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Effects of using guided (computer-controlled videotapes) and unguided (videotapes) listening practices on listening comprehension of novice second language learners

Javetz, Esther, Ph.D.

The Ohio State University, 1987

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EFFECTS OF USING GUIDED (COMPUTER-CONTROLLED VIDEOTAPES) AND UNGUIDED (VIDEOTAPES) LISTENING PRACTICES ON LISTENING COMPREHENSION OF NOVICE SECOND LANGUAGE LEARNERS

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of the Ohio State University

By

Esther Javetz, B.A., M.A.

* * * * *

The Ohio State University

1987

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John C. Belland
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Marjorie A. Cambre

Approved by

Adviser
College of Education
ACKNOWLEDGEMENTS

First I would like to thank the members of my reading committee. Each has played an important role in both my doctoral studies and my dissertation. I would like to thank Dr. John Belland, who has always been supportive of foreign students. He appreciates their background and helps them to cope with the "rituals" of graduate school. More specifically, he has refined my Israeli-based notions about "educational media" with notions of instructional design. I always appreciated his patience when he granted me incompletes, so that I could read "just a few more sources" and then write a more meaningful paper.

Struggling with English as a foreign language, was not easy, thus I would like to acknowledge the many libraries at O.S.U. Time spent at the libraries was well spent— my English improved and my knowledge base grew.

A special thanks is extended to to Dr. Marjorie Cambre, without her there would not be any interactive video and interactive video research in the College of Education. After the first interactive video units were established in the laboratory of the College of Education, she taught the College's first interactive video course. She encouraged
her students to look for any instructional advantage of the interactive video vs. the initial videotape. My research project evolved from that course.

Teaching Hebrew on campus and studying instructional design prepared me to design a study related to the two fields. I would like to thank Dr. Elizabeth Bernhardt, who was interested in the development of material for foreign language education and was enthusiastic about the eclectic approach of using constructs and research results from a variety of fields.

The Edgar Dale Media Center possessed the hardware, the software and most important the atmosphere conducive to conducting research in education. I would like to thank all of the lab assistants who were there when the interactive program was created. Later when the students came to the lab to work with the materials they made sure that everything was technically correct.

I would like to thank the Hebrew 102 students who were more than cooperative when participating in the study. They deserve a special thanks for the times when they came to the lab in the evening.

I do not want to forget to thank my family. I would like to thank my parents who had to bear six years of separation. I would like to thank my husband Hanan who has patiently gone with me through the trials and tribulations of the "end-of-the-quarter" and the end of the dissertation.
He exhibited an array of skills from cooking to drawing graphs. His long-range view of the light at the end of the tunnel was most encouraging. I would like to thank my two baby-birds, Adi and Zivit, who invented "Sun-shine cafe" as a service to tired parents. When they would politely ask: "which chapter are you on now?" I would know that I was needed for more than writing "one more chapter." Without my family this project would have been impossible.
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FIELDS OF STUDY

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Reading in Foreign Language Education - Dr. Elizabeth Bernhardt
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CHAPTER I
INTRODUCTION

Statement of the Problem

It appears that awareness of the need for foreign language education has increased in this country and abroad due to economic, technological and political interdependence of nations. However educating or training people to be bilinguals is a difficult endeavor because in the last two decades there has not been a major breakthrough in the field of second-language education.

The teaching of foreign languages has gone through several ideological and technique changes, as described below, however the best method of teaching a foreign language has not been determined. Although during the 1960s significant funding for foreign language (FL) programs was available, educators in the 1980s are faced with more stringent FL requirements and significantly less funding for FL programs. In response to these situations FL educators are investigating the application of technology to FL instruction.

The applications of new information technology to instruction have received considerable attention from
educators in all areas. During the mid 1970s the educational community began to purchase hardware and software, established programming courses and applications based courses, and began to utilize LOGO and Computer Assisted Instruction (CAI). Questions of educational utility and effectiveness began to arise after hardware and software were purchased and after curricular and instructional decisions were made. In general, educators were lacking software that was specifically designed for the classroom tasks. Available software has not been research and theory based.

Specifically FL educators are investigating the possibilities of using technologies to create learning experiences which normally do not occur in the classroom. As an example instructors are contemplating the question of how to use technology to simulate the foreign environment, i.e. authentic use of language, cultural knowledge, and views of the target country. They also contemplate the use of technology as a time saving device for teaching simple tasks, which would allow the teacher to work on more complex tasks, such as conversation. Unfortunately, only a few research studies exist, which focus upon the use of technology or the use of instructional materials in modern language instruction (those are cited in this document). Most articles about the use of technology in modern language
instruction are testimonials. FL materials too are not theory and research based.

Traditionally, FL instruction is defined as the teaching of four skills: reading, listening, writing, and speaking. The first two are receptive skills and the last two are productive skills.

The skill of listening comprehension has been the most neglected in instruction because of the lack of theory, research, curriculum and materials in this area. The skill was considered "simple," so often FL educators did not devote classroom time for the development of this skill, but left the "job" to the language laboratory. The language laboratories were full of audio equipment but the quality and amount of software, varied from one institution to another; e.g. the software contained recorded stories or dialogues in a variety of speaking paces. Again, neither theory nor research guided the development of the language laboratory software. Students did not seem to like the language laboratories nor did they succeed there (Rivers, 1982). Not only did the language laboratories fail statistically; they also failed in reality, as they are now empty rooms.

Study Synopsis and Research Questions

This research project focused on practicing listening comprehension through the use of new information technology:
video and computer-controlled video. In order to study the variables built into the materials, the materials were used by the subjects in an individualized setting, the media center. Although classroom use of these materials was possible and recommended, this approach was not selected.

In this research project the design of the materials was based not only on intuition and aesthetic appeal, but also on theory and research results from several fields of study such as reading, discourse processing, metacognition and FL education.

Two foreign language (Hebrew) original scripts were written by the researcher (see Appendix E). The "stories" were interviews with a native speaker. Four variables were incorporated into the stories: content, structure, signaling and pictures. The pictures were intended to facilitate comprehension. A detailed account of the theoretical background of these variables is available in chapter II. The two scripts were produced on videotape.

The videotapes were made computer-controlled by the addition of two computer programs. In order to make the stories even easier to process more variables were "built into" the computer-controlled programs. The computer-controlled programs were modeling a strategy using the following variables: advance organizers, post-questions, intermediate level retrieval cues, macrostructure strategies and program's conceptual map. A theoretical review of these
variables is provided in chapter II, and the description of the materials (videotapes and computer-controlled videotapes) is in chapter III.

Two methods of listening comprehension were incorporated into materials: the video (with four variables) and the computer-controlled video (with nine variables). Each method had two levels: story I and story II. Since there were two stories to listen to, the sequence aspect was varied too. Three variations of the sequence were conceptualized: story I video and story II computer-controlled video; story I computer-controlled video and story II video; story I computer-controlled video and story II computer-controlled video. Students participating in the study were divided into two levels, according to their pretest scores, High and Low.

Four research questions were posed in order to study the relative utility of the two methods and three sequences.

- Is one method (as implemented in a medium) more effective than the other—in general or for a particular story?
- Is one sequence (of the three) more effective than the others in general or for a particular story?
- Is there an interaction between one of the methods and a subgroup of students?
- Is there an interaction between one of the sequences and a subgroup of students?
The following figure illustrates how the methods and the sequences were studied (see Figure 1).

Figure 1. Layout of Methods and Sequences

Significance of the Study

This study is testing the effectiveness of materials designed according to recommendations of theory and research in the relevant fields. All materials were designed to be effective and incorporate the same content and sequence but vary in the amount and type of instructional guidance given to the learner.

Answers to the research questions will guide foreign language educators when deciding whether to use a videotape to teach listening comprehension to novices or to create a computer-controlled videotape. Since it is important to use multiple listening practice sessions, the answers of these
research questions will guide FL educators to select the proper sequence of media if two experiences are planned.

The results of this study may help FL educators plan listening activities for general or specific audiences. For example, one method-medium might be effective for relatively low level students but not for relatively high level students.

The results should point to treatments that are superior for certain situations. Statistical significance should prove superior effectiveness for some or all students, however, more studies should be conducted to sort out the crucial variables in the effective treatment and maybe find reason for the effectiveness.

Limitations of the Study

In the following chapters, the two materials are referred to as video and computer-controlled video. However, results of the study cannot be generalized for use with any video and any computer-controlled video. The two treatments are in essence two methods of instruction, Guided and Unguided Listening, which were implemented in video and computer-controlled video. The results should apply to cases with similar treatments or treatments which incorporate the same variables operating in these methods.

Because this is an exploratory study, only two stories were produced. Therefore, each of the treatment sequences
is a sequence of two stories. It is not advisable to extrapolate the results to a sequence with a third or fourth listening experience unless testing is conducted.

The data of the study were recall protocols. A certain analysis procedure was developed in order to render the protocols to quantitative analysis. This study cannot be applied to situations where listening is tested by other measures, e.g. multiple choice test.

The classification of students was based on a Hebrew vocabulary test (see Appendix D). According to their performance on the test, the students were classified by the researcher as High or Low. The test was composed of a random sample of 50 items from the Hebrew textbook (see Hayon, 1970). Therefore, the results cannot be generalized to student groups not similarly classified.

The last two research questions refer to possible interactions between treatments and groups of students. Implications of the interaction results should be applied only in cases of similar student classification.

In general the study was based on data collected from 32 students. When divided into sequences, there were 10 or 11 students in a sequence. This small number of subjects point to the need to be cautious in generalizing the results of the study. Randomizing of subjects and a counter-balanced design were procedures applied to strengthen the soundness of the results.
Assumptions of the Study

Several assumptions regarding the subjects were built into the study. The study was made under the assumption that since the students were taught by the same instructor, had the same textbook, and the same course, the students had equivalent preparation for participation in the study. Students of Hebrew 102, during the academic year 1985-1986, interacted with the materials once during the eighth week of the quarter and once during the ninth. Due to the small size of the classes, the study included all students from Autumn, Winter and Spring quarters. In 1985-86 the total enrollment in Hebrew 102 was 32 students. The students were randomly assigned to treatment levels. The design was counter-balanced, since in each quarter students were randomly assigned to three treatment groups (the sequences).

Students of Hebrew 102, during the academic year 1985-86, were thought to represent undergraduate American students enrolled in beginning language classes, not necessarily Hebrew.

A major assumption of this study was that materials which are theory and research based should be effective at least for one level of students more than commercially available materials. To be considered research based most aspects of the software should be an operational definition of a learning principle.
The language features of the materials, were not considered to be typical to Hebrew, and therefore may be generalizable to other modern languages. Briefly stated, the language features were: slower pace; use of only part of the tenses (present and past); use of few cultural concepts but with quick definitions; design of an "organized" discussion, where topics were dealt with one at a time, and major topics created a higher-order organization; the higher-order organization used expectancy as a tool in comprehension. Therefore it is assumed that similar language features can be used in materials of other foreign languages, with audio and visual effects, in order to achieve listening comprehension. A more detailed description of the materials is provided in chapter III.

Definition of Terms

Advance organizers - are textual structures that relate potentially meaningful material to the learner's existing cognitive structure. Such organizers are concepts and propositions that have a superordinate relationship to concepts and specific facts already in the learner's cognitive structure (Unwin & McAleese, 1978).

