

1-1-1990

A General Model For Enhancing Chinese Language Instruction Through Technology: Defense Language Institute Foreign Language Center Consultant Team Report

University of Central Florida Institute for Simulation and Training

Find similar works at: <https://stars.library.ucf.edu/istlibrary>
University of Central Florida Libraries <http://library.ucf.edu>

This Research Report is brought to you for free and open access by the Digital Collections at STARS. It has been accepted for inclusion in Institute for Simulation and Training by an authorized administrator of STARS. For more information, please contact STARS@ucf.edu.

Recommended Citation

University of Central Florida Institute for Simulation and Training, "A General Model For Enhancing Chinese Language Instruction Through Technology: Defense Language Institute Foreign Language Center Consultant Team Report" (1990). *Institute for Simulation and Training*. 3.
<https://stars.library.ucf.edu/istlibrary/3>

INSTITUTE FOR SIMULATION AND TRAINING

Contract 64-05-510
September 1990

A General Model for Enhancing Chinese Language Instruction Through Technology

Defense Language Institute
Foreign Language Center
Consultant Team Report



IST

Institute for Simulation and Training
12424 Research Parkway, Suite 300
Orlando FL 32826

University of Central Florida
Division of Sponsored Research

Q 37

Contract 64-05-510
September 1990

A General Model for Enhancing Chinese Language Instruction Through Technology

Defense Language Institute
Foreign Language Center
Consultant Team Report

Institute for Simulation and Training
12424 Research Parkway, Suite 300
Orlando FL 32826

University of Central Florida
Division of Sponsored Research

TABLE OF CONTENTS

	Page
1. BACKGROUND	1
2. OVERVIEW	2
3. DEVELOPING A GENERIC MODEL: KEY ASSUMPTIONS OF THE ACADEMIC TEAM	3
4. CLASSROOM AND NON-CLASSROOM STUDY: THE THREE SKILLS	6
5. THE GENERIC SKILL MODEL	8
6. THE ORIENTATION AND READING COMPONENTS	12
7. RAMIFICATIONS OF TECHNOLOGY-BASED INSTRUCTION	15
8. IMPLICATIONS/RECOMMENDATIONS	
A. THE NATIONAL CASE	16
B. DEFENSE LANGUAGE INSTITUTE FOREIGN LANGUAGE CENTER	17
APPENDIX 1	18
APPENDIX 2	20

A GENERAL MODEL FOR ENHANCING CHINESE LANGUAGE INSTRUCTION
THROUGH TECHNOLOGY
DEFENSE LANGUAGE INSTITUTE
FOREIGN LANGUAGE CENTER
Consultant Team Report

September, 1990

1. BACKGROUND

A Chinese Language Consultant Team met at the Defense Language Institute Foreign Language Center (DLIFLC), Monterey, California, September 25-28, 1990. The meeting was a follow-on effort based upon the recommendations of a Chinese Language Task Force that met at the DLIFLC, June 11-15, 1990. The June Task Force was a sub-part of the Educational Technology Needs Assessment (ETNA) Project. The ETNA Project is a DLIFLC initiative to improve the use of technology to teach foreign languages in the DLIFLC's resident and nonresident programs. The DLIFLC is assisted in this effort by the Department of Defense Training Performance and Data Center (TPDC). TPDC, in turn, contracted with the Institute for Simulation and Training (IST), University of Central Florida, Orlando, Florida. At the June meeting IST was assisted by a consultant task force consisting of experts in Chinese language instruction. Members of the task force were: Dr. A. Ronald Walton, Mr. Kim Smith and Major Michael E. Everson (Ph.D.).

At the June meeting the Chinese Language Task Force focused on the use of computer technology to improve the teaching of Chinese at the DLIFLC. The Task Force proposed a comprehensive computer based instruction (CBI) initiative in Chinese for DLIFLC that exceeded the resources available at the DLIFLC. The products developed through such an initiative would be useful to the broader military, government, and civilian Chinese language teaching community. The Task Force recommended that DLIFLC consider playing a centerpiece role for a collective effort in a more national context regarding Chinese CBI. It was felt that such a collective effort could result in obtaining the necessary human and dollar resources to implement the proposed plan.

DLIFLC agreed in principle with the Task Force's recommendation and a Chinese Language Consultant Team met at DLIFLC, September 25-28, 1990 to further develop the concepts presented at the June meeting. The team members were: Dr. A. Ronald Walton, Mr. Kim Smith, Major Michael E. Everson, Dr. Galal Walker, Dr. Ted Tao-Chung Yao and Dr. Clara Yu. The full list of participants and participant affiliations is included as Appendix 1. On-site activities of the team are listed in Appendix 2.

