td>A.M.</td>
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<td>1 MAY 1991</td>
<td>1. EEHN, JOHN</td>
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<td>CULTURAL REALIA</td>
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<td>Role Play, Q &amp; A</td>
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<td></td>
<td>Sports / Leisure</td>
<td>Audio / Video tapes</td>
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<tr>
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<td>P.M.</td>
<td>Accidents / Natural Disasters</td>
<td>LC / RC/ Speaking Reinforcement</td>
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<td>Informal Eval &amp; Feedback</td>
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<td>Travel &amp; Entertainment</td>
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<td>Family System</td>
<td>LC / RC/ Speaking Reinforcement</td>
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<td>Student - generated activities</td>
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<td>Role Play, Q &amp; A</td>
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<td></td>
<td>Culture / Arts / History</td>
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<td>P.M.</td>
<td>Military Affairs</td>
<td>LC / RC/ Speaking Reinforcement</td>
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<td>Student - generated activities</td>
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<td>2. SMITH, SUN</td>
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<td>Informal Eval &amp; Feedback</td>
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# Korean VTT - Curriculum Layout

## Week II

### 6 - 10 May 1991

<table>
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<th>DATE</th>
<th>INSTRUCTORS</th>
<th>TOPIC / LESSONS</th>
<th>SETTING / ACTIVITIES</th>
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</thead>
</table>
| **MONDAY**   | A.M. 1. Lee, Kap Soon 2. John | - CAS Review  
- Current Events  
- Travel & Entertainment | - At travel agency, hotel, restaurant  
- souvenir shop  
- At shopping mall  
- At hospital, home, pharmacy  
- Informal Evaluation & Feedback |
| 6 May 1991   | P.M. 1. John 2. Lee          | - Health / Medicine  
- CAS - Homework Assignment | - Role Play, Q & A  
- Audio / Video tapes  
- LC / RC Speaking Reinforcement  
- Student - generated activities |
| **TUESDAY**  | A.M. 1. Smith, Sun 2. Soon   | - CAS Review  
- Current Events  
- Sports / Leisure | - At home / game site  
- On vacation / at home  
- Interest & Hobbies  
- Role Play, Q & A  
- Audio / Video tapes  
- LC / RC Speaking Reinforcement  
- Student - generated activities  
- Informal Eval & Feedback |
| 7 May 1991   | P.M. 1. John 2. Lee          | - Military Affairs  
- Interrogation  
- Briefing | - Level Check  
- Role Play, Q & A  
- Audio / Video tapes  
- LC / RC Speaking Reinforcement  
- Student - generated activities  
- Informal Eval & Feedback |
| **WEDNESDAY**| A.M. 1. Lee, Kap Soon 2. Sun | - Current Events  
- Accidents / Natural Disasters | - Visiting towns, cities, monuments  
- Korean Society  
- Customs and Beliefs  
- Festivities  
- Role Play, Q & A  
- Audio / Video tapes  
- LC / RC Speaking Reinforcement  
- Student - generated activities  
- Informal Eval & Feedback |
| 8 May 1991   | P.M. 1. John 2. Lee          | - Geography / Terrain | - Critique  
- Role Play, Q & A  
- Audio / Video tapes  
- LC / RC Speaking Reinforcement  
- Student - generated activities  
- Informal Eval & Feedback |
| **THURSDAY** | A.M. 1. John 2. Smith, Sun   | - Current Events  
- Culture / Society | - Level Check  
- Role Play, Q & A  
- Audio / Video tapes  
- LC / RC Speaking Reinforcement  
- Student - generated activities  
- Informal Eval & Feedback |
| 9 May 1991   | P.M. 1. C. hyung 2. Lee      | - Culture / Society | - Post-test  
- Course Evaluation |
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<th>DAY#</th>
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<th>2nd Period</th>
<th>3rd Period</th>
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<th>5th Period</th>
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<th>Homework</th>
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<td>1</td>
<td>22 Jun</td>
<td>(IN) Intro/ Orient.</td>
<td>(TE) Pre-Test (L) JAVTT018</td>
<td>(TE) Pre-Test (R) JAVTT019</td>
<td>(PE) Useful Exp. JAVTT012</td>
<td>(IN) NNH L1, L2 JAVTT017</td>
<td>(OP) NNH L1, L2 JAVTT017</td>
<td>Rev. useful Exp. Rev. NNH L1, L2 NNH Workbook</td>
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<td>2</td>
<td>23 Jun</td>
<td>(IN) L-3, L-4 NNH</td>
<td>(OP) NNH L3, L4 JAVTT017</td>
<td>(IN) NNH L5, L6 JAVTT017</td>
<td>(OP) NNH L5, L6 JAVTT017</td>
<td>(IN) NNH L7, L8 JAVTT017</td>
<td>(OP) NNH L7, L8 JAVTT017</td>
<td>Rev. NNH L3 - 8 NNH Workbook</td>
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<td>25 Jun</td>
<td>(PE) Picture Bingo</td>
<td>(PE) L-4 Auth. List. JAVTT006</td>
<td>(PE) DOB Bingo JAVTT002</td>
<td>(PE) L-5 Auth. List. JAVTT006</td>
<td>(PE) POR Bingo JAVTT003</td>
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<td>26 Jun</td>
<td>(PE) Picture Dict.</td>
<td>(PE) L-6 Auth. List. JAVTT006</td>
<td>(PE) L-7 Auth. List. JAVTT006</td>
<td>(PE) L-8 Auth. List. JAVTT006</td>
<td>(PE) Simple Q - I JAVTT008</td>
<td>Vocab. work for VTT005, 006, 007 and 008</td>
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<td>6</td>
<td>27 Jun</td>
<td>(PE) Simple Q - II</td>
<td>(PE) L-9 Auth. List. JAVTT006</td>
<td>(PE) L-10 Auth. List. JAVTT006</td>
<td>(PE) WHAT Exer. JAVTT013</td>
<td>(PE) WHEN Exer. JAVTT014</td>
<td>(PE) WHEN Exer. JAVTT015</td>
<td>Vocab. work for VTT009, 013, 014 and 015</td>
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<td>28 Jun</td>
<td>(PE) WHERE Ex.</td>
<td>(PE) Occup. Bingo JAVTT004</td>
<td>(PE) Family Tree JAVTT010</td>
<td>(PE) Family Tree JAVTT010</td>
<td>(PE) Family Tree JAVTT010</td>
<td>(PE) Family Tree JAVTT010</td>
<td>Vocab. work for VTT004, 010 and 016</td>
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<td>(PE) CI Int. (Walk) JAVTT011A</td>
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(OP - Oral Practice) (RE - Review) (PE - Practical Exercise) (TE - Test) (IN - Introduction)
### RUSSIAN VTT - DAILY SCHEDULE
**TUESDAY, MAY 28, 1991**