Content - the sum of events, physical detail and information embodied in a work of art often contrasted with "form" (Webster's, 1961).
Cue - a signal that guides (or "cues") behavior. It may be either a part of an experimental stimulus, in which case it marks the occasion for an operant response, or part of a response in the form of some feedback from having made it, when it serves as a cue for another response (Reber, p. 169).

Episode - a developed situation that is integral to but separable from a continuous narrative (as a novel or play), scene (Webster's, 1961).

Macrostructure - a semantic structure created in the mind of the learner when processing discourse. A macrostructure is created by applying macrorules on the microstructure. The macrostructure describe the same facts, as the microstructure, "but from a more global point of view". There are several reasons why humans create macrostructures. "The theoretical and linguistic reasons for this level of description derive from the fact that the propositions of a text base must be connected relative to what is intuitively called a topic of discourse . . . There must be a global constraint that establishes a meaningful whole, characterized in terms of a discourse topic" (Kintsch & van Dijk, 1978).

Microstructure - or text base is a linear or hierarchical sequence of propositions that the comprehender processed from the text. Often people exhibit superior
recall of propositions that function as superordinates in the text-base structure (Kintsch & van Dijk, 1978).

Post-Questions - a type of adjunct question which aids learning from text. These questions are unique in their position—immediately after related text segments (Rickards & Denner, 1978).

Recall - a method of determining how much learning has been retained by requiring that the subject remember information without having any cues provided. An example is an essay test. Recall is a more difficult task than recognition (The Encyclopedic Dictionary of Psychology, 1986).

Recall protocol - an exercise in which the pupil is required to read a selection one or more times and then write out all that he can recall of the material read (Good, 1973).

Retrieval - one influence of the analogy between human memory and that of an electronic computer has been an increasing emphasis on the retrieval stage as important for a complete understanding of memory. The fact that information that is in memory cannot always be retrieved is illustrated by the familiar tip of the tongue phenomenon. The success of memory retrieval depends critically on the specificity of the cues that are available on the retention test (The Encyclopedia of Psychology, 1981).
Retrieval cue activities - are activities that serve to focus attention on important elements in the studied text like note-taking, underlining and selective rereading (Brown, et al., 1978).

Signaling - "can be described as information in the text that does not add new content to a topic, but gives emphasis to certain aspects of the semantic content or points out aspects of the structure of the content" (Meyer, 1981).

Structure - "how the ideas in a text are interrelated to convey a message to a reader. Some of the ideas in the text are of central importance to the author's message, while others are of less importance. Thus text structure specifies the logical connections among ideas as well as subordination of some ideas to others" (Meyer & Rice, 1984).

Contents of the Dissertation

This dissertation comprises five chapters and six appendices. The division of these chapters is rather conventional, or as much so as this non-traditional study permits.

The Introduction, Chapter I, deals with general concerns that finally are conceptualized in the form of four research questions and a study synopsis. Considerations regarding the study are also reported in Chapter I in the following sections: Significance of the Study, Limitations
of the Study and Assumptions of the Study. Definitions of Terms is a list of definitions for uncommon terminology found throughout the dissertation.

Chapter II, Theoretical Framework, is intended to provide the research and theory basis for this research project. It is divided into three major parts: Background of the Study, Theoretical Framework for the Design of the Generic Listening Materials, and Theoretical Framework for the Design of the Computer-Controlled Component. In the Background section, general issues pertinent to FL education and other fields are discussed. In the other two parts a more specific literature review is provided, where the variables incorporated into the video and later into the computer-controlled video are listed. A specific review is provided with the description of each variable.

Chapter III, Design and Implementation, deals with the design and implementation of the listening materials and their description. In addition, the two phases of the study are described: the design, production and testing of the prototypes; and the experiment, where materials were administered to students organized by treatment groups. The last section is dedicated to the details of the study. Here, materials, subjects, setting, data sources and analysis procedures are described.

Chapter IV, Results, reports the statistical procedures applicable for the original research questions. For each
question two analyses were performed: one for the episode scores and one for the detail scores. For first two questions the statistical tests ANOVA and ANCOVA are utilized for the last two questions graphs are used to compare observation points and regression lines. The last section of Chapter IV is a summary of the findings.

Chapter V, Discussion and Future Research Recommendation, includes a summary of the dissertation, a discussion section and three additional brief sections. The discussion section ties the results of this study to several research and theoretical sources which provide explanation for the findings. A brief section, General Implications, lists nine different implications which stem from this research project. The implications are addressed to instructional designers, FL education practitioners and researchers as well as prose learning researchers. There are also ten recommendations for future research, and an Epilogue which emphasizes the strengths of this study in light of directions suggested by leading scholars in the field of instructional technology.
CHAPTER II
THEORETICAL FRAMEWORK

Chapter II focuses upon the background of the study, and the theoretical framework regarding the variables that were tested in the study. The chapter is divided into three major sections: The Background of the Study; The Theoretical Framework for the Design of the Generic Listening Materials; and The Theoretical Framework for the Design of the Computer-Controlled Component.

"The Background of the Study" highlights the importance of the application of technology to education from an interdisciplinary perspective, emphasizing the field of FL education. This section also reviews the literature regarding the learning task examined in this study: listening comprehension to a second language.

"The Theoretical Framework for the Design of the Generic Learning Materials" focuses upon the following design components: content, structure, signaling and pictures. These variables were considered significant factors for comprehension.

The Theoretical Framework for the Design of the Computer-Controlled Component focuses upon the following design components: advance organizers, post-questions,
intermediate level retrieval cues and macrostructure strategies. These variables were considered significant factors for text study.

Background of the Study

The Foreign Language Perspective

The Foreign Language Education Perspective is divided into three sections: Issues and Trends in FL Education; Receptive Skills in FL Education and The Listening Skill in FL Education.

The Issues and Trends section is a diverse overview of FL education, primarily in this country. The overview encompasses several known methods of teaching; the relationship between technology and FL educators; the "big lesson" of the past regarding the language laboratories and the fact that the professional literature is full of testimonials. The section ends with an analysis of research needs.

The Receptive Skills section provides a historical perspective that receptive skills have gone through a change of importance trend in the eyes of FL educators. The section ends with quotations of authors who provide new descriptions of the receptive skills regarding the importance of receptive skills to FL educators. This section concludes with new insights regarding receptive skills.
The Listening Skill section surveys the development of this skill. Gary (1978) reviews the specialized methods in second language teaching which focus specifically on listening. However Omaggio (1984) reviews the mainstream ideas regarding listening, and the teaching materials for the development of this skill. Omaggio (1984) mentions the debate of authentic materials versus simplified materials, and then makes recommendations to educators. Byrnes (1984) provides knowledge regarding the most recent developments in the field. These include a complex description of the process of listening and a classification system of four types of oral discourse.

Issues and Trends in FL Education. Foreign language (FL) learning is a traditional school subject matter. In a few societies (as in Canada) the consensus has been that bilingual education is a basic skill that provides "communicative proficiency... to function and succeed" (Genesee, 1985, p. 541). Therefore a second language program has been established early in the elementary grades, as the immersion programs in Canada and the U.S. (Genesee, 1985). In other societies like in the U.S. a second language is introduced in high schools and colleges, where curriculum decisions are based on the notions of advancing international understanding and/or exchanging scientific knowledge among countries.
The data collected on college FL enrollment and attitudes in the United States reveal a grim picture. A survey conducted in Iowa revealed that 87% of the students taking a foreign language did so primarily to satisfy a requirement. In non-requirement situations, over 50% of students who begin foreign language study in college do not continue into the second year of such study (Benseler & Schulz, 1980). According to an ADFL survey, the modern foreign language "share" of the total U.S. college enrollment was 15.5% in 1968 and 8.4% in 1980 (Woloshin, 1983). In the U.S. most FL programs start at a late age (high school or college) and the general situation in the undergraduate program is declining in morale and in number.

There are several methods that have been developed of foreign language teaching: the audiolingual method, the cognitive method, the direct method and the grammar translation method. However, none of the methods have achieved a consensus of support as "the one true way" to teach a foreign language (Omaggio, 1983).

Several other methodologies are being practiced or experimented with on a relatively small scale. Among them are the Confluent Approach, Community Language Learning or the Counseling-Learning, the Silent Method, Suggestology, the Total Physical Response Method, etc. (Benseler & Schulz, 1980).
Benseler explains why the latter group of methods is not largely adopted. "Most research studies utilizing these approaches have been conducted with specialized groups of students (e.g., highly motivated adult language learners) or under special instructional constraints (e.g., intensive exposure), and findings cannot be conclusively generalized to traditional college instruction designed for heterogeneous groups of students" (p. 90).

Woloshin (1983) views FL departments in U.S. universities as missing their major goal. He blames foreign language departments, who in "their self-perpetuating zeal and their need to accommodate a reactionary reward system, seek primarily to train literary researchers. . . . Too many undergraduate foreign language students are being taught by untrained, uncommitted, poorly rewarded, and often completely unsupervised teachers" (p. 358). It seems that training literary researchers is satisfying the goals of a minority of students while the majority of students have neither a well focused program nor the best teaching staff.

Proponents of the use of technology in FL undergraduate instruction are now looking toward technological solutions as a method of enhancing the attractiveness of the undergraduate FL programs and sustaining good instruction of these programs. The proponents of technological solutions see many instructional potentials in the technology: "If the past decade has allowed us to dream of things to come,
facilitated by a technological revolution that many teachers still cannot quite understand, the coming decade will allow us to watch many of our dreams come true" (Meredith, 1983, p. 424).

On the other hand the same people know that FL educators are suspicious of technological miracles because of the widely admitted failure of the language laboratories (McCoy & Weible, 1983).

An analysis of past experience with the language laboratory reveals that there was "a simplistic faith in the power of technology to overcome all problems" that led to a rapid and extremely widespread adoption of language laboratories (McCoy & Weible, 1983, p. 132). Administrators were putting pressure on teachers so that labs would be used, but forgot two critical factors: teacher involvement and courseware. McCoy and Weible (1983) report that the courseware material was "boring repetition coupled with a total lack of student interaction with the material" (p. 132).

In general there is a widespread use of audiovisual materials in the foreign language classroom, but as Meredith (1983) asserts, "Little empirical research has been conducted on the effectiveness of such usage" (p. 424). Most of the literature in FL teaching regarding media is testimonial: reports of successful applications of various types of media. Meredith points to two studies, one by
Omaggio (1979) and one by Mueller (1980), that should be models of FL research because they investigate a certain specific question. Omaggio (1979), for example, tried to determine the effectiveness of varying types of pictorial cues. This kind of information guides not only development of sophisticated technological solutions, but also simple "aids" in classroom practice.

The "testimonial" research, previously mentioned, is not particularly helpful to knowledge accumulation. This is because the general scenario of such research is an account of a specific case of a videotaped segment, in order to provide "an opportunity to review the spoken material and to build one's confidence for comprehending the unremitting voice of the speaker" (Halbig, 1977, p. 7). However there is no rationale behind the choice of the specific text or the visuals. As an example in Halbig (1977), only a list of suggested exercises on how to follow up the video treatment is provided.

What is needed is:

A. a much more detailed description of variables, incorporated into a treatment;

B. a general theoretical rationale behind the employment of these variables;

C. a description of the learners, in addition to their performance, would be helpful: what kind of
curriculum and instructional method did they experience in FL and for how long.