The September meeting resulted in specific recommendations for government and civilian academic units: 1) establish a Chinese core

curriculum, 2) establish an umbrella group to collaborate on future project activities, and 3) coordinate curriculum design and technology with participants in the National Council of Organizations of Less Commonly Taught Languages. For DLIFLC, the group recommended the institute: 1) focus on learning versus teaching, 2) restructure the day, 3) implement computer assisted study (CAS) tutoring, and 4) make Chinese the prototype case for systematically applying technology to language instruction at DLIFLC and assign sufficient manpower and computer resources to make it happen.

2. OVERVIEW

There is a growing awareness that new technologies may be able to facilitate more effective approaches for the teaching and learning of Chinese. Three years ago, a group of academic Chinese specialists formed the Chinese Curriculum Consortium (CCC) to tackle, at a national level, the improvement of curriculum design in Chinese language instruction in the U.S. and to bring new technologies to bear as an inherent part of Chinese curriculum design.

Chinese is only one of over 150 Less Commonly Taught Languages (LCTLs) taught in academic institutions in the U.S. Beginning in 1986, the teachers organizations of the LCTLs formed first an annual conference and finally a national council with the goal of strengthening the teaching and learning of LCTLs generally. This group, the National Council of Organizations of Less Commonly Taught Languages (hereafter, the National Council) has established as one of its primary areas of activity the improvement of curriculum design in all LCTLs and especially the uses of new technologies in curriculum design.

At the same time the DLIFLC has been expanding the role of technology in teaching many LCTLs and has become especially interested in using technology in the teaching of Chinese, such that the Chinese initiative is now considered a prototype project for other DLIFLC language programs.

The visiting academic team sees in these various developments the opportunity for a National Chinese Language Technology Initiative, and perhaps even a National LCTL Technology Initiative, with the academic community represented by the new National Council (including the Chinese Curriculum Consortium) and the government sector represented by DLIFLC.

This academic-government cooperative approach would pool the common interests of both the academic and the government community in curriculum design issues generally, but particularly with regard to the uses of technology in teaching and learning LCTLs.

3. DEVELOPING A GENERIC MODEL: KEY ASSUMPTIONS OF THE ACADEMIC TEAM

- Generic: the model is designed for all instructional environments, academic or government.
- Goals: the goals of instruction do not change with the intervention of technology. Essentially the Academic Team sees the Proficiency Guidelines as supplying the goals, though there are some differences between academic and government programs.
- Curriculum Design: it is not the role of technology intervention to change the content of instruction or invent new content but rather to improve the teaching and learning of the content established by a given program, either academic or government.
- Skill-Based: the model is based on a division of learning into (1) conversation (speaking and interactive listening), (2) non-interactive listening (radio, speeches, etc.). (3) reading and (4) writing (of less interest to government programs, but important in many academic programs; writing will not be discussed in this report).

Within each skill we recognize four broad levels of instruction: (1) orientation, (2) elementary, (3) intermediate and (4) advanced. These levels are not directly tied to the proficiency levels, but rather to levels that we assume are found in the curriculum of any instructional setting. The levels reflect increasing complexity of language features and the learning task. The academic team is aware that skills are intertwined in complex ways; the model does provide some hypotheses on skill-mix.

- Learner Centered: the model is designed with the assumption that technology-based instruction is directed to the individual learner.
- Declarative (FACT) and Procedural (ACT) Knowledge: the model assumes that second language learning by adults involves at least two types of knowledge: (1) FACT knowledge is knowledge about the language: rules, conventions, explanations, etc. (2) ACT knowledge refers to the performance of the language. We see classrooms and teachers as playing the central role in ACT as it relates to conversational ability and the computer playing a growing role in the learning of FACT, generally. In the model, FACT knowledge is either taught with instructional materials and media, tied to computer-based work, or is taught totally on computer.

The CMI module will include topics topics still at

FACT work, such as grammatical explanations, cultural information, word usage, sociolinguistic conventions, generally follows three stages: (1) presentation of the facts in English, (2) check-out of the facts in English (e.g., through multiple-choice fill-in-blank items) and (3) application check-out, a check of conceptual understanding of the facts when applied to samples of the target language.

Not only does the model remove FACT from the classroom, but the instructional time devoted to FACT work is purposely limited: the emphasis should be on ACT.