<table>
<thead>
<tr>
<th>TIME</th>
<th>TEACHER/BACK UP</th>
<th>SKILLS / ACTIVITY</th>
<th>MATERIALS</th>
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<tbody>
<tr>
<td>8:36</td>
<td>Ted Horn</td>
<td>Introduction</td>
<td>Pictures, Graphics</td>
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<tr>
<td>8:41</td>
<td>Randy / Kiril</td>
<td>Expectations</td>
<td></td>
</tr>
<tr>
<td>8:46 -</td>
<td>Tanya</td>
<td>Program description</td>
<td></td>
</tr>
<tr>
<td>9:30</td>
<td>Tanya / Masha / Naum</td>
<td>Listening (L), Speaking (S) Introduction / Interview / Checking for true Proficiency Levels of the students</td>
<td></td>
</tr>
<tr>
<td>9:40 -</td>
<td>Liuda</td>
<td>Cont. Introduction / Interview</td>
<td>Pictures, Graphics, Video</td>
</tr>
<tr>
<td>10:30</td>
<td>Masha / Tanya</td>
<td>L, S Russian Conventions / Greetings / Cultural Peculiarities</td>
<td></td>
</tr>
<tr>
<td>10:40 -</td>
<td>Tanya / Masha / Naum / Liuda</td>
<td>Topic Intro - &quot;FAMILY&quot;, Brainstorming, Description L, S Listening Comprehension, T/F, Mult /Choice Q / Answers; Exchange of factual info</td>
<td>Pictures, Graphics, Key Vocab Tapes from RBC</td>
</tr>
<tr>
<td>12:30 -</td>
<td>Liuda / Naum</td>
<td>Grammar Notes (optional) Reading Comprehension, T / F, M / C; Exchange of factual information</td>
<td>Contemporary authentic materials - magazines, newspapers, etc. Segments from RBC.</td>
</tr>
<tr>
<td>13:40 -</td>
<td>Guest Interview</td>
<td>Alla Vishepolskaya - DLI ,RU Instructor</td>
<td>Photographs, Personnal Papers</td>
</tr>
<tr>
<td>14:40 -</td>
<td>All four teachers - communicative activities, review, HW assignment</td>
<td>Conversational exchanges, role-play, communicative activities, exchange of thematic information, clarifications, review, HW assignment, recommendations. Program Review / Feedback</td>
<td>Pictures, graphics, short texts - based on authentic materials.</td>
</tr>
<tr>
<td>TIME</td>
<td>TEACHER / BACK UP</td>
<td>SKILLS / ACTIVITY</td>
<td>MATERIALS</td>
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</tr>
<tr>
<td>8:30 - 9:30</td>
<td>Masha / Tanya</td>
<td>News, Reporting on Guest Findings, Vocab Check L, S Note. No Connection till 10:10. Students work with R / C materials.</td>
<td>Handouts</td>
</tr>
<tr>
<td>9:40 - 10:30</td>
<td>Tanya / Masha</td>
<td>Intro of a new topic - &quot;EDUCATION &amp; PROFESSIONS&quot; L, guessing, brainstorming Listening Comprehension. Various activities - depends on students prof. levels</td>
<td>Graphics, pictures Tapes from RBC and authentic recordings</td>
</tr>
<tr>
<td>10:40 - 11:30</td>
<td>Masha / Tanya</td>
<td>Russian Conversation Formulas - Idioms Video - Professions L/C activities leading to Speaking and Interactive Communication</td>
<td>Pictures Video &quot;Contact&quot;</td>
</tr>
<tr>
<td>12:30 - 13:30</td>
<td>Liuda / Naum</td>
<td>Grammar - based on topical needs (optional) Reading Comprehension leading to Skill Integration, Skimming, Scanning, etc.</td>
<td>Handouts</td>
</tr>
<tr>
<td>13:40 - 14:30</td>
<td>Liuda / Naum</td>
<td>Guest Interview</td>
<td></td>
</tr>
<tr>
<td>14:40 - 15:30</td>
<td>Masha / Tanya</td>
<td>Conversational exchanges, role-play, communicative activities, exchange of thematic information, clarifications, review, HW assignment, recommendations. Program review, Feedback</td>
<td>Texts, graphics, pictures</td>
</tr>
<tr>
<td>TIME</td>
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<td>SKILLS / ACTIVITY</td>
<td>MATERIALS</td>
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<tr>
<td>8:30 - 9:30</td>
<td>Liuda / Naum</td>
<td>News, Reporting on Guest Findings, Vocab Check</td>
<td></td>
</tr>
<tr>
<td>9:40 - 10:30</td>
<td>Naum / Liuda</td>
<td>Topic Intro - &quot;GEOGRAPHY, CLIMATE, NATURAL DISASTERS&quot;</td>
<td>Pictures, Postcards, Maps</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lead In, Listening Comprehension</td>
<td>Tapes - topic based, short segments</td>
</tr>
<tr>
<td>10:40 - 11:30</td>
<td>Tanya / Masha</td>
<td>Conversational Formulas; Idioms</td>
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<td></td>
<td></td>
<td>Video - Natural Disasters</td>
<td>SCOLA - &quot;VREMJA&quot;</td>
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<tr>
<td>12:30 - 13:30</td>
<td>Masha works for 15 minutes on morning video.</td>
<td>Grammar Review - if needed; Topic dependent variable</td>
<td>Handouts, newspapers, magazines</td>
</tr>
<tr>
<td></td>
<td>Liuda / Naum</td>
<td></td>
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</tr>
<tr>
<td>13:40 - 14:30</td>
<td>Tanya / Masha</td>
<td>Guest Interview - Galia, DR1 Instructor</td>
<td>Pictures, Photos</td>
</tr>
<tr>
<td>14:40 - 15:30</td>
<td>Masha / Tanya</td>
<td>Communicative Activities, Simulated Comm. Situations, clarifications, review, HW assignment, recommendations.</td>
<td>pictures, maps, graphics</td>
</tr>
<tr>
<td></td>
<td>Kiril</td>
<td>Review, Feedback</td>
<td></td>
</tr>
</tbody>
</table>

Note. 11:10 loosing connection.