From the above arguments we might conclude that in order to produce good materials for FL learning, prototypes should be developed that will incorporate principles from various fields of knowledge. Then the effectiveness and the appeal of the prototypes should be measured in the natural settings with samples of their prospective clientele. Results from experiments with such prototype materials could promote knowledge of instructional design for FL materials and of the process of second language learning.

Receptive Skills in FL Education. During several decades audiolingualism and afterwards communicative methods were dominant in FL education. These approaches emphasized productive skills, mainly speaking. However recently the FL field is reevaluating the importance of the receptive skills (reading, listening). Davies (1983) says that, "The receptive skills are the primary path to language mastery, and that language learning should therefore initially concentrate on active comprehension, leaving the systematic training of the productive skills to a later stage" (p. 245). Davies (1983) notices that the change of terminology reflects a change in theory. "Receptive" used to be a second word for "passive", and therefore receptive skills were neglected. Mooijman (1983) would rather use "interpretive" skills to emphasize the active role students
are called upon to play while listening or reading. But even with no change of terminology listening comprehension has only recently been conceptualized as "a highly complex problem-solving activity" (Byrnes, 1984, p. 318).

The Listening Skill in FL Education. Some specialized methods in FL teaching, such as the Total Physical Response concentrate on listening as the major skill in the first period of instruction. These methods were classified by Gary (1978) according to the type of stimulus given to the students and the type of response elicited from them. The methods are: (1) pictorial-audio match, (2) physical response audio match, and (3) graphic-audio match. In all three, the principles are similar: use of all the instructional time for listening only; start with short segments (a word for a command) and increase complexity; elicit immediate response; and for every step, provide immediate feedback. However, Gary (1978) does not provide any description of the sequencing rationale of one or all of these methods. She does not address which aspect of language is introduced first from a content aspect (traveling vocabulary versus professional vocabulary) and from a form aspect (just present tense or all tenses). She summarizes the assumptions underlying the methods just reviewed, what she calls "a delayed speaking approach":

1. Language is not speech. It is a set of principles establishing correlations between meaning and sound sequences or other overt forms of communicative language such as sign language.
2. Learning a first or second language does not occur through habit formation. Rather, it occurs by an inductive-deductive process whereby the learner starts with a general theory of grammar, and given the linguistic data of a particular language, constructs a grammar for the language based on this theory.

3. The development of receptive skills is necessary for the development of productive skills. That is, speaking is a result, not a cause of language learning, and therefore should be postponed, at least in the early stages of language learning.

4. Effective listening comprehension training must be meaningful, challenging, require overt learner response, and provide immediate feedback to the learner as to the correctness of his response (p. 192).

It seems that only the words "meaningful" and "challenging" are descriptors to the kind of language used for listening comprehension. This is not much help in designing instruction or instructional materials for listening comprehension.

However, most undergraduate classroom FL instructors are not using any of the methods of concentration on listening comprehension. Instead they are using one of the more common methods (see in Issues and Trends in FL Education). The mainstream of second language pedagogy (Omaggio, 1984) has lately accepted that "comprehension generally precedes production in language acquisition. Students can typically understand material that is more advanced than material they can consistently and accurately produce" (p. 55). Regarding instructional materials Omaggio (1983) recommends use of the two kinds of language: authentic and simplified.
The trend toward authenticity stems from the communicative approach to language learning. Therefore real or simulated cultural items are recommended: travel documents, menus, newspapers, radio broadcasts, television or film, etc. However Omaggio (1983) admits that there is a problem with using authentic language materials when dealing with novices: "Just how to make the most effective use of authentic language materials in elementary-level classes remains unclear" (p. 334).

A major theoretical influence on the field of FL education is maintained by Krashen, who is famous for his input hypothesis. Krashen et al. (1984) theorize that people acquire language that is directed at the acquirer's current level of competence, but which includes some structures that are somewhat beyond that level as well. He asserts that language learners will understand that which is "beyond" them from contextual cues in the message or from extra-linguistic cues. Krashen's influence on the field of FL education is in the direction of teaching simplified language which is just slightly beyond the learner's knowledge. Krashen recommends increasing the complexity of the language as the learner progresses.

The two trends of authentic language and simplified language are moving in opposite directions. Omaggio (1983) tries to find a compromise between the two extremes:

[A.] Using simplified version of authentic materials in elementary and intermediate
instruction and gradually moving toward incorporating complete, unedited language samples in advanced courses.

[B.] Provide enough extralinguistic cues to render unedited authentic materials 'comprehensible' to the beginning or intermediate student.

[C.] We should not, however, abandon the use of materials created for instructional purposes in favor of 'authentic' materials alone. Rather a blend of the two seems more appropriate (p. 334).

It seems clear that with all the intentions of providing authenticity—"Language as used in the target culture" (Omaggio, 1983)—some simplification is needed for novices. Otherwise, why would adults living in a foreign country for many years, exposed to all its authenticity, not achieve proficiency in the target language? The first two suggestions by Omaggio (1983) can provide general guidelines if one wants to design an "authentic" material for novices, but the suggestions are not specific enough.

The definition of authenticity is not simple (Davies, 1984), and one can find authenticity in one, some, or all of the following aspects: setting, characters, topic discussed, attitudes/views expressed, vocabulary used, syntax employed, pronunciation, intonation, gestures, speed of production and reaction, clarity and distinctness of word production, and more.

Only very recently do we see direct influence from developments in psychology and in reading on the FL field. Byrnes (1984) disputes old notions of listening comprehension and proposes a model of three interacting
variables: raw data, contextual understanding, and schema-based understanding. In her words, "It would be too simplistic to conceive of it as serial processing of linguistic form categories, no matter how elaborated these may be. Rather, cognitive processing will have to involve schema-based understanding as well as contextual understanding in addition to the raw input data. 'Schema-based understanding' draws on information stored in long-term memory as frames or scripts which direct the comprehension process, while 'contextual understanding' by providing further input, helps the listener resolve ambiguities and uncertainties to form hypotheses and draw inferences. . . . Listening comprehension, conceived in this way, forces us to go far beyond a mechanistic view of language, which has far-reaching implications for language teaching" (p. 319).

Byrnes's (1984) contribution is not only to the psychological parameters of listening comprehension, but also to the classification of the different discourse types in oral language. Her view is that oral language is "a subset of the totality of language use" (p. 319). The following four oral discourse types are mentioned:

1. Spontaneous free speech, characterized by the interactiveness of the situation (i.e., initiating turn-taking, leave-taking strategies, overlapping speech, checking the channel, repairing possible lapses in the partner's comprehension) and by constraints on the speaker's manner of speech production, which bring on poor
ordering, discontinuous, fragmented syntax, rephrasing, different lexical choices, etc.;

2. Deliberate free speech as it occurs in interviews and discussions, which has higher information value but maintains some of the interactional and production-related characteristics of spontaneous speech;

3. Oral presentation of a written text as in newscasts, commentaries, and lectures, where transmission of information is the objective and interactional considerations enter on a much more covert level;

4. Oral presentation of a fixed, rehearsed script such as on stage or in a film. This will bring about highly stylized forms of delivery which reflect aesthetic and artistic valuations above and beyond the message itself (p. 319).

These developments are very encouraging, but still one should conceptualize a rationale, according to program objectives and entering state of students, for using one or more of the discourse types just described, to practice listening comprehension. One should be aware, too, that many variables could be involved in comprehension of each discourse type.

Interdisciplinary Comprehension Research Perspective

This section describes the interdisciplinary aspect of the process of comprehension or discourse processings. The researchers agree that the process of comprehension is the same regardless of the medium (print or broadcast) or the modality (listening or reading). Finally definitions of comprehension are provided by Rumelhardt (1980) and Anderson and Pearson (1984).

Comprehension of connected discourse is now studied in many fields: cognitive psychology, cognitive science,
educational psychology, developmental psychology, linguistics, artificial intelligence, reading. If experiments were conducted with human subjects, the text was expository prose in first language, English (Meyer, 1981) or the text was stories of different kinds, again in English (Mandler, 1978). In these studies sometimes the subjects were exposed to the discourse through listening (Meyer & McConkie, 1973) and sometimes through reading (Meyer et al., 1978). Basically, it looks as though that people in the area of discourse processing accepted Kintsch and Van Dijk's (1978) position:

Comprehension is involved in reading as well as in listening, and our model applies to both. Indeed, the main differences between reading and listening occur at levels lower than the ones we are concerned with. . . . We are talking here, of course, about readers for whom the decoding process has become automated, but the model also has implications for readers who still must devote substantial resources to decoding (p. 364).

Actually, in practice the field of reading has advocated the connection between reading and listening (Sticht & James, 1984), and oracy to literacy transfer has been the rationale for intervention programs to develop verbal (oral) skills of preschool children to facilitate their success in reading when they reach school.

When looking at research on television viewing, Collins & Wiens (1983) say, "In a broader perspective, comprehension of television content demands many skills that are similar to those required for literacy more traditionally defined"
If comprehension is occurring after reading, listening and also viewing, one could adopt Rumelhart's (1980) position of what comprehension is: "Readers are said to have understood the text when they are able to find a configuration of hypotheses (schemata) that offers a coherent account for the various aspects of the text. To the degree to which a particular reader fails to find such a configuration, the text will appear disjointed and incomprehensible" (p. 38). It seems that the notion of text would generalize to any other connected discourse.

A similar definition of comprehension is provided by Anderson and Pearson (1984): "Whether we are aware of it or not it is this interaction of new information with old knowledge that we mean when we use the term comprehension. To say that one has comprehended a text is to say that she has found a mental "home" for the information in the text, or else that she has modified an existing mental home in order to accommodate that new information" (p. 255).

Theoretical Framework for the Design of the Generic Listening Materials

As stated in chapter I, it was hypothesized that research and theory from prose learning could provide a theoretical framework for designing the material. Four variables were deliberately implemented in the treatment:
content, structure, signaling, and pictures. The theoretical framework for each variable follows.

**Content**

Chall (1983) has provided a stage analysis of the acquisition of reading skills. During the early stages of reading, the reading task is largely that of symbol decoding and bringing meaning to the printed page. This is what is called the "learning to read" stage. Young readers are given stereotypical stories. Also, pictures are provided to illustrate events in the text. The goal of reading at this stage is to confirm what is already known. Readers are seldom asked to retain the materials they read for an information value. At a certain point there is a shift in the reading process. Readers begin to read to gain new knowledge and information, which is the "read to learn" stage. Prose with highly familiar concepts is now replaced by text information that is largely unfamiliar to the reader. The implication is that the materials read are now to be retained for an information value.

In the typical undergraduate FL classroom the students are heterogeneous, and using the constructs of Chall each one is at a different stage in the continuum of from "learning to listen" to "listening to learn". Therefore the content that was chosen for the listening practice material was new in the respect that it was based on the lifestyle of
the target linguistic community (Israel). However it was highly stereotypical as described ahead.

The decision to base the content on the lifestyle of the target linguistic community is based on the growing awareness of researchers who study comprehension for the need of content knowledge or "world" knowledge in order to comprehend text. Collins & Wiens (1983) propose a model of three categories that may affect comprehension of television programs: "(1) knowledge about presentation formats (e.g., the structure of stories, commercials); (2) knowledge of media conventions (e.g., formal features, cinematic conventions); and (3) general social or 'world' knowledge" (p. 183). Cook and Mayer (1983) also incorporate content knowledge in their model, too: "A cognitive theory of learning from prose assumes that a reader comes to the reading task with a vast storehouse of existing knowledge. The storehouse includes content, structural, and process knowledge" (p. 93). Bernhardt (1984) who has done research in FL reading, calls for designing materials, which will provide "historical, economic, and visual information in order to approach . . . text with adequate memories for comprehending the passages" (p. 24-25).