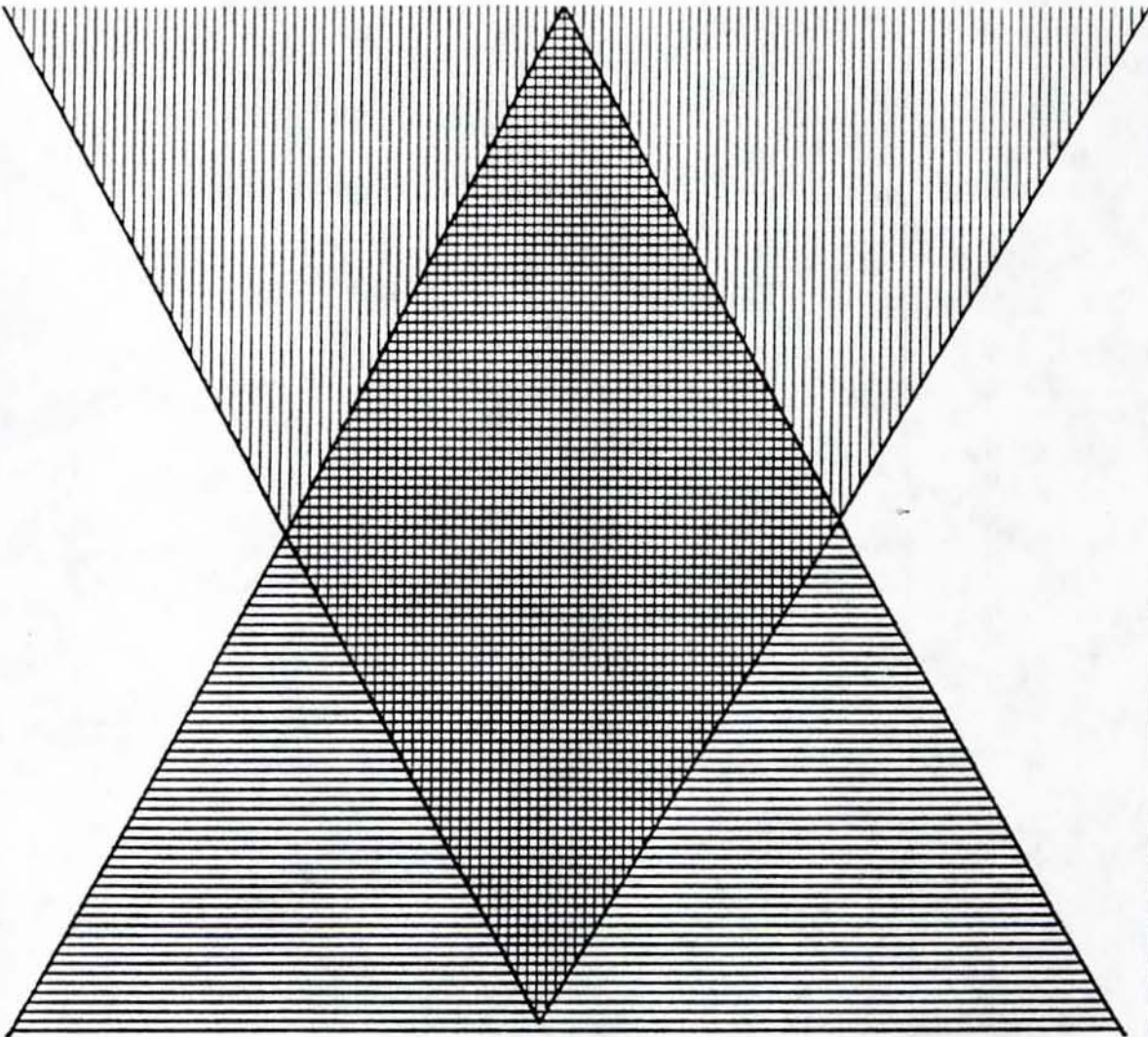
- Learning Model Instruction (LMI) and Acquisition Model Instruction (AMI):

LMI is focused on the mastery of discrete language features: sound system, vocabulary, grammatical structure, discourse structure, elements of social interaction, and cultural conventions. The goal is product; with some emphasis on process. LMI addresses the types of content and features typically found in pedagogically designed instructional materials.

AMI: AMI is focused more on process and strategy than product. The learner works with authentic language and/or culturally appropriate scenarios and problem-solving.

For each skill the two models are intertwined from the beginning of instruction with initial emphasis on LMI phasing into increasing emphasis on AMI. See the next page for a representation of the model. Note that at lower levels of instruction, LMI is present whereas at higher level of instruction AMI predominates but LMI is still present. Thus, the model recognizes that realia can be introduced early on but that pedagogical treatment is still required even at higher levels of instruction. (This model was developed by Professor Galal Walker of Ohio State University).