Masha works for 15 minutes on morning video.
## Russian VTT - Daily Schedule
### Friday, May 31, 1991

<table>
<thead>
<tr>
<th>Time</th>
<th>Teacher/Back Up</th>
<th>Skills/Activity</th>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 - 9:30</td>
<td>Tanya/Masha</td>
<td>News, Reporting on Guest Interview</td>
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<td>Findings</td>
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<td>L, S, Note Taking</td>
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<tr>
<td>9:40 - 10:30</td>
<td>Masha/Tanya</td>
<td>Topic Intro - &quot;TRAVEL&quot;</td>
<td>Video - &quot;Let's Get Acquainted&quot;</td>
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<td></td>
<td>Description of Soviet Cities</td>
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<td></td>
<td>Naum/Liuda</td>
<td>Video - Hotel Reservation</td>
<td>Audio tapes</td>
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<td></td>
<td></td>
<td>L/C, various activities</td>
<td></td>
</tr>
<tr>
<td>10:40 - 11:30</td>
<td>Tanya/Masha</td>
<td>Video - Soviet Cities</td>
<td>Video - &quot;Let's Get Acquainted&quot;</td>
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<tr>
<td></td>
<td></td>
<td>L, S, Pair Activities</td>
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</tr>
<tr>
<td>12:30 - 13:30</td>
<td>Liuda/Naum</td>
<td>Grammar - implicit, optional</td>
<td>Handouts, Graphics</td>
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<tr>
<td></td>
<td></td>
<td>Reading Comprehension - Gisting, Scanning</td>
<td>Newspapers, Magazines</td>
</tr>
<tr>
<td>13:40 - 14:30</td>
<td>Naum/Liuda</td>
<td>Guest Interview - Korotnikov (a Soviet writer)</td>
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</tr>
<tr>
<td>14:40 - 15:30</td>
<td>Masha/Tanya</td>
<td>Review, Skills Integration, Communication,</td>
<td>Diagrams, Graphics, Pictures, other</td>
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<tr>
<td></td>
<td></td>
<td>HW assignment, clarifications, etc.</td>
<td>authentic materials</td>
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<tr>
<td></td>
<td>Kiril</td>
<td>Program Review, Feedback</td>
<td></td>
</tr>
<tr>
<td>TIME</td>
<td>TEACHER / BACK UP</td>
<td>SKILLS / ACTIVITY</td>
<td>MATERIALS</td>
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<tr>
<td>8:30 - 9:30</td>
<td>Naum / Liuda</td>
<td>News Report; Reporting on Guest Interview; HW check, clarifications</td>
<td></td>
</tr>
<tr>
<td>9:40 - 10:30</td>
<td>Tanya / Masha</td>
<td>Topic Intro - &quot;HOBBIES&quot; Lead In, Brainstorming, Vocab. Generator Video - &quot;Hobby&quot;</td>
<td>Video - &quot;Let's Get Acquainted&quot;</td>
</tr>
<tr>
<td>10:40 - 11:30</td>
<td>Masha / Tanya</td>
<td>Conversation Formulas Simulated comm. - Role-Playing</td>
<td>Graphics, Audio Tapes - RBC &amp; Others</td>
</tr>
<tr>
<td>12:30 - 13:30</td>
<td>Liuda / Naum</td>
<td>Grammar Practice - if needed Reading Comprehension - Jisting, Scanning, T/F</td>
<td>Authentic Materials - topic related</td>
</tr>
<tr>
<td>13:40 - 14:30</td>
<td>Tanya / Masha</td>
<td>Guest Interview - Sasha Ortenberg</td>
<td></td>
</tr>
<tr>
<td>14:40 - 15:30</td>
<td>Masha / Tanya</td>
<td>Review, Clarifications, Skills Integration, Communication HW assignment</td>
<td>Clippings, Newspapers, Listening Segments, Graphics</td>
</tr>
<tr>
<td>TIME</td>
<td>TEACHER / BACK UP</td>
<td>SKILLS / ACTIVITY</td>
<td>MATERIALS</td>
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<tr>
<td>8:30 - 9:30</td>
<td>Masha / Tanya</td>
<td>News Report; Reporting on Guest Interview; HW check, clarifications</td>
<td></td>
</tr>
<tr>
<td>9:40 - 10:30</td>
<td>Tanya / Masha</td>
<td>Topic Intro - &quot;SPORT&quot; Lead In, Brainstorming, Vocab. Generator</td>
<td>Songs, Graphics</td>
</tr>
<tr>
<td></td>
<td>Naum / Liuda</td>
<td>L / C - Sport, Various activities</td>
<td>RBC audio Tapes</td>
</tr>
<tr>
<td>10:40 - 11:30</td>
<td>Tanya / Masha</td>
<td>L / C - continuation. Video materials; Various activities</td>
<td>SCOLA - &quot;VREMJA&quot;</td>
</tr>
<tr>
<td>12:30 - 13:30</td>
<td>Liuda / Naum</td>
<td>Grammar clarifications - grammar function which is topic related</td>
<td>Authentic materials - magazines, newspapers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>R / C - Sport, Various activities</td>
<td></td>
</tr>
<tr>
<td>13:40 - 14:30</td>
<td>Liuda / Naum</td>
<td>Guest Interview</td>
<td></td>
</tr>
<tr>
<td>14:40 - 15:30</td>
<td>Tanya / Masha</td>
<td>Review, Clarifications, Skills Integration, Communication HW assignment</td>
<td>Pictures, short L / C segments</td>
</tr>
<tr>
<td></td>
<td>Kiril</td>
<td>Program Review, Feedback</td>
<td></td>
</tr>
<tr>
<td>TIME</td>
<td>TEACHER / BACK UP</td>
<td>SKILLS / ACTIVITY</td>
<td>MATERIALS</td>
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<tr>
<td>8:30 - 9:30</td>
<td>Liuda / Naum</td>
<td>Speaking / Skills Integration Reporting on guest findings; News report</td>
<td></td>
</tr>
<tr>
<td>9:40 - 10:30</td>
<td>Masha / Tanya</td>
<td>New topic introduction - &quot;Health&quot; Brainstorming, Key Vocab generating, Clarifications about cultural peculiarities Naum / Liuda</td>
<td>Graphics, Pictures RBC Tapes</td>
</tr>
<tr>
<td>10:40 - 11:30</td>
<td>Masha / Tanya</td>
<td>Conversational Formulas Teachers - Role Playing Video segments - Health</td>
<td>&quot;VREMJA&quot; &quot;VZGLJAD&quot;</td>
</tr>
<tr>
<td>12:30 - 13:30</td>
<td>Liuda / Naum</td>
<td>Grammar Clarifications - if needed R / C - Health and Welfare; Various R / C activities leading to skills integration</td>
<td>Topic oriented authentic materials</td>
</tr>
<tr>
<td>13:40 - 14:30</td>
<td>Tanya / Masha</td>
<td>Guest Interview</td>
<td></td>
</tr>
<tr>
<td>14:40 - 15:30</td>
<td>Masha / Tanya</td>
<td>Personalized activities; Communicative activities; Review &amp; Clarifications</td>
<td>Graphics, Pictures - authentic</td>
</tr>
<tr>
<td>TIME</td>
<td>TEACHER / BACK UP</td>
<td>SKILLS / ACTIVITY</td>
<td>MATERIALS</td>
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</tr>
<tr>
<td>8:30 -</td>
<td>Tanya / Masha</td>
<td>Students’ reporting on guest findings and news reports</td>
<td></td>
</tr>
<tr>
<td>9:30</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>9:40 -</td>
<td>Masha / Tanya</td>
<td>Intro of a new topic - Military Service</td>
<td>Songs, graphics, tapes</td>
</tr>
<tr>
<td>10:30</td>
<td></td>
<td>Vocab Generator, Brainstorming, Checking students’ level regarding the particular</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Naum / Liuda</td>
<td>topic</td>
<td>RBC tapes</td>
</tr>
<tr>
<td>L / C -</td>
<td></td>
<td>various activities</td>
<td></td>
</tr>
<tr>
<td>10:40 -</td>
<td>Tanya / Masha</td>
<td>Popular sayings about the Soviet Army, Jokes</td>
<td>Tapes</td>
</tr>
<tr>
<td>11:30</td>
<td></td>
<td>Short Video segments</td>
<td>“VREMJA”</td>
</tr>
<tr>
<td>12:30 -</td>
<td>Liuda / Naum</td>
<td>Topic related grammar clarifications - if needed</td>
<td>Magazines, newspapers</td>
</tr>
<tr>
<td>13:30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13:40 -</td>
<td>Liuda / Naum</td>
<td>Questions, Note taking - Guest Interview</td>
<td></td>
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<tr>
<td>14:30</td>
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<tr>
<td>14:40 -</td>
<td>Tanya / Masha</td>
<td>Review; Skills Integration; Communications skills</td>
<td>Video - “VREMJA”</td>
</tr>
<tr>
<td>15:30</td>
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<tr>
<td>TIME</td>
<td>TEACHER / BACK UP</td>
<td>SKILLS / ACTIVITY</td>
<td>MATERIALS</td>
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<tr>
<td>8:30 - 9:30</td>
<td>Naum / Liuda</td>
<td>News report, Reporting on guest findings, HW check</td>
<td>Personal letters, Pictures, New vocab</td>
</tr>
<tr>
<td></td>
<td>Tanya / Masha</td>
<td>Introduction of new topic - Area Studies</td>
<td>brainstorming</td>
</tr>
<tr>
<td>9:40 - 10:30</td>
<td>Masha / Tanya</td>
<td>Conversational formulas</td>
<td>“VREMJA”, postcards, graphics</td>
</tr>
<tr>
<td></td>
<td>Naum / Liuda</td>
<td>L/C - various L/C activities leading to skills integration</td>
<td>RBC tapes</td>
</tr>
<tr>
<td>10:40 - 11:30</td>
<td>Tanya / Masha</td>
<td>Video on Area Studies - short segments, comprehension check, speaking</td>
<td>“CONTACT”</td>
</tr>
<tr>
<td>13:40 - 14:30</td>
<td>Masha / Tanya</td>
<td>Guest Interview</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Victor Ortenberg - a HS student</td>
<td></td>
</tr>
<tr>
<td>14:40 - 15:30</td>
<td>Tanya / Masha</td>
<td>Review</td>
<td>pictures, graphics, documents</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Communicative activities - role play, Q/A, descriptions, predictions, etc.</td>
<td></td>
</tr>
</tbody>
</table>
# Russian VTT - Daily Schedule