From another perspective, content or world knowledge about the target linguistic community is important. There is a growing awareness among FL educators that in addition to reading, writing, speaking and listening, culture
knowledge is a fifth necessary skill (Hiple, 1982). In Near-Native Competence, culture is described as following: "can discuss geography, history, institutions, customs and behavior patterns, current events, and national policies. Perceives almost all unverbalized responses, and recognizes almost all allusions, including historical and literary commonplaces . . ." (Hiple, 1982, p. 6). One aspect of teaching culture of the target linguistic community to second language learners is to provide the necessary content knowledge that is so needed to be able to comprehend oral as well as written messages.

To summarize, providing "stories" from the lifestyle of the target linguistic community is not only to make learning interesting and motivational; but it is a necessary input in reading or listening practice. The learners should practice decoding but at the same time they should study content which will prepare them to comprehend more information during subsequent encounters with second-language oral or written discourse.

Structure

Previously several comprehension models were cited in reference to the content aspect; here it is important to examine them in reference to the structure aspect. Collins and Wiens (1983) discuss two aspects of structure: the structure of the plots of the stories and the structure of their presentation by the media. Cook and Mayer (1983)
review several approaches to structure. There are story grammar theories regarding narratives (Mandler and others); there is a structural analysis regarding expository prose (Meyer, 1975), and some research on content domain. An example is the structures commonly found in science textbooks.

Cook and Mayer (1983) report an investigation to determine if training helps to identify three text structures (generalization, enumeration and sequence). When reading an unfamiliar biology passage the trained students outperformed a nontrained group on both recall and problem-solving tests.

Results of a study by Meyer (1975) indicate that people remember information mainly from the top-level structure of prose. Results of a study by Mandler (1978) indicate that people are using story schema in retrieval. This supports the notion that discourse with a recognizable macrostructure (van Dijk, 1977) is easier to comprehend and remember.

**Signaling**

Signaling is defined by Meyer (1981) as the following: "Signaling can be described as information in the text that does not add new content to a topic, but gives emphasis to certain aspects of the semantic content or points out aspects of the structure of the content" (p. 19).

Meyer's (1981) review of the signaling effect relates it to text type and student skill level. When a text has
"differential emphasis", (some elements are more emphasized than others, often this does not match the "real" content structure) then signaling improves performance of high and moderate achievement students. Also, when a text has "normal emphasis" (as compared to the content structure), signaling improves performance of moderate achievement students but does not contribute much to performance of high achievement students. In the case of high achieving students there was "found only a trend for facilitation that was not statistically significant (p. 19). Poor readers may lack sensitivity to the usefulness of signaling.

Franks et al. (1982) found a strong effect of the explicitness of the text upon students' ability to learn. These researchers differentiated between "explicit text" and "implicit text". The description of the difference between these two kinds of text is similar to the difference between the text having signaling versus the text not having signaling: "The explicit passage provided elaborations that made the information less arbitrary . . . an implicit passage (no elaborations were provided in the text)" (p. 414).

Pictures

Several researchers have investigated the issues of the function of pictures in learning. The researchers have developed a classification of different kinds and functions
of pictures, and within this more detailed framework several answers to the function of pictures were provided.

Winn et al. (1985) classifies functions of graphics: illustration, cuing, and structuring. According to this classification system the pictures used in the generic learning materials served the purpose of illustration. Winn et al. (1985) define this function as follows: "When graphics are used to illustrate something, it is their purpose to show as accurately as possible what something looks like" (p. 6).

Levin (1981) presented a classification system of eight functions of pictures. His classification system (p. 212) is reproduced in Table 1.
Table 1. Proposed Functions of Prose Pictures

<table>
<thead>
<tr>
<th>Function</th>
<th>Anticipated Contribution to Improved Prose Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Decoration</td>
<td>Not applicable</td>
</tr>
<tr>
<td>2. Renumeration</td>
<td>Not applicable</td>
</tr>
<tr>
<td>3. Motivation</td>
<td>Little or none</td>
</tr>
<tr>
<td>4. Reiteration</td>
<td>Little</td>
</tr>
<tr>
<td>5. Representation</td>
<td>Moderate</td>
</tr>
<tr>
<td>6. Organization</td>
<td>Moderate to substantial</td>
</tr>
<tr>
<td>7. Interpretation</td>
<td>Moderate to substantial</td>
</tr>
<tr>
<td>8. Transformation</td>
<td>Substantial</td>
</tr>
</tbody>
</table>

Note. Adapted from Levin, 1981.

Within this classification system, the pictures used in the generic listening material served the functions of reiteration, representation and interpretation. The hypothesis of this researcher was that pictures will function differently for students of various levels. They will be more essential for students with low to moderate achievement in the second language, and for them, the pictures will carry the function of interpretation. For students with moderate to high achievements in the second language, who have not been in the target country (Israel), the pictures will carry the function of representation. For
the small group of students, who have been in the target country, the pictures will carry the function of reiteration.

Levin (1982) provides a framework that classifies strategies which are assumed to contribute either to recall or comprehension of macrostructure or of microstructure. The basic features of his graphical description are provided in Figure 2.

![Diagram of prose-learning strategies]  

**Figure 2.** Prose-learning strategies (adapted from Levin, 1982, p. 414).

Pictures are mentioned in this system as enhancing the learner's memory of microstructure. In addition "pictorial concretization" could enhance comprehension of
macrostructure (p. 415). In the generic listening materials (videotapes), pictures of places and people represented/illustrated and made the details of the stories more memorable. In addition, the general framework was an interview. Thus most of the time the students viewed the two people talking in the studio (a general concrete framework). However from time to time pictures of concrete details were interspersed. Chapter III provides further description of the materials.

Theoretical Framework for the Design of the Computer-Controlled Component

The opening segment of this section analyzes and interprets the results of the pilot test of the generic listening materials. Next two literature bases were consulted: metacognition and study skills. Accordingly, four variables were selected to be implemented into the computer-controlled component. Four subsections follow; each is dedicated to research results concerning the variable in question.

Results of the pilot testing of the generic learning materials can be interpreted by consulting Cook and Mayer's (1983) model of learning from prose. The generic learning materials were designed to be highly structured (not like a frivolous conversation), with the questions of the interviewer pointing to the macrostructures and the pictures
illustrating and making the details more memorable. However, even good students (1) did not recall many episodes, (2) did not pick up a lot of details, (3) overgeneralized the two lines of plot to one plot, and (4) did not see higher order interconnections. Cook and Mayer's (1983) model points to three components that are critical to learning from prose: content knowledge, structure knowledge and process knowledge. Some students had more content knowledge than others, however they did not outperform the others. Although there was structure in the generic learning materials, students who do not possess "structure awareness" did not use the structure to facilitate their learning. These students are probably also deficient in process knowledge as well.

Process knowledge, according to Cook and Mayer (1983), relates to the levels of processing hypothesis (Craik & Tulving, 1975): The more deeply prose is processed, the better it will be remembered. In addition Cook and Mayer (1983) provide examples from newer theories, which advocate several good reading strategies, each one matches a type of performance. For instance, Mayer (1979) has distinguished between "addition" and "assimilation" as two different encoding strategies which produce different types of performances.
It seems as though Cook and Mayer's (1983) "process knowledge" component of the model is not inclusive, as today we know more about studying from text.

Recently, reading researchers are aware of the relationship of metacognitive skills and reading. Baker and Brown (1984) list some of the metacognitive skills involved in reading:

(a) clarifying the purposes of reading, that is, understanding both the explicit and implicit task demands;
(b) identifying the important aspects of a message;
(c) focusing attention on the major content rather than trivia;
(d) monitoring ongoing activities to determine whether comprehension is occurring;
(e) engaging in self-questioning to determine whether goals are being achieved; and
(f) taking corrective action when failures in comprehension are detected (p. 354).

Baker and Brown (1984) report that even mature readers (college students) do not monitor their comprehension very closely. They did not find sixty-two percent of confusions which were deliberately implanted into their reading passages.

Concerning "reading for remembering" which is similar to the task researched here (listening for remembering), Baker and Brown (1984) list the following five activities: "Concentrating on main ideas, making use of logical structure in the material, self-interrogation during studying, self-testing the results of studying, and employing macrorules to ensure comprehension and retention" (p. 368).
These macrorules mentioned are operations of deleting redundancy and trivia, providing superordinates, and finding or inventing topic sentences.

Thus a host of activities exist which include applying previous general knowledge (how can one identify main vs. trivial otherwise?), applying knowledge about the structure of the material, comprehension checking through self-interrogation, and memory checking through self-testing. Applying macrorules is both information reduction and categorization which help both in comprehension and recall.

An examination of study skills literature revealed that some of the variables chosen to the computer-controlled components produced positive results. Others had not been researched. Some of these variables were more effective when presented prior to the text, while others were more effective when presented after the text.

**Advance Organizers**

Meyer (1981) reviewed what she calls "adjunct techniques designed to bridge text and reader variables." Advance organizers were researched extensively. Most of the literature on advance organizers focus upon their content function. Some of the literature points to "positive results" and some to "negligible effects" (p. 26). More recent studies indicate that advance organizers are helpful when the passage to be learned is poorly organized. Another type of advance organizer was recently defined— one that
aims at passage structure. Thorndyke (1977) found transfer learning effects occurred across successive stories with the same plot structure but new characters. However, Meyer et al. (reported in Meyer, 1981) tried twice to replicate Thorndyke's finding with expository prose, and the data failed to show statistically significant differences.

Post-Questions

Questions as an adjunct technique of prose comprehension have been extensively researched (Anderson & Biddle, 1975). Meyer (1981) summarizes the findings as follows:

In general, the earlier studies showed that questions facilitate comprehension of prose. Prequestions were shown to facilitate intentional learning of the cued content, but were not found to increase incidental learning . . . Post questions were found to stimulate more general learning from text, and Frase (1968b) showed that frequent interspersion of postquestions provided the most effective use of questions for overall prose comprehension (p. 23).

Anderson and Biddle (1975) tried to divert attention to the theoretical question rather than to the empirical evidence: "We do not need another demonstration that adjunct questions 'work.' Surely serious application of questioning techniques in the real world of instruction will require knowing why they work and under what conditions" (p. 108).

Rickards and Denner (1978) reviewed the literature regarding "inserted questions" starting from the behavioristic orientation to the cognitive orientation. In
the behavioristic orientation question position and frequency were the important variables. In the cognitive orientation the level of inserted question is most often the manipulated variable. In their summary, Rickards and Denner (1978) generalized that post-question groups exceeded pre-question groups or reading-only groups in recall of incidental passage materials. However there were numerous exceptions to this generalization.

To summarize, the research indicates the advantage is one of incidental learning or what is called "indirect effect." This is an advantage that is important when studying from text or "reading for remembering" (as used by Baker and Brown, 1984), if the intention is that the learner will comprehend and remember most of the information both high and low in the content structure. On the other hand, there is no difficulty in cueing learners to a certain piece of information in a text ("direct effect"). Thus this could be done regardless of the questions' position or level.