Acquisition Model Instruction



Learning Model Instruction

4. CLASSROOM AND NON-CLASSROOM STUDY: THE THREE SKILLS

For each skill, the model attempts to distinguish, regardless of instructional setting, which learning activities are best studied outside the classroom and which are best suited for classroom instruction. The approach to using technology in each skill area is suggested below.

A. Non-interactive Listening

1. Non-classroom

The model is based on the assumption that most work on listening is best performed outside the classroom.

We suggest that the current practice of group audio-lab work in the DLIFLC Chinese program be replaced by work at individual computer-based work-stations with multi-media capability.

For work in non-interactive listening, the role of the computer is to provide opportunities for instant feedback on comprehension. The computer guides the learner through listening passages by layers of increasingly specific queries. In addition, the computer can provide for replay and focus on specific segments. For some listening work, scripts can be provided at certain stages within the listening task for identification of lexicon.

A main focus of the listening component on computer is FACT descriptions of the schema that underlie a given genre (weather forecasts, international news items, speeches) followed by ACT practice in identifying key schema elements in actual listening passages.

2. Classroom

Classroom work on non-interactive listening would be limited to occasional check-outs of skill ability and understanding of genre schema. For this skill, classroom work is occasional.

B. Reading

1. Non-Classroom

The majority of work on building reading skills, according to the model, occurs outside the classroom, using either print instructional materials or such materials used in conjunction with computer-based work.

Computer-based work focuses on such items as:

- Introduction of vocabulary
- Vocabulary practice
- Introduction of grammatical structures
- Structure practice
- The reading of texts under time pressure
- Queries of increasing specificity to ascertain and guide comprehension
- Frequent check-outs on the mastery of reading components
- A computer-guided approach to the reading task

2. Classroom

The classroom plays a smaller role in the learning process but is utilized for check-out of previously studied material, for feedback, and for discussion, in Chinese (not English) of material already read and already prepared for classroom discussion. Activities such as reading aloud, read-and-translate, dictation and the like would not play a role in the classroom and the goals of such activities (not the activities themselves) would have already been addressed in computer-based instruction.

C. Conversation (Speaking and Listening)

1. Non-Classroom

Non-classroom work on acquiring conversational skills, according to the model, would be undertaken with limited use of print text materials and heavy use of audio (or video) material and computer-based instruction.

For computer-based instruction:

- Dialogue work: best done with video versions of all conversational exchanges using a video-disk platform.
- Grammatical and usage notes: presentation, fact check-out, and fact application, all done on computer.
- Vocabulary introduction and practice: additional listening work done with screens used to check listening acquisition: maps, diagrams, pictures, etc.
- The presentation, in English, of interactional and transactional schema common to frequently encountered situations: ordering a meal, transportation, price negotiation.

In general, the computer would present the "core" elements of conversations for introduction and practice: grammatical explanation, vocabulary drill and practice, structural drill

and practice, and explanations of schema. All work on a lesson beyond the core would be undertaken using audio (or video) work.

2. Classroom

Under this model, classroom time within any instructional setting would be devoted heavily to the building of conversational skills. Emphasis would be on performance, problem-solving of real-life communicative tasks, scenarios, etc. per the performance standards outlined in the speaking and listening proficiency guidelines.

5. THE GENERIC SKILL MODEL

The term "generic" here refers to a model that applies to any formal instructional context. That is, the model is not confined to either government language training or academic training but rather could include both these contexts and other contexts as well, such as high school programs and formal study-abroad programs that start from the beginning of instruction.

The model is based on a careful distinction between skills, not just because testing and testing guidelines are based on skill-specific tasks, but because the learning of conversation, reading, and non-interactive listening skills require the brain to perform different psychophysical processes, related, yet skill-specific.

The following chart on page 9 gives a breakdown of a skill-based curriculum. Starting at the top of the table, a broad distinction is made between interpersonal communication, labeled here as 'interactive' and communication that is not directly interpersonal, labeled here as "monitoring". The first phase, beginning at the bottom of the Chart (Cell 1), is orientation to the learning process and the language. At this stage, a clean division into the three skills of conversation, reading, and listening is not of primary concern. There is a great deal of interplay among the skill components. For example, learning the sound system requires both listening and speaking and skill-development stage (for instance, in Chinese, character stroke order and character components are the primary focus of instruction, not reading per se).

After the orientation stage (Cell 1), the learner begins work on the various skills coming up the columns in the chart. Numbers have been assigned to the various cells for illustrative purposes only: no instructional order is implied by the numbers of each cell.