**Friday, June 7, 1991**

<table>
<thead>
<tr>
<th>TIME</th>
<th>TEACHER / BACK UP</th>
<th>SKILLS / ACTIVITY</th>
<th>MATERIALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 - 9:30</td>
<td>Masha / Tanya</td>
<td>News Report&lt;br&gt;Reporting on guest interview findings&lt;br&gt;Review - Topics: Personal Data</td>
<td>Pictures, graphics</td>
</tr>
<tr>
<td></td>
<td><strong>Note. This is a day for topics review, enrichment and final clarifications</strong></td>
<td></td>
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</tr>
<tr>
<td>9:40 - 10:30</td>
<td>Masha / Tanya</td>
<td>Video “Women in the Soviet Union” discussions, clarifications</td>
<td>“CONTACT”</td>
</tr>
<tr>
<td>10:40 - 11:30</td>
<td>Masha / Tanya</td>
<td>“Education”&lt;br&gt;“Health”&lt;br&gt;Review and discussions on these two topics</td>
<td>Pictures, authentic graphics and texts</td>
</tr>
<tr>
<td>12:30 - 13:30</td>
<td>Masha / Tanya</td>
<td>“Military Service”&lt;br&gt;Review, additional factual information, discussions&lt;br&gt;“Geography / Climate”&lt;br&gt;Review, clarifications</td>
<td>Pictures, maps, graphics</td>
</tr>
<tr>
<td>13:40 - 14:30</td>
<td>Masha / Tanya</td>
<td>Guest Interview&lt;br&gt;Galina Veksler - DLI RU teacher, song writer, guitar player</td>
<td></td>
</tr>
<tr>
<td>14:40 - 15:30</td>
<td>Masha / Tanya</td>
<td>Various video materials - topic based&lt;br&gt;Final Review &amp; Feedback</td>
<td>END</td>
</tr>
</tbody>
</table>

**END**
Appendix C - Sample Evaluation Instruments
Site Form A: Baseline Data

Date__________________ Person Completing Form ____________________________

For each participant in the video teletraining (VTT) pilot test please enter the following data. Use additional pages, if necessary.

<table>
<thead>
<tr>
<th>Name/Rank</th>
<th>PMOS</th>
<th>Unit</th>
<th>Last DLPT</th>
<th>Completed DLIFLC Basic Korean Course?</th>
<th>Experience as Linguist # Years</th>
<th>Active Reserve</th>
</tr>
</thead>
<tbody>
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</table>
Site Form D: Baseline Data - Current Language Program

Unit ___________________________ Site Coordinator ___________________________
Date ___________________________ Person Completing Form ___________________________

Provide the following information about the language training program available to Korean linguists in your unit.

1. Local program of instruction.
   a. Name of Language Training Manager ___________________________ Telephone # ________
   b. Name of Contractor Providing Training ___________________________ Telephone # ________
   c. Names of Korean language instructors ___________________________ ___________________________
   d. Qualifications of instructors: __________________________________________

   e. How many hours of Korean language instruction are provided each year? _________ hours
   f. On the average how many of the unit's Korean linguists participate in the instruction each year? Number _________
   g. For those Korean linguists who do participate in this instruction how many (average) hours of instruction do they receive each year? _________ hours
   h. Where is the instruction provided? Place __________________________________________
   i. Are all levels of instruction provided (e.g., 0+ to 1, 1+ to 2, 2+ to 3)?
      Yes/No _______ Explain__________________________________________________________
j. What materials are available for Korean language instruction? Please list major items below.

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

k. Other options may exist for language training for your Korean linguists (e.g., programs at local colleges, immersion training at BYU or other locations). List below those other language training opportunities in which your Korean linguists participate or are planning to participate.