Rickards and Denner (1978) also summarize current views on mental processes which seem to be associated with post-questions:

(1) A specific review process which involves mental review of material directly questions; (2) a general review process which results in mental review of nonquestioned material that is adjacent to and/or thematically related to the questioned material; (3) a learning set process in which one focuses attention on the particular type of information being questioned. This learning set develops after having been repeatedly exposed to several post-questions of the same type, and the
set is applied to paragraphs following the adjunct post-questions; and (4) a general stimulatory process which results in increased attention to information in paragraphs immediately following the inserted post-questions (p. 339).

These four processes were also labeled specific backward effect, general backward effect, specific forward effect and general forward effect, respectively.

Levin (1982) differentiates between strategies that are beneficial for macrostructure level of text and strategies that are beneficial for microstructure level of text. In each level he also differentiates between strategies that primarily support comprehension and strategies that primarily support recall. His view is that success in one of the four tasks does not ensure success in others, unless proper strategies are employed by the learner in addition to strategy monitoring. Neglecting one of the levels is referred to as "top-down leap of faith" or "bottom-up lead of faith" (p. 417), depending on which level is strategically processed and which level is expected to follow without conscious effort.

In Levin's (1982) list of recommended memory-directed microstructure strategies one can find reviewing details and answering lower-order questions. He also recommends more strongly mnemonic devices for remembering.
Intermediate Level Retrieval Cues

Successful learning from text is a late developing skill: even college students unexperienced with a certain task do not execute the most efficient strategies. Brown et al. (1978) studied retrieval cue selection. The researchers hypothesized that a sophisticated retrieval plan might involve the selection of relatively less central or important facts as retrieval cues, because recall of main ideas happens without conscious intent to do so. In this study college students did not adopt this strategy in their first trial of recall but afterwards modified their retrieval plan and selected intermediate level units as aids for recall.

The new term metacognition refers to "deliberate conscious control of one's own cognitive actions" (Brown, 1980, p. 453). Brown (1980) describes the "automatic" reading done by skilled readers where all their top-down and bottom-up skills are so fluent that they can proceed with reading quite quickly until a comprehension failure is detected. Then they must slow down and invest time and effort in conscious attempts at debugging strategies. Brown (1980) differentiates between different reading tasks such as deep processing versus skimming, and concludes, "Any description of effective reading includes active strategies of monitoring, checking and self-testing" (p. 453).
Macrostructure Strategies

Levin (1982) is again the source for the macrostructure support feature of the computer-controlled component. In his model that was cited several times he differentiates between comprehension-directed and memory-directed strategies for the macrolevel, too.

Because the students were lacking general cultural knowledge, only the memory-directed strategies were considered important for the computer-controlled program even if some of them have been to Israel, and were familiar with some of the physical characteristics of the places, still it is not much of a cultural knowledge. It was hypothesized that for this beginning level input of cultural knowledge, one macro advance organizer, or any other device, would not change the students' schema in interpreting the discussions which they are listening to. This kind of change could happen only over a longer period of time, when students would be exposed to a large amount of input about the culture of the target linguistic community.

Hence, as stated in Kintsch and van Dijk (1978) the level of macrostructures in comprehension was expected to be operating, but the experimenter wanted to leave the process as variable or biased as naturally would occur with learners who do not possess knowledge of the culture and often create wrong macrostructures.
However, it was important to support the memory of whatever macrostructures the students were constructing in order to evaluate as fully as possible their current state of comprehension.

Levin (1982) recommends as memory-directed macrostructure strategies: text analysis, concretization (through graphs or visuals), summary writing, underlining main ideas or answering higher-order questions. Higher-order questions was the strategy used in this program to support the coding of macrostructures by the listening students for efficient retrieval.

Summary

From the perspective of instructional design researchers, one can observe a marketplace of low quality software coupled with their utopian views of future contribution of technology to education. By contrast, other researchers propose research agendas, which are assumed to be more fruitful solutions to the problem. Following Lesgold and Reif's (1983) recommendation, theories and research results from several fields were consulted to find the variables which are considered to facilitate the processes of comprehension and recall. All the variables were originally conceptualized and tested as aids in prose learning. However, more and more scholars are considering the processing of prose in different media or modalities as
equivalent to the processing of a written text. In general, comprehension involves perceiving individual stimuli and searching for appropriate schemata in order to interpret the meaning of a set of stimuli. Processes that activate stimuli: recognition, perception, recall and meaning extraction are probably different. However, processes that handle the individual meaning and the relationship between the individual meaning and a schema are agreed upon to be the same.
CHAPTER III
DESIGN AND IMPLEMENTATION

This chapter focuses on the design and implementation of this study. The chapter is composed of five major parts: Study Design, Description of the Generic Listening Materials, Results of Testing the Generic Listening Materials, Description of the Computer-Controlled Component and Implementation of the Study.

Design

This section describes two of the main stages of the study: the work regarding the prototypes (design, production and testing) and the design of the experimental study. The two topics are divided into two separate subsections: Design and Testing of the Prototypes and Design of the Study.

Design and Testing of the Prototypes

Knowledge from fields such as reading, discourse processing, and cognitive strategies for comprehension were used as the theoretical basis for the design of prototype material for listening in a second language. The prototype was designed in the following stages:
A. The generic listening material was designed as a videotape in order to provide visual extralinguistic support and to allow various pacing according to student level. Visual support has been shown to facilitate comprehension in FL education studies (Omaggio, 1979; Mueller, 1980).

The design of the videotape was carefully constructed according to recommendations of the research on how to make meaningful materials easier to learn (Pressley, 1983).

In order to avoid claims of special experimental effects that are not typical to the treatment itself two videotapes were produced with two different "stories."

B. The two videotapes were pilot tested on one intact classroom of a Hebrew 102 class at The Ohio State University. The students wrote recall protocols after listening and watching each tape during a different week.

C. Results of the pilot testing were analyzed, and a new component was built into the system according to the weakness indicated by the results. Two computer programs made each videotape computer-controlled and included variables (advance organizers, post-questions, retrieval cues and suggestions for
macrostructures), that were hypothesized to increase comprehension without providing vocabulary or story translations.

D. During the next quarter the computer-controlled videotape was pilot tested at the same period of the quarter (the eighth and ninth week) on a same level intact classroom.

E. An analysis procedure was developed in order to render the recall protocols to numerical data. The procedure was applied on the pilot data (see Table 2).

Design of the Study

In the academic year 1985-86 the two kinds of prototype materials (videotapes and computer-controlled videotapes) were used with students of Hebrew 102 attending Autumn, Winter and Spring Quarters. Students were randomly assigned to one of the following three sequences for practicing listening skills (see Table 2).
Table 2. **Study Design**

<table>
<thead>
<tr>
<th>Story</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Video</td>
<td>Computer-controlled Video</td>
<td>Computer-controlled Video</td>
</tr>
<tr>
<td>II</td>
<td>Computer-controlled Video</td>
<td>Video</td>
<td>Computer-controlled Video</td>
</tr>
</tbody>
</table>
Table 3. Distribution of Subjects in Treatment Groups

<table>
<thead>
<tr>
<th>Sequences</th>
<th>High</th>
<th>Low</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>2</td>
<td>6</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>6</td>
<td>10</td>
</tr>
</tbody>
</table>

Note. Pretest mean in each sequence was very similar: 28.9, 28.3 and 28.8 in sequences 1, 2 and 3 respectively.

Description of the Generic Listening Materials

Two interview scripts were written. The variables incorporated into the scripts are described below, followed by specific examples from the stories.

Content

The objective of the program was to provide to the students facts about the lifestyle of the target linguistic community living in two different locations in the country: a historic city which has a large university (Jerusalem) and a resort city (Eilat). The facts were intended to be remembered independently and also tied to more concrete (visual) experiences of how the places and people look. In order to make the facts more comprehensible and more
memorable the two "stories" were structured as outlined below. Also, in order to strengthen the concreteness aspect and to create more learner involvement in the stories, some parts of the stories were unfolded around a human model, mainly the interviewee. However sometimes the interviewer "remembered" that she was also involved in similar events. The importance of human modeling to attitude learning is discussed in Gagne (1977).

**Story Structure**

The story structure can be divided into two constructs: "dynamic" structure and "static" structure. The "dynamic" structure is created through the sequence of the story while the "static" structure is created from all the elements in the story, regardless of sequence, and can be appreciated only after reading or listening to the whole story. These constructs are sometimes used in the literary theory field.

**The Dynamic Structure.** The dynamic structure or sequence of the two stories follows a similar pattern: The interviewer greets the interviewee and announces the topic: HAYOM ANI ROTZA LEDABER AL YERUSHALAIM (Today I would like to speak about Jerusalem). Next, two more elements follow: (not always in the same sequence) a general statement about the place, and the interviewee's relationship to this place. This establishes the credibility of her expertise. In one story the general statement is: YERUSHALAIM MEOD YAFA UMEOD
ME'ANYENET. YESH DEVARIM XADASHIM UMODERNIYIN VEYESH DEVARIM ATIKIM VEYESHANIM (Jerusalem is very beautiful and very interesting. There are new and modern things, and there are old and ancient things.) In the second story the general statement is a combination of a question and an answer: LAMA ANASHIM NOS'IM LE EILAT? KI ZE MAKOM LA'ASOT XAIM BE'IKAR BIGLAL HAYAM (Why do people go to Eilat? Because this is a place to enjoy oneself, mainly because of the sea.) In the story about Jerusalem the interviewee reveals that she knows the city because she has been a student there for five years. In the story about Eilat both the interviewer and interviewee have been there and they both tell how they arrived (means of transportation) and the activities in which they were involved.

The rest of the story is unfolded through questions and answers which follow a certain general outline. In the story about Jerusalem the general outline focuses upon a typical week of a student. Most of the information focuses upon the social life of the students. Sometimes the interviewee is talking in a general manner: BEYAMIM REGILIM: HOLXIM LEKURSIM, LOMDIM BASIFRIA VEGAM OVDIM (Usually people go to courses, study at the library and also work). Sometimes she talks in a general manner. However, she specifically includes herself as experiencing the event: HARBE PEAMIM HAYNU KONIM FALAFEL VEHOLXIM BAREXOV IM AFALAFEL BAYAD (Many times we used to buy falafel and go on
the street with the falafel in hand). And in a few cases she talks about her experience as different from that of other students; e.g., she did not have a family in Jerusalem, but she had very good friends.

The expected advantages of the structure just described are organization on the one hand and variety on the other hand. For instance, the activities in the Jerusalem story are organized around days of the week and even certain parts of each day, such as: boys are going to watch soccer on Saturday afternoon. However, variety is achieved by the relationship of Batia's (interviewee name) plot to the main plot. The expected disadvantage could be that the existence of two plots (Batia's plot and most students' plot) will create a burden on the learners who may exhibit task overload.

At the end of the interview, the interviewee is prompted to summarize her experience with a general statement. In the story about Jerusalem a question and an answer serve this purpose: AZ MAHI YERUSHALAIM? IR MODERNIT O ATIKA? (So what is Jerusalem? A modern city or an ancient city?) GAM ZE VEGAM ZE. YESH BA GAM YASHAN VEGAM XADASH (Both. There is in it both old and new). In the story about Eilat again the last question and answer are dedicated for a summary statement. Question: AZ MA ZE EILAT? MA ME'ANYEN SHAM? HATEVA? (So what is Eilat? What's interesting there? The nature?) Answer: GAM HATEVA
VEGAM HA'ANASHIM . . . KOL . . . HAKOL SHONE HAKOL MEYUXAD BEEILAT (Both the nature and the people . . . all . . . everything is different, everything is special in Eilat).