Generic Skill-based Model for Integrating Technology into the Chinese Language Learning Environment

Interactive		Monitoring	
Spoken Development	Spoken Application	Written	Listening
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="writing-mode: vertical-rl; text-orientation: upright; text-align: center;"> 3 Artefacts </div> <div style="writing-mode: vertical-rl; text-orientation: upright; text-align: center;"> 2 A r t e f a c t s S c r i p t s </div> </div>	6 Use-feature based tasks	9 Reading AMI	12 Genre listening AMI
	5 Language-feature based tasks		8 Reading LMI
	4 Realia-based scenarios and problem-solving	7 Literacy model	10 Literacy model
1			

First Phase

(Orientation Modules)

Conversation skills are broken down into a Development component and a Spoken Application component. At the lower stage of spoken development (Cell 2) the emphasis is on prepared scripts (for example, pedagogically constructed dialogues and exchanges) and exposure to real-world artefacts such as illustrative fragments of authentic movies, television dialogues, and other examples of interpersonal communication. At this stage, all scripts and authentic artefacts are carefully controlled as regards input in line with Learning Model Instruction (LMI). At the more advance stage (Cell 3) only authentic artefacts are used as the source for input; pedagogically constructed or controlled input begins to give way to authentic sources of input.

Spoken application is concerned with what the learner is expected to do with the input that has been provided through the Spoken Development component. At the lowest level (Cell 4), the learner is expected to convert input into intake and perform tasks requiring output that can be judged for accuracy and especially cultural appropriateness. Scenarios and problem solving tasks are based on realistic communication situations which are heavily contextualized. At the next level up (Cell 5), the learner is focused on extracting language features (lexicon, structures, discourse features, pragmatic features) from increasingly authentic input and then on incorporating these features into the learner's growing interlanguage or approximate language. By the top level (Cell 6), the learner is well into Acquisition Model Instruction (AMI) where the negotiation of meaning is primary and where strategies are used to circumlocate gaps in language-feature knowledge.

Note that the space in the table devoted to conversational skill development takes up a larger share of the table than does the reading and non-interactive listening components. What the table reflects is that while most of the work on reading and non-interactive listening is directed to the individual learner without heavy reliance on teacher interaction, the work in the conversation component is a complex interplay between non-classroom work and teacher interaction. The Team envisages that more teacher interaction will eventually be devoted to the development of interpersonal communication, an area where teachers play a crucial role and where technology is quite limited in its contribution. Thus, the teaching of conversation skills requires a richer and more precise approach than at present. The division between Spoken Development and Spoken Application is meant to give more definition to the mastery of conversation skills. However, the model does NOT imply that more LEARNER TIME be devoted to conversation, only that the learning of conversational ability be approached more effectively.

Under Monitoring, "Written" refers to mastery of the written medium for purposes of reading (not to "writing"). Cell 7, the Literacy Model, means that the learner learns only to read what he or she has already mastered in the conversation component. By Cell 8, the learner is reading realistic written material, but with

heavy pedagogical control as implied by LMI instruction whereas by Cell 9, the learner is working with authentic texts as is characteristic of AMI.

With regard to non-interactive listening, Cell 10 refers to listening input that is closely aligned with input that is already familiar from work in conversational development and application. Emphasis here is on the expansion of short-term memory capacity and the automaticity of aural processing. The emphasis on manipulation of input here is to present longer input sequences than are found in interactive conversation. Thus, the most likely sort of input is listening to longer conversational exchanges and realistic monologues.

The focus of non-interactive listening in Cell 11 is on the mastery of discourse schema specific to a particular genre. For example, different types of signal traffic will vary in discourse form and there are explicit discourse structures for weather forecasts, news broadcasts, public announcements of train or plane departures and so forth, all the way to formal speeches. In line with the LMI model, the focus in Cell 11 is on features of discourse and input is pedagogically controlled. By contrast, Cell 12 is concerned, as is characteristic of AMI, with the negotiation of meaning using authentic input sources not pedagogically controlled; however, because subject-matter knowledge and context constraints are still quite important in non-interactive listening, even at this stage, all input is presented within explicitly defined genres.

The Team concentrated, in the short time available, on fleshing out some facets only of the orientation component, Cell 1 and the reading track, Cells 7,8, and 9. Other cells will be fleshed out in subsequent meetings.