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

2. Instructional technology available in the classroom for Korean language instruction.

<table>
<thead>
<tr>
<th></th>
<th>Number available</th>
<th>Number used in instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Audio tape players/recorders</td>
<td>____</td>
<td>____</td>
</tr>
<tr>
<td>b. Video tape players</td>
<td>____</td>
<td>____</td>
</tr>
<tr>
<td>c. Computers</td>
<td>____</td>
<td>____</td>
</tr>
<tr>
<td>d. Video disc players</td>
<td>____</td>
<td>____</td>
</tr>
<tr>
<td>e. Satellite dish</td>
<td>____</td>
<td>____</td>
</tr>
<tr>
<td>f. Other, specify</td>
<td>____</td>
<td>____</td>
</tr>
</tbody>
</table>
Site Form C: Student Background Questionnaire

Date __________________________ PMOS __________________

Name/Rank ______________________ Unit __________________

1. Did you attend the DLIFLC? Yes __________ No ________
   If so, Did you graduate? ________ Year? ________

Language(s) studied? __________________________

What were your Korean DLPT scores upon completing the program at the DLIFLC?
   ______ Listening
   ______ Reading
   ______ Speaking

2. What was the date of your last Korean DLPT test in Korean? ________

3. What scores did you receive on that test?
   ______ Listening
   ______ Reading
   ______ Speaking

4. If you feel your proficiency level has changed since your last DLPT test, what do you feel your current proficiency level is?
   a. Unchanged
   b. Changed (specify below)
      ______ Listening
      ______ Reading
      ______ Speaking

5. What specific skills do you need to address in your overall language training? List in order of priority.
   1. __________________________
   2. __________________________
   3. __________________________
   4. __________________________
   5. __________________________
6. In view of your answer to question 5 above, what specific progress do you hope to make in the two-week CAS/VTT Korean course? 

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

7. What level of priority do you personally place upon improving your Korean language skills? (check one) 

____ Very high priority 

____ High priority 

____ Some priority 

____ Little priority 

____ No priority 

Please explain _____________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

8. How many hours of Korean language training have you received in the past year? ______ 

Providers(s): ____________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

9. How much prior experience have you had in using computers? 

____ A lot 

____ Some 

____ A little 

____ Practically none 

10. Have you previously participated in instruction through: 

a) Computers: Yes _____ No _____

b) Television: Yes _____ No _____
Site Form D: VTT Instruction Log

Date ____________________________

Person Completing Form ____________________________

Students in Attendance

Topics Covered

-------------------

Trouble Report: Check all problems that occurred.

Video from DLI _______ None (no picture) _______ Some Problems _______ Poor Quality

Audio from DLI _______ None (No audio) _______ Some Problems _______ Poor Quality

Video to DLI _______ None (No picture) _______ Some Problems _______ Poor Quality

Audio to DLI _______ None (No audio) _______ Some Problems _______ Poor Quality

How were problems resolved?

VTT Instructor(s)

Quality Instructional Rating
(Insert one for each item)
Low 1 2 3 4 5 Medium High

Presentation Quality _______

Student enthusiasm (motivation) _______

Quality of Interaction with DLI teacher _______

Instructor's use of graphics/charts _______

Relevancy of presentation _______

Wise use of available time _______

Instructional Comments:

Trouble Report Comments: ____________________________

_________________________________________________________________________

_________________________________________________________________________
Site Form D: VTT Instruction Log

Date ______________________

Person Completing Form ____________________________

Students in Attendance

Topics Covered

Quality Instructional Rating
(Insert one for each item)
Low 2 Medium 4 High 5

Trouble Report: Check all problems that occurred.
Video from DLI ____________ None (no picture) Presenta- tion Quality ______
Some Problems
Poor Quality

Student enthusiasm (motivation) ______

Audio from DLI ____________ None (No audio)
Some Problems
Quality of Interaction with DLI teacher ______
Poor Quality

Instructor's use of graphics/charts ______

Video to DLI ____________ None (No picture)
Some Problems
Relevancy of presentation ______
Poor Quality

Wise use of available time ______

Audio to DLI ____________ None (No audio)
Some Problems
Instructional Comments:
Poor Quality

How were problems resolved?

Trouble Report Comments:

VTT Instructor(s)
Site Form E: Student Computer Instruction Log

Please use this form to record each day's participation in the Computer Assisted Study Project.

<table>
<thead>
<tr>
<th>Date</th>
<th>Lesson Number</th>
<th>Time Started</th>
<th>Time Completed</th>
<th>Lesson Pretest Score (when taken)</th>
<th>Lesson Posttest Scores (when taken)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
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<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td></td>
</tr>
</tbody>
</table>
Site Form F: Computer Assisted Study/Video Teletraining (CAS/VTT) Student Questionnaire

Name/Rank ________________________ Unit ______________________

Date ______________________

Please indicate how much you agree or disagree with these statements about the Computer Assisted Study/Video Teletraining (CAS/VTT). Use the following codes:

1. Strongly Agree
2. Agree
3. Undecided
4. Disagree
5. Strongly Disagree

____ 1. The CAS/VTT training will help me perform my job better.
____ 2. The CAS/VTT training makes me more proficient in my MOS.
____ 3. The CAS/VTT training ranks high compared to other Army training I have received.
____ 4. The VTT equipment and course materials were easy to use.
____ 5. The CAS equipment and course materials were easy to use.

Please answer the following as indicated (check one answer for each item).

6. How much of what you learned via CAS/VTT could be applied on the job?
   ____ Almost all of what I learned
   ____ Most of what I learned
   ____ Some of what I learned
   ____ Little of what I learned
   ____ None of what I learned

7. Compared with other training equipment you have used (for example computers, slide projectors, video cassettes, Besseler Cue/See Projectors); rate the reliability of the equipment for VTT.
   ____ Much better than other training equipment
   ____ Better than other training equipment
   ____ About the same as other training equipment
   ____ Worse than other training equipment
   ____ Much worse than other training equipment
8. In a similar manner, please rate the reliability of the computer equipment used for the CAS portions of the course.
   - Much better than other computer equipment
   - Better than other computer equipment
   - About the same as other computer equipment
   - Worse than other computer equipment
   - Much Worse than other computer equipment

9. Would you like to use the CAS/VTT for other language related training?
   - Would very much like to use it
   - Would like to use it
   - Undecided
   - Would not like to use it
   - Would very much not like to use it

10. How would you advise a friend who had a choice between a course using CAS/VTT and a course that covered the same material, without CAS and VTT?
    - Try hard to get into the CAS/VTT course
    - Request the CAS/VTT course if convenient
    - Neither request, nor avoid the CAS/VTT course
    - Avoid the CAS/VTT, if possible
    - Avoid the CAS/VTT at any cost

11. How much time did you spend preparing for and taking the CAS/VTT training compared with other Korean linguists who took the course?
    - Much more time than the others
    - More time than the others
    - About the same time as the others
    - Less time than the others
    - Much less time than the others