The Static Structure. As for the static structure or "content structure" (Meyer, 1975), it seems that it is not as simple to obtain in the interviews, as it is in expository prose.

A nice framework to the different genres of oral language is provided by Byrnes (1984). Byrnes (1984) differentiates between four types of oral language which are subsets of the totality of language use and are also typically occurring under different circumstances (see Listening Comprehension in FL Education in chapter II).

The language produced in the videotapes could be mainly classified as type 2 in Byrnes's framework. There was an informational aspect intended for the students to learn but it was also interactional. There was some aspect of type 4. The stories were well structured so elements in the stories were highly interrelated to facilitate recall. However, because the genre was an interview with an authentic "expert" from the target linguistic community, then the type 4 aspect was not expected to be highly salient in the students' interpretation.

In the story about Jerusalem the underlying theme was the combination of old and new in one city. This idea was expressed in the opening and closing generalization but was
also in the description of the two parts of the city (old and new) and in the students' social life (a traditional family meal on the one hand and a disco on the other hand). In the story about Eilat the underlying theme was that this resort city is a special place due to its natural attributes and due to the kinds of people one can find there. This idea was expressed in most of the activities which were related to the sea shore, the underwater marine life, and in the variety of people who go there: Israelis and tourists, newly wedded couples, youngsters who want a "break", and beach bums.

To summarize, the qualities of oral language, e.g., fragmented syntax, are different from those of written language in expository prose, where there are conjunctions to show and to "signal" (Meyer, 1975) the author's higher order structure. In these interviews the two legitimate levels of interpretation—an unedited description of a reality from an expert interviewed and/or an artistic selection of underlying themes—lend themselves to two different "content structures" (Meyer, 1975). Although the details of each story stay the same the higher order macrostructures, which are so important for recall (Meyer, 1975) are different.

Another factor in creating the static story structure was the cultural aspect. Because the events of the stories do not occur in the students' native country, the students
lack cultural schemata and are expected to show different patterns of recall. The importance of cultural knowledge to recall of stories was shown long ago by Bartlett (1932) and recently by Steffensen et al. (1979).

Because of the cultural consideration, the stories were translated into English and the translation was done with the editorial aid of an American. Four American graduate students were instructed to read the stories with no time limitation. Then they sat with the author to described to the author the content structure of the stories.

The construct "content structure" (used by Meyer, 1975) is used here in a broader sense than originally used by its author. The broader definition is influenced by Kintsch and van Dijk's (1978) theory which differentiates between microstructure (text base) and macrostructure (reader's schemata as related to the text). The broader definition is more sound psychologically. Meyer (1975) includes in her definition a tree structure composed of vocabulary items actually present in the text, however her model does not consider the reader's input.

The Kintsch and van Dijk (1978) approach is more appropriate to the complexity involved in discourse comprehension, as explained ahead. Kintsch and van Dijk (1978) say that, "The semantic structure of a discourse is characterized at two levels, namely, at the level of microstructure and of macrostructure. The microstructure
is the local level of the discourse, i.e., the structure of the individual propositions and their relationship. The macrostructure is of a more global nature, characterizing the discourse as a whole" (p. 365).

Meyer's (1975) content structure carries an implied assumption that the reader/listener comprehension and recall are based mainly on textual data and his/her report (like in a recall protocol) reflects the same elements but sometimes not in the same hierarchical order. Kintsch and van Dijk (1978), on the other hand, state clearly that there are two semantic structures: the microstructure which is text based and the macrostructure which is schema based. The results of the procedure performed by the American raters of the translated interviews, are a further indication to the validity of Kintsch and van Dijk's (1978) theory as described ahead. The raters equally perceived the details and lower-order episodes of the stories but differed on higher-order categorizations.

In reference to the raters, the macrostructures described by all five in the story about Jerusalem were almost identical for the higher-order categories that subsumed all the information: People and Places. These categories were not always named the same, but they were similar. (See Table 4).
Table 4. **Macrostructures of Jerusalem Story**

<table>
<thead>
<tr>
<th>Rater</th>
<th>People</th>
<th>Places</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Student Life/ Batia</td>
<td>Jerusalem: modern and ancient</td>
</tr>
<tr>
<td>K</td>
<td>People</td>
<td>Places</td>
</tr>
<tr>
<td>E</td>
<td>Batia</td>
<td>Jerusalem</td>
</tr>
<tr>
<td>S</td>
<td>Lifestyle</td>
<td>Physical characteristics</td>
</tr>
<tr>
<td>D</td>
<td>Student Life</td>
<td>Jerusalem: modern and ancient/ Hebrew University</td>
</tr>
</tbody>
</table>

The above scheme was simplified and tended to emphasize similarities. However there were also some differences: rater D rated the place category as superordinate to the people's category, while rater K rated them as two separate and equally important categories.

Thus, there was a difference between the author and the other raters in the second level categories, especially in breaking down of people/lifestyle category. Here the cultural knowledge and/or perspective of the raters played a role: the author's hierarchy organized the details about the students' activities around days of the week, while the
American raters used the following structures to categorize the events:

D: A list of activities
K: Activities on campus vs. activities off campus
S: Activities of students vs. activities of families

The differences exhibited can be attributed to both individual differences and cultural background. However teaching about a culture cannot be accomplished with only two exposures to instructional materials.

Signaling

Some signaling was used in the two interviews. In the Jerusalem story the statement of the theme (a city which is both old and new) was repeated twice; once close to the beginning of the interview and once as a closing statement.

In the story about Eilat more signaling was used. One signal was the addition of a statement before the interviewer's questions. The following is an example:

ANAXNU TZRIXOT LEDABER AL HA'ANASHIM SHENOS'IM LE'EILAT. MI NOSEA LE'EILAT? (We should talk about the people who go to Eilat. Who does go to Eilat?) Another example of signaling was a summary statement of a preceding large text portion. The following is an example: TOV AZ ANI YODA'AT: BABOKER OSIM SPORT, HOLXIM LAYAM LEHISHTAZEF O' LEHISTAKEL AL HADAGIM. (Well so I know: in the morning people do sports, go to the sea to get suntan or to look at the fish.)
Pictures

The two taped interviews were interspersed with pictures (and sometimes also music) of places and events mentioned in the dialogues. For example, when the interviewee said that the students go Saturday morning to visit the ancient part of the city, pictures from the ancient part of the city were shown. An example from the second story is: When the interviewee was asked what activity she did in Eilat, she said that she learned to dive into the water, and that many people were diving there, to see tropical fish because the water is warm year-round. The pictures of a diver and an underwater scene of corals and fish represented this.

To summarize, the pictures provided context, but looking at the pictures the listener could not have recreated the entire episode.

Results of Testing the Generic Listening Materials

Since there was not another group with whom to compare performance, the following descriptive measures were used to describe the results of the pilot group: total length of recall protocol, paragraphing, local and global coherence markers, use of macro-propositions, content accuracy, depth of recall in each microstructure, and overall organization of the recall protocol.
Story I Performance

Length. Five out of eight protocols were only half a page long. The two best students produced from recall a three-quarter of a page protocol. Only one student produced one and a fourth pages.

Paragraphing. Five of eight students did not use paragraphs at all. Two students marked paragraphs inconsistently. Only one student correctly marked the paragraphs.

Coherence markers. One student tried to create a translation of the interview and to reproduce the question and answer format. Some of the questions were just her own partly-correct reconstruction. This was the least coherent protocol.

The other seven protocols used expository prose style to summarize the interview (which is the most efficient strategy). However they differed in their coherence. The best and worst protocols are reproduced below (see Appendix F). The worst protocol includes some referential ties such as "she lived" and "she also went to school." Unrelated nodes are tied with "there is." The best protocol is divided into four distinct paragraphs, each one dedicated to one function: (1) macropropositions about the entire interview, (2) the elements of the plot relating to Batia, (3) elements of the plot relating to the students in
general, (4) general statements about the city of Jerusalem and regarding Batia's attitude.

Content accuracy. Even the best protocol demonstrated some mixing of facts from the two plots: The student wrote that she (Batia) sees her family on weekends. However in the story the students go to a family, and Batia has only friends. There was also over-generalization. The story is about taking the bus from campus to downtown and not about always taking the bus (which is possible). Other mistakes appeared in the protocols. As an example: in the tape the students study 5-1/2 days in a week, however the student wrote that there are 500 students at the university.

Depth of recall in the microstructure level. Even in the best protocol, when using an episode which is easy to interpret because of its similarity to American life, the student wrote: "They go to discos and dance." The student wrote only one sentence, however the original input from the videotape contained 17 idea units (see Appendix F).

Overall organization. Except for the students who clearly paragraphed (as in the good example) overall organization was poor. One student (with the lowest vocabulary grade) wrote a long and paragraphed recall protocol but with a lot of pictures descriptions, guesses with no basis in the dialogue, and inferences. This was a clear case of minimum amount of language processing. It seems that overall organization of the recall protocol could
be an important criterion only after most of the propositions have been processed.

**Macropropositions.** Very few macropropositions were used. Only three students tried to write those. An example is: "She told about the college and its functions." However only few of the macropropositions were true.

According to Kintsch and van Dijk's (1978) text comprehension model, a schema, which is usually shared by the members of a given cultural group, determines which micropropositions or generalizations of micropropositions are relevant, and thus which parts of the text will form its gist.

Hence, production of relevant macropropositions seems a high level performance that cannot be normally expected from students who are unfamiliar with the foreign culture and who are novices in this language as well.

**Conclusions of Pilot Results**

Performance on the second story exhibited similar characteristics to performance on the first story. It seemed as though (according to the grade in the vocabulary quiz) students were not applying their knowledge of vocabulary. It seemed as if they did not know how to study. Therefore, the study skills literature, discourse processing literature, and some work regarding metacognitive development was reviewed in order to produce the computer-
controlled component, which was hypothesized to create conditions for better performance.

Description of the Computer-Controlled Component

The undergraduate students who are novices in a foreign language have presumably very low skill levels in "automatic listening," which is hypothesized here as similar to automatic reading. Also, it was hypothesized that these students are on different levels as skilled learners: some have probably developed sophisticated study skills while others have not. Therefore, the computer-controlled component was designed as modeling a text-learning strategy which will structure the time the students are engaged in practice.

Categorizing Into Component Episodes

The recall protocols of the group experiencing the videotape were fragmented. It seemed that the students were not aware of the higher-order structure of the interview. Therefore in the computer-controlled treatment, the computer played each episode at a time to make episode boundaries more salient.

Forward Cues

The "forward cues" were computer screens before each episode. These included content advance organizers and structural advance organizers. Both cues were designed to be very general in nature, so as not to disclose the content
of the interview and by that providing a content advantage rather than a strategy advantage to the students listening in the computer-controlled setting.

An example of a content advance organizer is the following excerpt from the interview about Jerusalem:

"LISTEN AND FIND OUT BATIA'S RELATIONSHIP WITH THE CITY OF JERUSALEM . . ."

This was an introduction to the topic discussed in the following episode. However the introduction could not help the listener to write a recall protocol, by saying: Batia (the interviewee) had a relationship with the city of Jerusalem . . . Only by learning the videotape in Hebrew could the student pick up the facts that she was a student at the Hebrew University in Jerusalem; she lived in this city for five years; she was actually born in Tel-Aviv, and as a single student, she had a good time in this city.