In the following section, the goals of each cell are briefly described as is how the skill and phase under consideration would make use of technology-based instruction. Regarding the latter, in the June report of the Chinese Technology Task Force, details were presented on the hardware platforms for development and for instructional delivery (generally Macintosh PCs with hypercard or IBM PCs with Windows 3.0 and Toolbox). As a brief overview, the level of sophistication is rather simple: "dumb tutoring: for drill and practice. There is no attempt to consider intelligent tutoring in this development program. The types of screens, and menus, the use of digitized sound, and so forth, will resemble much of what is currently being used by language specialists in other languages working with the Macintosh and Hypercard. What will differ is the presence of a well-defined pedagogical plan that drives the form of drill and practice, the options on screens, and the like.

For LMI work in general, the learner will not be given great latitude on screen options and "help" will not be open-ended. Most help will simply be in the form of repeating the task. There will be a strong emphasis on checkouts so that the learner always knows

where he or she stands with regard to mastery of a specific task. Most work will be "mastery-based" in that the learner cannot proceed through a learning sequence stage-by-stage unless a required performance level has been reached on the preceding stage.

For AMI work, however, the learner will have more latitude for non-linear, exploratory learning and "help" will be more open-ended and much richer. Ideally, the learner would have access, ultimately, to an underlying data base of grammar, lexicon, discourse features and subject matter knowledge (in English) though the Team is not sure how realistic this is at the current time.

The Team is reluctant to use the notion "shell" or "template" to describe the software that will be utilized, but the technical specialists do anticipate that aside from the Orientation software (Cell 1) all other software will be developed so that the staff in any language program will have the option to enter their own instructional content into the software structures available. Quasi "authoring" screens will guide the staff of any instructional program in this endeavor and while no programming knowledge will be required, familiarity with either Hypercard or Toolbox will most likely be a prerequisite.

6. THE ORIENTATION AND READING COMPONENTS (Cells 1,7,8,9)

A. Cell 1: The Orientation Module

Foundation building for all skills. Modules include introduction to the Chinese sound system, tones, introduction to orthographic systems such as romanization and characters (traditional and short forms).

1. Description: 1) Fact: Sound system; Character composition
 2) Fact Check-out and Application: Sound system, character composition
 3) ACT: Drills and Exercises
2. Purpose: Provide building blocks for skill development; pre-proficiency.
3. Role of Technology: Primary
4. Role of Teacher: 1) work with contextualized dialogues - focused on sound system
 2) Exercises - Communicative - focused on sound system
5. Design of CBI: Orientation modules are already being developed for introducing the sound system romanization and Chinese characters.

B. Cell 7: Reading Level 1

1. Model: Literacy Model
2. Description: Reading is based strictly on content already covered in spoken instruction.
3. Purpose: To target specifically the development of lower level reading processing skills (i.e. sound-symbol relationship, graphic representation, visual recognition, chunking) and beginning development of automaticity/rapid processing at the basic level.
4. Role of technology environment: Primary environment
5. Role of teacher: Check-out, monitor, discuss
6. Design of CBI: Presentation of lexical items with sound options; grammar review; build up into combinations and phrase presentation with options for timing to encourage rapid recognition; breakdowns of texts to focus on chunks and individual graphs; emphasis on surrounding context; feature redundancy, sound-symbol correspondence to derive meaning; drills to accomplish these objectives; options to include both traditional and short forms of characters. As student skills develop, reading for different purposes (skim, scan, general comprehension) will be introduced with literacy materials.
7. Time required for Pedagogical Design: Two weeks for design of templates. The full development time to be determined.

C. Cell 8: Reading Level 2

1. Model: Literacy Model
2. Description: Development of skills to read authentic Chinese writing; written-style Chinese to include pedagogically designed texts and pedagogically constrained authentic texts introduced in the context of previously studied spoken and written materials.
3. Purpose: Processing of written text in a manner consistent with learning model instruction; student is introduced to conventions particular to the written language; general introduction to genres particular to the written language such as newspapers, forms, signs, story structure, semi-literary features, etc. are introduced at this time; use of written artefacts and realia.
4. Role of technology environment: Primary environment
5. Role of Teacher: Check-out, monitor, discuss

6. Design of CBI: Use of technology to encourage rapid processing of larger units of text; to attain processing of a "real" text, design would include four types of activities: text preparation, text performance, responses to text, and extension to other texts. Continuation of reading for specific purposes. CBI would also use "help" notes in English to introduce learners to genre-specific textual organization, rhetorical strategies, etc. so as to give learners a framework or "schema" to facilitate processing within a specific genre.
7. Time required for pedagogical design: Two weeks for design of templates. The full development time to be determined.