12. Relative to your individual proficiency in Korean, how difficult was the required language proficiency level of the VTT lessons?
    - Very difficult
    - Somewhat difficult
    - About right
    - Somewhat easy
    - Very easy

13. How difficult was the Korean language proficiency required for the CAS lessons?
    - Very difficult
    - Somewhat difficult
    - About right
    - Somewhat easy
    - Very easy
14. In comparison to available language-related training by contract instructors, what was the quality of the training provided by CAS/VTT?
   _____ Much better
   _____ Better
   _____ About the same
   _____ Worse
   _____ Much worse

15. In comparison to available language-related training by contract instructors, how fast were you able to learn the required skills by CAS/VTT?
   _____ Much faster
   _____ Somewhat faster
   _____ About the same
   _____ Somewhat slower
   _____ Much slower

16. In comparison to other language-related training you have experienced, how effectively did the CAS/VTT classes hold your attention.
   _____ Much better
   _____ Somewhat better
   _____ About the same
   _____ Somewhat worse
   _____ Much worse

The following questions call for a yes or no answer and allow you to provide a short explanation or comment.

17. After your initial familiarization with the VTT classroom, were you comfortable with the format of the class sessions?
   Yes _____ No _____
   Comment: __________________________________________________________

18. After your initial familiarization with the CAS instruction, were you comfortable with the computer lessons?
   Yes _____ No _____
   Comment: __________________________________________________________

19. Did you feel that you and the other students were provided a sufficient opportunity to interact with the VTT instructor(s) from DLIFLC?
   Yes _____ No _____
   Comment: __________________________________________________________
20. Were the DLIFLC VTT teachers competent and well-prepared for the class sessions? Yes ____ No ____
Comment: ____________________________

21. Did the DLIFLC VTT teachers make proper use of charts, maps, or other visual aids in the presentations? Yes ____ No ____
Comment: ____________________________

22. Did the DLIFLC VTT teachers provide accurate and useful responses to your questions? Yes ____ No ____
Comment: ____________________________

23. Did the DLIFLC VTT teachers make good use of the interactive capabilities of the two-way television used in the VTT? Yes ____ No ____
Comment: ____________________________

24. Were the print support materials provided for VTT sessions adequate and of high quality? Yes ____ No ____
Comment: ____________________________

25. Was your team leader/site facilitator able to operate and troubleshoot the equipment necessary for the VTT? Yes ____ No ____
Comment: ____________________________

26. Approximately what percentage of the VTT classes were you able to attend: ____%
Comment: ____________________________

27. Were you hampered or distracted by the type of video used in the VTT (compressed video)? Yes ____ No ____
Comment: ____________________________

28. Did technical problems with the audio or video used in the VTT, substantially hamper or detract from its effectiveness? Yes ____ No ____
Comment: ____________________________
29. Did you receive adequate training in the use of computer equipment for the computer assisted study lessons?  
Yes _____  No _____
Comment: ____________________________________________

30. Did you experience any problems with the computer equipment or software when taking the computer assisted study lessons?  Yes _____  No _____
Comment: ____________________________________________

31. Did you feel that the content of the computer assisted study lessons appropriately supported what you were to learn in the overall CAS/VTT course?  Yes _____  No _____
Comment: ____________________________________________

32. Did you find that the material covered in the computer assisted study was appropriate to your needs and proficiency level?  Yes _____  No _____
Comment: ____________________________________________

33. Was the computer equipment available and operational when you were scheduled to use it?  Yes_____  No_____  
Comment: ____________________________________________

34. Was there a knowledgeable person available at the computer learning center to assist you with any technical difficulties that occurred during the CAS training?  
Yes _____  No _____
Comment: ____________________________________________

C-14
The following questions address your overall impression of the CAS/VTT.

35. What did you like about the CAS/VTT? List in order of importance, starting with the most important.
1. __________________________________________
2. __________________________________________
3. __________________________________________
4. __________________________________________
5. __________________________________________

36. What did you not like about the CAS/VTT? List in order of importance, starting with the most important.
1. __________________________________________
2. __________________________________________
3. __________________________________________
4. __________________________________________
5. __________________________________________

37. When language related training is provided in the future, which method of training would you prefer? (Rank from 1= highest to 7= lowest)
   a) On-base instruction from a local instructor
   b) TDY to another location to obtain the training
   c) Computer-based instruction
   d) Video Teletraining (VTT) from the Defense Language Institute (no computer portion)
   e) Videoteletraining supplemented by Computer Assisted Study (CAS/VTT)
   f) Self-study package using print materials/ audio tapes
   g) Mobile Training Team from DLIFLC
Site Form G: Site Coordinator Interview Form

Person Interviewed ___________________________ Date __________________

Unit ___________________________ Interviewer __________________

1. Did the CAS/VTT meet the specific training needs of Korean linguists in your unit(s)? Please explain.______________________________________________________________

2. How much improvement in the targeted skills did you observe in your linguists as a result of the training? _________________________________________________________________

3. Do you feel that you were provided adequate training and documentation by the DLIFLC to manage this sort of training? How would you improve this training and documentation in the future? _________________________________________________________________

4. a) What specific problems did you encounter in using the computer and VTT hardware during the training? _________________________________________________________________

b) How were these problems resolved? _________________________________________________________________

c) How could these problems be avoided in the future? _________________________________________________________________

5. What specific problems did you encounter in the local management of the project? How could these problems be avoided in the future? _________________________________________________________________

6. What specific problems did you encounter in coordinating the CAS/VTT training with the DLIFLC? How could these problems be avoided in the future? _________________________________________________________________

C-16
7. How would you rate the efforts of the DLIFLC in each of the following aspects of the project? (use 1= highest, 5= lowest)
   ___ a. Incorporating your specific training priorities.
   ___ b. Course design
   ___ c. Course delivery (instructional approach and execution)
   ___ d. Technical aspects (equipment, communications)
   ___ e. On-going support during the project (from DLIFLC)
   ___ f. Responsiveness to trouble shooting requests.
   ___ g. Availability of alternative materials/activities to be used in case of equipment failure.

8. How did the students like the CAS/VTT training in comparison to other alternatives available to them? 

9. What do you like most about this form of training? 

10. What do you like least about this form of training? 

11. Would you like to expend the use of CAS/VTT training in the future? If so, how? 

12. How could this type of training best be used to complement your existing language training program? 

13. Could this type of instruction, if it were more available, replace a portion of your existing training program? If yes, please specify. 