An example of a content advance organizer from the second interview is the following:

"THIS PLACE IS FOR ISRAELIS--LIKE ?? ?? FOR AMERICANS"

This was a very implicit advance organizer, which was intended to activate students "knowledge of the world" from their American experience. Next they listened to a segment describing why people go to Eilat (a resort city).

Structural advance organizers were not always exclusively different from content advance organizers. However, in general they were hints to episode
interrelationships. An example from the story about Jerusalem is the following. After the episode of the Friday night family meal, the computer prompt was:

   AFTERWARDS THERE ARE TWO CHOICES. THE FIRST ONE . . ."

and before the following episode the advance organizer was:

   "AND THE SECOND CHOICE . . ."

Again, only from the tape in Hebrew and not from the computer prompts could the students learn that the time frame is Friday, and first comes a family meal and then come two entertainment choices for the students; one is a "singing-night" and one is a disco.

**Backward Cues**

The cues referring back to each episode were intended for self-monitoring and for review which would enrich the learning from the episode. It was hypothesized that even the best students will only pick up the gist of the episode in first listening, and they would need a review to pick up more. Regarding the selection process in encoding see Meyer (1975). On the other hand, lower skill students would use the backward cues for self-monitoring.

Backward cues were divided into two types: post-questions that appeared on the screens. They were always labeled "THINK". The second type were suggestions for intermediate level retrieval cues that always appeared on screens labeled "REMEMBER." No feedback was provided in this treatment. The modeled strategy was to provide some
hints for students who had learned vocabulary but had not practiced comprehension in a second language. The hints were intended to encourage the learners to invest time and effort in search activities until they found a coherent interpretation to the discussion. The rationale was that the best solution would be to train them to rely on their own resources rather than providing "spoon feeding."

Since the treatment was based on relying on one's own resources, with the same hints for all learners, it was hypothesized that the treatment would benefit all the students. However, students with a larger Hebrew vocabulary base and perhaps students with better study strategies (good students in general) would profit more from the treatment, since they have a larger resource base to begin with. An example of a THINK computer page could be:

********THINK********

THE PLACE WAS REALLY TWO PLACES.

W-H-A-T ARE THEY?

W-H-E-R-E ARE THEY?

TO WHICH ONE WAS BATIA RELATED?

CAN YOU LIST SOME OF THE THINGS THERE?

iF YOU ARE NOT SURE--GO AHEAD AND LISTEN AGAIN . . .

In this THINK page very little content was provided. The learner only receives the following information: the discussants talk about two places, and mention that Batia was related to one of them. However, this information could
be reassuring to learners who understood that the discussion was about the two campuses of the Hebrew University in Jerusalem; one campus in the new western part of the city, and one campus in the old eastern part of the city. Batia studied on the western campus and she lived in a student dorm. Then she describes the campus which includes big buildings, several cafeterias, a very big library and a museum. Even if one comprehended the general idea, still three or four questions of a discussion of 0.44 minutes (average length of an episode) would presumably urge even a good student to go back to the previous episode and to pick up answers to the questions he could not answer after the first listening.

An example of a REMEMBER could be:

********REMEMBER********

T-W-O PLACES
BATIA WAS RELATED TO O-N-E OF THEM.
THERE ARE SOME FAMILIAR THINGS THERE.

The local intermediate-level retrieval cues (the REMEMBER) would direct to the levels of importance within the details of the conversation. However these cues also suggested the student to encode this information (by rehearsing or taking notes) and not forget it. Students were motivated to follow instructions, as they were aware that at the end of listening they are required to write a detailed recall protocol.
Several Suggestions for Macrostructures

In a pilot study previously conducted with natives, it was observed that they did not use the same organization plan in their recall protocols, which was confirmed by their self-reports of memory strategy. Therefore, several suggestions of macroorganization were suggested to the students at the end of the program under the title REVIEW.

Kintsch and Van Dijk (1978) in their model of text comprehension and production theorize a text base which is a "linear or hierarchical sequence of propositions in which coreferential expressions occur" (p. 365). Another level which is necessary in discourse comprehension is the macrostructures which are derived by applying macrorules that "both reduce and organize the more detailed information of the microstructure of the text" (p. 366). Kintsch and van Dijk (1978) point to world knowledge and schematic structure of discourse as needed to establish connection and coherence at the microstructural level and also for application of macrorules.

Based on Kintsch and van Dijk's (1978) theory it was assumed that by the end of the program the students would establish one or more macrostructures. Accordingly the REVIEW would only be reassuring. However the review page would help the less skilled learners to see inner connections, which are assumed to contribute to both comprehension and recall. This phenomenon was labeled
"organization plan" by Meyer and Rice (1983) when they studied how certain texts are more likely to be recalled using the same organization plan (top-level structure) while others are more likely to be recalled using other organizational plans.

An example of this is found in the interview about Jerusalem:

*********REVIEW********

ORGANIZE YOUR THOUGHTS ACCORDING TO ONE OF MORE OF THE FOLLOWING IDEAS:

(1) --TIME--WHAT DO THE STUDENTS DO ON DIFFERENT DAYS OF THE WEEK?

(2) --PLACE--THE DIFFERENT SECTIONS OF THE CITY AND WHAT IS DONE THERE.

(3) --PEOPLE--WITH WHOM DO STUDENTS INTERACT AND WHEN?

(4) --QUALITIES OF THE CITY--HOW ARE THE TWO QUALITIES CHARACTERISTIC OF PEOPLE, PLACES, AND EVENTS?

(5) --BATIA--WHAT EVENTS REALLY HAPPENED TO HER?

Program's Conceptual Map

Cambre and Cook (1984) reviewed the research which defined computer anxiety, measured it, and examined its correlates. One point mentioned by Cambre and Cook (1984) is the following: "An anxiety reaction to stress can occur as a result of uncertainty associated with external or environmental factors as well as internal or cognitive factors" (p. 4).
The computer-controlled program is not reviewable as many other computer programs. In this type of computer program the user cannot randomly access each "frame." The program is displayed in a certain predesigned order ("program control"), and it is assumed that the user will follow directions without always being aware of what follows each frame, or being aware of the general principle upon which the program was designed. Hence it was hypothesized that it could be a source of anxiety to some students and therefore would not help them in the listening practice.

Consequently, a fifth variable was conceptualized in the computer-controlled treatment. A map of the basic pattern of the program was drawn and explained to the students twice before sitting down to work (see Figure 3). It was emphasized orally that the videotape in Hebrew

**Figure 3.** Program map.
was the primary learning experience, while the computer programs would provide some pre- and post-cues to make the listening easier.

Summary of the Computer-Controlled Component

After two screens of instructions, the program displayed the following repetitive pattern: a screen with an advance organizer, a videotaped episode played, a screen with a list of post-questions (THINK), a choice point screen (GO BACK? Y/N), next a student could choose to go back to the last videotaped episode (no limit of how many times) or to advance to the retrieval cue page (REMEMBER). This pattern repeated itself in each episode. At the next stage in the program a list of macrostructures appeared (REVIEW).

The last component was a choice point which provided four options: to watch the videotape without computer guidance, to listen to the taped discussion with neither visuals nor computer guidance, to go through the structured program again or to quit. These choices were not hypothesized to make much of a difference on how much was learned, since the initial encoding of the story had been done already.

The initial encoding was designed to create as large a text base as possible, this would ensure meaningful practice at the decoding level. Cook and Mayer (1983) provide a framework for assessing learning outcomes as a result of reading: (1) Number and type of nodes; (2) internal
connections; (3) external connections. In order to achieve a good listening comprehension practice at the level of novices, the first two criteria were considered to be important. The third criterion was not considered to be important, because a skeletal text base with a lot of "external connections" to other bodies of knowledge, would not be fruitful at that level of novices. The objective was that the students would gain a great deal of practice. In order to gain this amount of practice, one should decode every expression in the second language.

Results of Testing the Computer-Controlled Listening Materials

When the computer-controlled videotapes were produced they were pilot tested on a Hebrew 102 intact classroom. The nine students listened to each story during the eighth and ninth week of that quarter and wrote recall protocols after listening.

This set of data was not analyzed by the descriptive measures that were used with the group that listened to videotapes. The descriptive measure did not seem to be precise enough for comparing two groups. As a result a new analysis procedure was developed (see Analysis section below).

The new analysis procedure was applied on the data of the two groups (videotape and computer-controlled
videotapes). The numerical results were not put to a statistical test, since the comparison would have been between two intact classrooms that could be different in many respects. Therefore the numerical data was plotted on graphs (see Javetz, 1986).

As stated in the original document (Javetz, 1986, p. 62): "students who were novices in the language but who had a relatively big vocabulary, could not apply their vocabulary knowledge [in the videotape treatment] for comprehension any better than their classmates who had much less vocabulary. But students who used the computer-controlled programs and had a larger vocabulary than classmates could outperform them."

The result of better performance with computer-controlled videotapes for medium and high students was considered tentative until confirmed by an experimental study.

Implementation of the Study

This section presents a detailed description of the actual conditions under which the treatments were administered. The section is organized by these topics: Materials, Subjects, Setting, Data Sources and Procedures. Because the study tested prototypes, use of the materials within the natural setting was desired. Prototype research by definition should be conducted in the natural setting,
since it is not basic research. Prototype research uses principles, derived from basic research, incorporated in a realistic configuration and preferably in the natural setting. Results of such studies may refine principles derived from basic research due to the natural setting aspects: social interaction, real learning task, realistic incentives and performance under typical distracting conditions.

Materials

The two videotaped Hebrew interviews were the generic listening materials. One was named, "Batia is Telling about Student Life in Jerusalem" ("Jerusalem" for short), and the other was named, "Batia is Telling about Eilat" ("Eilat" for short). The Jerusalem story was 523 words long, out of which nine percent were words not included in the Hebrew textbook glossary. The Eilat story was 640 words long with eleven percent of the words were not included in the Hebrew textbook glossary.

The computer-controlled programs were written using the BCD authoring system for computer-controlled videotape. In the computer-controlled mode students listened to each interview, segmented into component episodes in the following order:

A. Before each episode appeared an Advance Organizer
B. The videotape played the episode
C. Post-Questions (THINK page) appeared on the screen
D. A question appeared (go back yes/no)
E. If the student chose not to go back, the next screen would be a few summary statements about the episode.

These were hypothesized to be good Retrieval Cues (REMEMBER page). This pattern repeated itself until the end of the program, where a list of suggestions for Macrostructures was presented (REVIEW). At the end of this linear sequence there was a choice point, where students could choose to go through the program again, to watch the videotape without computer interruptions, listen to the interview without visuals, or quit (see program map in Figure 3).

Subjects

Students were enrolled in a Hebrew 102 course at The Ohio State University. They came to the computer laboratory to fulfill a course requirement. Hebrew 102 is usually offered in one or two sections per quarter, with an enrollment range of five to fifteen students.

In the academic year of 1985-86, the entire population of Hebrew 102 participated in the study; one section in Autumn Quarter, two sections in Winter Quarter and one section in Spring Quarter. There was a total of 32 students. All students were native speakers of English.

Students came once in the eighth week of the quarter to listen to the Jerusalem story (story I) and then came once
in the ninth week of the quarter to listen to the Bilat story (story II).

Setting

Each student could use the equipment for approximately an hour. The setup of the lab included an Apple II plus microcomputer, a half-inch videotape player, a color television monitor to display the videotaped program, and a "green screen" to display the computer messages.