D. Cell 9: Reading Level 3

1. Model: Acquisition Model
2. Description: Reading of Authentic Materials
3. Purpose: Development of ability to comprehend, at various levels of competence, authentic Chinese texts in an expanding number of genres (newspapers, reports, academic writing, etc.). Purpose is also to develop reader independence from overt reading pedagogy, thus instilling in the learner the ability to exploit native Chinese human resources and reference materials.
4. Role of technological environment: Primary learning environment
5. Role of teacher: Check, monitor, discuss, and serve as resource
6. Design of CBI: Increasing levels of help available only upon need. Text encountered first with minimal help. Questions-help-text-questions-help strategy used; "help" can include lexical, structural, and subject matter tutoring in English focused on enhancing schema development.
7. Time required for pedagogical design: Two weeks for design of templates. The full development time to be determined.

7. RAMIFICATIONS OF TECHNOLOGY-BASED INSTRUCTION

For any formal Chinese language learning environment, the intervention of technology-based instruction implies a restructuring of the instructional program. For each skill, the intervention of technology-based instruction geared to the individual learner argues for a redefinition of the role of the classroom in imparting that skill. The model suggests that grammar and FACT in general, non-interactive listening and reading, are primarily learning components that are studied, for the most part, outside the classroom. On the other hand, the classroom becomes the primary focus for communicative interaction.

The shift from classroom to technology-based instruction is likely to be gradual: as each technology-based component becomes available, there is a shift in classroom-based instruction. It is unlikely that the classroom-based approach will shift in nature to accommodate technology-based instruction before the technology is introduced; more likely, there will be significant changes in classroom-based instruction only when technology-based instruction is on-line.

The Team sees three major shifts in program design that are likely to be triggered by the gradual introduction of technology-based instruction:

1) Redefining the Role of the Learner

With the advent of technologically-based instruction designed for use by the individual learner, there is a much greater need for teaching the learner how to learn. Learners will be more directly responsible for their learning. Rather than an exclusive emphasis on teacher training, there will need to be a considerable shift to learner training.

2) Redefining the Role of the Teacher

The model described here suggests that the teacher's role remains constant in terms of level of involvement with learners, but the nature of this involvement begins to change. Teachers are in effect the managers of learning whether the learning is inside or outside classrooms. In particular, teachers may be able to move from a platform-teaching role towards a tutoring role (individuals, small groups) for the teaching of some skills and for certain components of all skills. This transformation implies a focus not so much on "classroom teacher" training as on "tutor" training.

3) Redefining the Use and Structure of Instructional Time

As each component of technology-based instruction moves into the program, it will become increasingly necessary to reevaluate the segmentation of formal study time. It may turn out that locking students into 50

minute classrooms is less effective than a mixture of group-study hours with a teacher, study periods without teachers but with access to other learning input, study periods with tutors, one-on-one study segments and so forth. Such changes will obviously come into language programs in a step-by-step fashion as the student has more opportunities to learn the language through a variety of interactions other than the classroom.

8. IMPLICATIONS/RECOMMENDATIONS

A. The National Case:

As was mentioned at the start of this paper, there is an opportunity for a National Chinese Language Technology Initiative. Two groups, civilian and government (including the Department of Defense and military), could work together on subjects of common interest. The common denominator would be their focus on Chinese and other languages. The National Council (including the Chinese Curriculum Consortium) would represent the civilian sector and the Defense Language Institute Foreign Language Center would represent the government. Two subjects of primary interest that could be worked are curriculum design and the uses of technology in teaching and learning less commonly taught languages. Those involved in the cooperative effort are listed below:

Civilians	DoD/Military/Government
- LCTL's	- DLIFLC
- National Council	- Other government agencies (such as NSA)
- Chinese Curriculum Consortium	- Chinese language personnel
- Chinese teachers	- Other language personnel

The following are implications for both government and civilian academic units and have been drawn from the deliberations of the Chinese Team:

General recommendations:

- * Establish core curriculum
 - Chinese Curriculum Consortium (C3) projects involving both civilian and government academics
 - Bring Yale Press Core on line (Phase One)
- * Establish umbrella group for Chinese instruction in US
 - Involve government academics with C3
- * Coordinate efforts in curriculum design and technology with participants in the National Council of Less Commonly Taught Languages

B. Defense Language Institute Foreign Language Center

1. General

Recommendations for making Chinese a model program at DLIFLC:

- * Experiment with restructuring instruction focussed on:
 1. learning rather than teaching
 2. distinguishing the roles of ACT and FACT
 3. developing "courses" within the program focussed on skills
- * Establish a "development loop" for CAS by:
 1. Starting a development shop with adequate staffing (DLAB)
 2. Creating study stations (CLAB)
 3. Analyzing and reporting results to C3
- * Identify key projects for CAS development and instructional experimentation