14. If this type of training were more available would you expend unit funds for any of the following?
   1. VTT equipment
   2. Computers
   3. Communications costs
   4. Lesson development
   5. Lesson teaching
   6. Computer Software
   7. Other
15. Which of your training needs do you feel are best facilitated by the following types of training?
   a) Self study
   b) On-base classroom instruction
   c) Computer assisted study
   d) Video teletraining
   e) TDY to program at another site
   f) Mobile Training Team (MTT) from the DLIFLC
   g) Other

16. Compared to courses with VTT or CAS by itself, what special advantages/disadvantages do you see with the combined CAS/VTT approach to language training?
Site Form H: Student Interview Form

Name/Rank __________________________ Date __________
Unit __________________________ Interviewer __________________________

1. Were the goals and objectives of the CAS and VTT lessons made clear to you?

2. Was the lesson content appropriate to your needs (CAS and VTT)?

3. How were you helped by the CAS/VTT training?

4. Did you attend all of the VTT lessons? If not, how many did you miss? Why?

5. Did you encounter any problems in fully participating in the VTT lessons?

6. Do you feel that video teletraining is valid, despite the fact that the teacher is not physically on-site?

7. Would you like to participate in additional videoteletraining?

8. For what specific aspects of language training do you feel that VTT is best suited?

9. Do you feel that you were provided an adequate opportunity to interact with the VTT teacher? Please comment.

10. Which of the CAS lessons did you complete?

11. Did you experience technical problems with the CAS equipment or software? Please explain.
12. How were you helped by the CAS training? ____________________________

_______________________________________________________________

13. Would you like to participate in additional CAS language training? ____________________________

_______________________________________________________________

14. For what specific aspects of language training do you feel that CAS is best suited? ____________________________

_______________________________________________________________

15. Do you feel that the combination of CAS and VTT was superior to one of these types of training by itself? Why or why not? ____________________________

_______________________________________________________________

16. Please provide any additional comments which you feel may assist in improving the quality of this type of language training in the future. ____________________________

_______________________________________________________________

_______________________________________________________________

C-20
Form I: DLIFLC CAS/VTT Teacher Interview

Teacher Interviewed ___________________________ Date ___________

Interview ___________________________

1. Considering the media available to you with the VTT system (two-way video and graphics), how difficult was it to provide language training of similar quality to that which you could provide on-site at DLIFLC? Please comment on advantages and disadvantages of the media included with the VTT.

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

2. Given the VTT equipment capabilities, how effective was the language training in meeting the objectives established for the two-week training session?

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

3. Given the VTT capabilities and the particular learning strategies chosen for the training, how well were you able to encourage and maintain student motivation to learn the targeted language skills?

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

4. Of the specific teaching/instructional strategies selected for the VTT course, which were particularly successful? Why?

1. _______________________________________________________________________

2. _______________________________________________________________________

3. _______________________________________________________________________

4. _______________________________________________________________________

5. _______________________________________________________________________

C-21
5. Which were not successful? Why?
   1. 
   2. 
   3. 
   4. 
   5. 

6. Given your experience with the VTT, which new strategies would you suggest to increase the effectiveness of a course such as the one you taught?
   1. 
   2. 
   3. 
   4. 
   5. 

7a. What specific types of training were provided to you at the DLIFLC to prepare you as a VTT teacher? 
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

b. What type of additional training would have been desirable to better prepare you as a VTT teacher? 
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

8a. How many work days were you allotted to prepare for the VTT Korean course? 
   ____________________________________________________________

b. What were you able to accomplish during the preparation period? 
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
c. Was the time allotted for preparation adequate?
   _____ Yes _____ No

   If not, how many days were needed? _____

9. How did student variables such as proficiency level, motivation, and aptitude affect their individual and collective abilities to benefit from the VTT course? Were there problems for some students in mastering the course objectives? ______________________________________________________
   ______________________________________________________

10. Was the level of technical support in the DLIFLC VTT facility sufficient to meet your needs? Cite any specific problems in this regard. ______________________________________________________
    ______________________________________________________

11. In comparison to classroom teaching, how difficult was it to present instruction and manage interaction in the "VTT Classroom?" Cite specific problems and solutions. ______________________________________________________
    ______________________________________________________

12. Overall, what do you feel are the specific strengths of VTT language instruction (i.e., what do you like about it)?

    ______________________________________________________
13. Overall, what do you feel are the specific weaknesses of VTT language instruction (i.e., what do you not like about it)?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

14. If you were to advise a friend who is going to teach a VTT language course later this year, what specific advice would you offer?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

15. What specific advice can you offer the DLIFLC in improving future VTT language courses?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

16. How familiar were you with the content of the Computer Assisted Study (CAS) portions of the course?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

17. In your lesson plans and VTT teaching how were you able to integrate what the students were learning from the CAS lessons?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
18. How effective were the CAS lessons in increasing the overall amount of student learning in the Korean course?

________________________________________________________________________

19. How would you suggest that the DLIFLC best design and use CAS to augment the VTT lessons in future language courses?

________________________________________________________________________

________________________________________________________________________

20. Please comment on the desirability and effectiveness of integrating computer lessons with future VTT language instruction as opposed to using VTT by itself?

________________________________________________________________________

________________________________________________________________________
DLIFLC Video Teletraining
Course Description Form

Date: _______________ School: _____________________

Course Title: ________________________________

Dates Offered: ________________________________

1. Course Coordinator: ________________________

2. Members of Course Design Team: ________________
   (Indicate DLI organization for each)

3. Course Instructor(s): ________________________

4. What language proficiency levels are addressed by the course (circle all that apply):
   Reading  0+  1  1+  2  2+  3
   Listening 0+  1  1+  2  2+  3
   Speaking 0+  1  1+  2  2+  3

5. What is the overall goal of the course? Please specify in terms of what the learners should accomplish in the course, not what is to be presented?
   ________________________________
   ________________________________
   ________________________________

6. What are the major objectives of the course? Again, please specify in terms of what the learners are to master (e.g., be able to use a particular set of verb forms in orally describing common, everyday situations, be able to accurately translate a given set of military terms presented in context, etc.)
   1) ________________________________
   2) ________________________________
   3) ________________________________
7. What major presentation/learning strategies are to be used in the VTT sessions to accomplish the above objectives? Specify (by number) the objectives (from the list in item 6) each strategy addresses.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Objective(s) Addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
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<td>9)</td>
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</tbody>
</table>

8. Describe below the typical daily schedule for the VTT instruction and other activities where appropriate (e.g., reading, group work, worksheets, computer activities, etc.).

a) Hour 1
b) Hour 2
c) Hour 3
d) Hour 4
e) Hour 5
f) Hour 6
g) Hour 7
9. List below the major learning materials (e.g., books, study guides, etc.) used in the course.

_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________

10. List below the types of materials (e.g., videotapes, maps, charts, vocab lists, etc.) to be transmitted via the VTT overhead projector or videotape player during the VTT sessions. Indicate for each which objectives (from the list in item 6) are addressed.

<table>
<thead>
<tr>
<th>Description</th>
<th>Objective(s)</th>
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<tbody>
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11. What specific techniques do you plan to use in the course to enhance the amount of teacher/student or student/student interaction in the course?

1. 
2. 
3. 
4. 
5. 
6. 