2. Specific

More specifically, the following actions should be implemented immediately by the DLIFLC Chinese Department:

- * Make Chinese the prototype language for technology application:
 1. Restructure academic day
 2. Implement CAS tutoring
 3. Develop new instructor roles
- * Refocus Curriculum Division (VPC), Faculty and Staff Development Division (VPF), and Educational Technology Division (VPT):
 1. Learning versus teaching
- * Make Chinese staffing a top DLIFLC priority
- * Assign two instructors to Mr. Yui's project
- * Dedicate 3 Macintosh IICXs to Mr. Yui's project
- * Install 10-station Mac SE lab in Asian School (DAS) and add more as needed
- * Share materials and feedback data with C3

APPENDIX 1

LIST OF PARTICIPANTS

- Dr. David Hosley, Chinese Language Team Coordinator
Institute for Simulation and Training
University of Central Florida
- Dr. William Bramble, Senior Scientist, ETNA Project
Institute for Simulation and Training
University of Central Florida
- Dr. Ronald Walton, Consultant Team Leader
Associate Professor, University of Maryland and
Deputy Director, National Foreign Language Center
- Dr. Galal Walker, Consultant
Associate Professor, Department of East Asian
Languages and Literatures
The Ohio State University
- Dr. Ted Tao-Chung Yao, Consultant
Associate Professor, Asian Study Program
Mount Holyoke College
- Dr. Clara Yu, Consultant
Assistant Professor, Chinese Department
Middlebury College
- Mr. Kim L. Smith, Consultant
Associate Research Fellow, Humanities Research Center
Brigham Young University
- Maj. Michael E. Everson (Ph.D.), Consultant
Associate Professor, Department of Foreign Languages
and Chief, Strategic Language Division
United States Air Force Academy
- Col. Donald Fischer, Jr.
Commandant
DLIFLC
- Dr. Ray T. Clifford
Provost
DLIFLC
- Dr. John L.D. Clark
Dean, Directorate of Evaluation and Standardization
DLIFLC

Dr. John A. Lett, Jr.
Chief, Evaluation/Research Division
DLIFLC

Mr. Hugh McFarlane
Chief, Cryptologic Training System
Representative
DLIFLC

Mr. Bruce Phinney
National Cryptologic School

Mr. Charles D. Olney
Dean, Asian School
DLIFLC

Mr. Victor Shaw
Research Division
DLIFLC

Mr. Andrew Soh
Academic Coordinator, Asian School
DLIFLC

Mr. William Yui
Training Specialist, Chinese Department, Asian School
DLIFLC

Mr. Victor Wen
Chair, Chinese Department, Asian School
DLIFLC

APPENDIX 2

ACTIVITIES

Colonel Donald C. Fischer, Jr., Commandant, DLIFLC, presented an overview of technology initiatives at DLIFLC.

Dr. Ray T. Clifford, Provost, DLIFLC, presented the charge to the team regarding its role in providing recommendations for the use of technology in teaching Chinese.

Mr. Charles D. Olney, Dean, School of Asian Languages, welcomed the group and provided a brief update on initiatives at the School.

Dr. John L.D. Clark, Dean, Directorate of Evaluation and Standardization, DLIFLC, described the challenge that DLIFLC has to produce linguists and the need for the team to provide a model to assist DLIFLC in accomplishing their mission.

Dr. John A. Lett, Jr., Director, Evaluation and Research Division, DLIFLC, presented the background of the ETNA project and reviewed DLIFLC's present and future needs in the area of instructional technology.

Lt. Col. Sharon Richardson, Director, Educational Technology Division, DLIFLC, briefed the on-going distance learning initiatives, plans for the future, and the impact on educational technology at DLIFLC.

Dr. Ted Tao-Chung Yao demonstrated software on tone discrimination and the basic Chinese sound system, plus an interactive module demonstrating the use of a public telephone in Taiwan. He also demonstrated an interactive listening program based on weather reports.

Dr. Clara Yu demonstrated software on an introductory module to the Chinese sound system and useful beginning phrases, plus a reading module targeting more advanced reading skills development.

Mr. William Yui demonstrated software focused on the listening of dialogues, as well as one focused on listening/reading of an advanced-level radio broadcast.

The participants reviewed Chinese course materials and spent extensive time in discussion of how to use technology to more effectively teach Chinese. They focused on DLIFLC and national efforts through a new approach using a generic model to use technology for the teaching of skills in Chinese. The team developed a draft paper and presented an outbrief to key DLIFLC representatives.