12. What steps were taken to ensure that the course will meet the specific needs of the unit/students to be served?
13. In general, what techniques did you use to maximize the effectiveness of the course given the specific media available with the VTT.

Please attach a copy of the course syllabus and/or lesson plans developed for this VTT course.
Pre-Post Achievement Test

Part I

You will hear ten sentences in Korean voiced only once. Select the best translation of each sentence by circling the letter A, B, C, or D. (50%)

1. A. Have you been to Korea?
   B. When did you come to Korea?
   C. When will you come to Korea?
   D. Did you come to Korea yesterday?

2. A. Some Army officers left for America yesterday?
   B. There were some Army officers yesterday?
   C. I met some Army officers yesterday?
   D. I don't know how many Army officers there were yesterday?

3. A. I bought a briefcase at the market last weekend?
   B. I bought a briefcase at the department store last weekend?
   C. I bought a hat at the market last weekend?
   D. I bought a hat at the dept. store last weekend?

4. A. It rains here only in Summer?
   B. It rains here only in Autumn?
   C. It is foggy here only in Summer?
   D. It is foggy here only in Autumn?

5. A. Many people travel by train these days.
   B. Not many people travel by train these days.
   C. Many people stand in line to buy the train tickets nowadays.
   D. Not many people stand in line to buy the train tickets nowadays.

6. A. When my younger brother was promoted to Corporal, I entered the service.
   B. When I was discharged from the service, my younger brother got promoted to be Corporal.
   C. When I was promoted to Corporal, my younger brother entered the service.
   D. When my younger brother was discharged from the service, I was promoted to be Corporal.
7. A. The baby was given two pills every 3 hrs for three days.
B. The baby was given three pills every 2 hrs for two days.
C. I fed the baby two pills every 3 hrs for two days.
D. I fed the baby three pills every 2 hrs for three days.

8. A. I went there by airplane and stayed there for 2 nights and 3 days.
B. I went there by express bus and stayed there for 3 nights and 4 days.
C. I went there by airplane and stayed for 3 nights and 4 days.
D. I went there by express bus and stayed there for 2 nights and 3 days.

9. A. He has two older brothers, a younger brother, and a younger sister.
B. He has an older brother, a younger brother, and a younger sister.
C. He has two older brothers, two younger brothers and a younger sister.
D. He has an older brother, a younger brother, an two younger sisters.

10. A. Because it is foggy, the airplane can not land.
B. Because it was foggy, the airplane could not land.
C. Because it is foggy, the airplane can not take off.
D. Because it was foggy, the airplane could not take off.
Part II

You will hear ten dialogues in Korean voiced twice. After listening to each dialogue, write your answers to each question in English. (50%)

11. When did Choe get married?

12. What is SFC Lee's job now?

13. How do you address a married Korean lady?

14. Why is Korea called a Peninsula, according to this dialogue?

15. What supposedly has made PFC Choe to be prepared for rain today?

16. What are the symptoms of a cold, according to this dialogue?

17. What kinds of damages have been caused by the earthquake?

18. What did the person buy at the store?

19. Why do people go to Kukilkwan, although it is generally considered not a particularly good place?
   1.  
   2.  

20. What is the person looking for?

END OF TEST
Appendix D - List of Acronyms
## Appendix D
### List of Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARNG</td>
<td>Army National Guard</td>
</tr>
<tr>
<td>ATSC</td>
<td>U.S. Army Training Support Center</td>
</tr>
<tr>
<td>AVN</td>
<td>Aviation</td>
</tr>
<tr>
<td>Bde</td>
<td>Brigade</td>
</tr>
<tr>
<td>Bn</td>
<td>Battalion</td>
</tr>
<tr>
<td>BYU</td>
<td>Brigham Young University</td>
</tr>
<tr>
<td>CAI</td>
<td>Computer-Assisted Instruction</td>
</tr>
<tr>
<td>CALICO</td>
<td>Computer-Assisted Language Learning and Instruction Consortium</td>
</tr>
<tr>
<td>CALL</td>
<td>Computer-Assisted Language Learning</td>
</tr>
<tr>
<td>CALLIS</td>
<td>Computer-Assisted Language Learning Instruction System</td>
</tr>
<tr>
<td>CAS</td>
<td>Computer-Assisted Study</td>
</tr>
<tr>
<td>CDT</td>
<td>Computer Display Tube</td>
</tr>
<tr>
<td>CLI</td>
<td>Compression Labs, Inc.</td>
</tr>
<tr>
<td>CONUS</td>
<td>Continental United States</td>
</tr>
<tr>
<td>DCTN</td>
<td>Defense Communications Teleconferencing Network</td>
</tr>
<tr>
<td>DLIFLC</td>
<td>Defense Language Institute, Foreign Language Center</td>
</tr>
<tr>
<td>DLPT</td>
<td>Defense Language Proficiency Test</td>
</tr>
<tr>
<td>EIDS</td>
<td>Electronic Information Delivery System developed by Matrox, Inc.</td>
</tr>
<tr>
<td>ETNA</td>
<td>Educational Technology Needs Assessment</td>
</tr>
<tr>
<td>FLAMRIC</td>
<td>Foreign Language Maintenance/Refresher and Improvement Course (DLIFLC)</td>
</tr>
<tr>
<td>FORSCOM</td>
<td>Forces Command, U.S. Army</td>
</tr>
<tr>
<td>GM</td>
<td>German</td>
</tr>
<tr>
<td>I-CORPS</td>
<td>1st Corps, U.S. Army</td>
</tr>
<tr>
<td>ICW</td>
<td>Interactive Courseware</td>
</tr>
<tr>
<td>ILR</td>
<td>(Federal) Interagency Language Roundtable</td>
</tr>
<tr>
<td>IST</td>
<td>Institute for Simulation and Training</td>
</tr>
<tr>
<td>JA</td>
<td>Japanese</td>
</tr>
<tr>
<td>KP</td>
<td>Korean</td>
</tr>
<tr>
<td>Ku-Band</td>
<td>12-14 gigahertz microwave bandwidth used for satellite communications</td>
</tr>
</tbody>
</table>
LC - Listening comprehension
LCT - Less commonly taught
LTP - Language Training Program
Mb - Megabyte (million bytes of computer memory)
MI - Military Intelligence
MOS - Military Occupational Specialty
MTT - Mobile Training Team
OSU - Oklahoma State University
PDPEC - Professional Development Program Extension Course (DLIFLC)
POC - Point of Contact
RC - Reading Comprehension
RC - Reserve Component
RU - Russian
SCOLA - Satellite Communications for Learning Associated (Creighton University)
TLSI - Technical Language Service, Inc.
TNET - Teletraining Network (U.S. Army)
TPDC - Defense Training and Performance Data Center
TRADOC - Training and Doctrine Command, U.S. Army
UCF - University of Central Florida
USAREUR - U.S. Army Europe
VTT - Video Teletraining