When students were using the programs in the videotape mode, they sat in front of the same configuration of equipment. However only the videotape and one monitor were operating. When the students were using the programs in the computer-controlled mode, the four equipment components were operating. It is important to note that a student, when studying from a videotape, had direct access to the videotape player which was temporarily disconnected from computer control.

The students used the computer laboratory on regular operating hours. Students from other courses were also using the laboratory, including the printers.

Data Sources

Each student listened to one interview for about an hour. The interview had a net playing time of about eight minutes. Students were encouraged to take notes. After they stopped listening they studied their notes for a few minutes and then wrote a recall protocol in English. They
were instructed to write as much as they could remember. A week later the same process was repeated for the second interview.

A surprise Hebrew vocabulary pretest was administered a few days before the first listening treatment. The pretest included 50 Hebrew words, which were randomly chosen from the first Hebrew textbook's glossary (Hayon, 1970). The first Hebrew textbook is used during the courses Hebrew 101 and Hebrew 102 at The Ohio State University.

To summarize, the data included 32 vocabulary pretests and 64 recall protocols (two from each student).

Analysis

The data were in the form of recall protocols (expository prose) in English. In order to analyze the recall protocols, several sources, focusing on text analysis, were consulted, such as Bernhardt (1983) and Meyer (1975), however none was chosen as the single method of analysis. Meyer's method ignores macropropositions because they are not mentioned in the text. Meyer's method is also too rigid as far as the hierarchical relationships between elements in the text. In her studies she found that her subjects mentioned in their recall protocols more higher level propositions than lower-level propositions. However she did not find a duplication of the author's "content structure." Since Meyer did her studies with subjects who were good readers and who were all processing first language
(English), it did not make sense to adopt her analysis procedure with diverse students, who are processing in a second-language (Hebrew).

Bernhardt's (1983) method could not be used as the only method of analysis. This method is sensitive to vocabulary and also tends to create small idea units. Both characteristics are in accord with second-language learners needs. These learners stick to the words they heard or read and do not replace them with others. These learners also remember short ideas, because they very quickly experience a memory overload. However Bernhardt's (1983) method deals with a text as a sum of many individual units equal in value. This notion is in complete contradiction with schema theory.

According to schema theory comprehension occurs when a reader/listener finds a match between the new text and one of the schema/scripts which are stored in his/her memory. A script is defined by Schank and Abelson (1977) as "a structure that describes appropriate sequences of events in a particular context . . . a script is a predetermined stereotyped sequence of actions that defines a well-known situation." When a text has to match a script, then certain items of the text become more important. Those are the major variables of the script. The rest of the information could be called details, since they add information to the major hypothesis or script.
Consequently, two analyses procedures were used. One was an identification of episodes in the text, which was based on script theory. The other was an identification of details in the text which was similar to Bernhardt's (1983) procedure. The combination of the two methods afforded the advantages of Meyer's (1975) technique without the disadvantages of rigidity—when she assigns precise numerical value to each proposition.

An instrument was developed for each story. The instrument included a listing of all idea units which were narrowly defined (see Appendix B). Another instrument was also developed for each story in which component episodes were listed and criteria for positive identification of each episode were developed. The division to component episodes was identical to the one which was used to categorize the stories for the computer-controlled treatment (see Appendix B).

The experimenter used two types of analyses to rate the 64 recall protocols, and recorded the results on a data collection sheet (see Figure 4). The first analysis was a count of the number of episodes mentioned in each protocol. Certain criteria were set for positive judgment. If an episode was mentioned and it also satisfied the criteria, a plus score was inserted in the corresponding box. If details from the episode were mentioned, but the criteria were not satisfied, a minus score was inserted. If the
episode was not mentioned at all, a zero score was inserted. (For a similar procedure see Kintsch & Greene, 1978.)

The second analysis was to count the number of details that were mentioned in each protocol. The instruments of idea units were used, and each detail that matched the listing in the instrument received one point. (For such a procedure see Bernhardt, 1983.)

Therefore, the summary box for each student's performance consisted of two numbers: one was the count of plus scores, which is the number of episodes recalled, and the second (circled) was the count of the number of details recalled. (See summary line in Figure 4.)

An instructor of the Hebrew program served as an auditor to the experimenter's judgments. The experimenter scored all 64 recall protocols both for episode count and for detail count. The auditor scored only 30% of randomly selected data. Correlations were computed and the results are as following shown in Table 5.

Table 5. Correlations with auditor's scores

<table>
<thead>
<tr>
<th>Story</th>
<th>Episodes</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>0.87</td>
<td>0.81</td>
</tr>
<tr>
<td>II</td>
<td>0.91</td>
<td>0.64</td>
</tr>
</tbody>
</table>
### Figure 4. Data collection sheet.

<table>
<thead>
<tr>
<th>Episode</th>
<th>$S_1$</th>
<th>$S_2$</th>
<th>$S_3$</th>
<th>$S_4$</th>
<th>$S_5$</th>
<th>$S_6$</th>
<th>$S_7$</th>
<th>$S_8$</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>3+</td>
<td>1+</td>
<td></td>
<td></td>
<td>6</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>2+</td>
<td>1+</td>
<td>0</td>
<td></td>
<td>9</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>3+</td>
<td>1+</td>
<td>3+</td>
<td>3-</td>
<td>0+</td>
<td>0+</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

**Legend**

+; -; o experimenter's scores for episode performance

[4]; [3] experimenter's scores for details in each episode

+; -; o auditor's scores for episode performance

[5]; [7] auditor's scores for details in each episode

Summary line
These results established confidence in the experimenter's judgments and the following analyses were done based on her initial scores.

However before the scores were statistically analyzed, they were all transformed into percentages. The computation needed to be done by percentages and not by raw scores, because there was a difference between the maximum score one could get on Story I (Jerusalem) and on Story II (Eilat).

Two ANOVA tests (one for episodes scores and one for detail scores) of $2 \times 2 \times 2$ were computed. The purpose was to determine if the method of listening produces any impact comprehension. Two ANOVA tests (again for episodes and details) of $2 \times 2 \times 3$ were computed to determine if the instructional sequence produces any impact on comprehension. More tests were conducted to determine if these elements, method and sequence, had an impact on comprehension within one story.

The ANOVA tests could show only relationship between groups' averages. To observe interactions and correlations between the treatments and student sub groups the data were plotted on graphs.

**Summary**

The prototypes were produced according to the variables that were conceptualized in the design.
After pilot testing of the generic listening materials, the computer-controlled component was designed and implemented. When the two prototypes were ready, the study was designed.

The study design was experimental and the subjects were randomly assigned to treatment groups. The design was conceptualized to determine method effect (video or computer-controlled video) and sequence effect (V-CV; CV-V; or CV-CV).

A new analysis procedure was developed, based on two different methodologies which were previously used. Completing the Data Sheets required verification of the experimenter's judgments. An auditor sampled 30% of the data and graded the protocols for episodes and details. Most correlations between the experimenter's scores and auditor's scores were satisfactory. Therefore the scores in the summary lines of the Data Sheets were fed into the computer.

All scores were transformed into percentages and several statistical tests were conducted. The data were also plotted on graphs, so tendencies and interactions could be observed.
CHAPTER IV
RESULTS

In chapter IV the four research questions are addressed by reporting the results of statistical tests performed on the data.

Two procedures were used to analyze the data that is described in chapter III. One was statistical tests, that were conducted on group variances--ANOVA and ANCOVA. The second was graphing the data, where one could see both the individual scores, and the regression lines of the different groups. Both procedures were done with the aid of SAS at the Instructional Research Computer Center of The Ohio State University.

The Impact of a Method

The first research question was: is one method more effective than the other--in general or for a particular story? In order to answer this question all scores from the two stories were tested with ANOVA: first the episode scores and second the detail scores.
Episode Scores

All the episode scores were analyzing a $2 \times 2 \times 2$ ANOVA. The symbols correspond to 2 levels of learners (High vs. Low), 2 stories (Jerusalem vs. Eilat) and 2 methods (Video vs. Computer-Controlled-Video). Results are shown in Table 6 and Table 7. There was no significant difference to the use of one method over the other. The High group (Group 1) outperformed significantly ($p < .0055$) the Low group (Group 2), which would be expected.

Detail Scores

The detail scores were analyzed using a $2 \times 2 \times 2$ ANOVA. There were again 2 levels of learners (High vs. Low), 2 stories (Jerusalem vs. Eilat) and 2 methods (Video vs. Computer-Controlled-Video). Results are shown in Tables 8 and 9.

Here too there was no significant difference between one method and the other. The High group (Group 1) was significantly better ($p < .0019$) than the Low group (Group 2) as expected. There was no other significant result.

The Impact of an Instructional Sequence

The second research question was: is one instructional sequence more effective than the others—in general or for a particular story? In order to answer this research question all scores from the two stories were put to ANOVA tests: first the episode scores and second the detail scores.
Table 6. **Effects of Group, Story and Method on All Episode Scores—ANOVA**

<table>
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<tr>
<th>Source</th>
<th>df</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>1</td>
<td>1570.611</td>
<td>1570.611</td>
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<tr>
<td>Story</td>
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<td>199.543</td>
<td>199.543</td>
<td>1.06</td>
</tr>
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<td>Method</td>
<td>1</td>
<td>247.432</td>
<td>247.432</td>
<td>1.32</td>
</tr>
<tr>
<td>Group * Story</td>
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<td>91.518</td>
<td>91.518</td>
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<td>Group * Method</td>
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<td>35.887</td>
<td>35.887</td>
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<tr>
<td>Story * Method</td>
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<td>117.281</td>
<td>117.281</td>
<td>0.62</td>
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<tr>
<td>Group * Story * Method</td>
<td>1</td>
<td>245.200</td>
<td>245.200</td>
<td>1.30</td>
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*p < .0055

Table 7. **Means and Standard Deviations for Table 6**

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<th>Variable</th>
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<th>Standard Deviation</th>
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<td>Group 1</td>
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<td>Group 2</td>
<td>65.011</td>
<td>15.408</td>
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Table 8. **Effects of Group, Story and Method on All Detail Scores—ANOVA**

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<td>Method</td>
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<td>Group * Story</td>
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<td>7.987</td>
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<td>Group * Method</td>
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<td>68.129</td>
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<td>Story * Method</td>
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<td>19.019</td>
<td>0.45</td>
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<tr>
<td>Group * Story * Method</td>
<td>1</td>
<td>126.111</td>
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</table>

*p < .0019

Table 9. **Means and Standard Deviations for Table 8**

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<tr>
<td>Group 2</td>
<td>15.783</td>
<td>6.461</td>
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</table>
Episode Scores

An ANOVA test was conducted on all episode scores in a 2 x 3 x 2 design. There were 2 groups (High and Low), 3 instructional sequences (Video -> Computer-controlled video; Computer-controlled video -> Video; Computer-controlled video -> Computer-controlled video), and 2 stories (Jerusalem and Eilat). There was no significant difference among the instructional sequences (see Table 10 and Table 11). As expected the High group outperformed (p < .0035) the Low group.

Detail Scores

To find out the impact of the instructional sequence on the details scores an ANOVA test of 2 x 3 x 2 was conducted. There were 2 groups, 3 instructional sequences, and 2 stories. Test results are shown in Table 12 and Table 13.

Also in the details scores there was no impact to the instructional sequence, and there was no significant difference but between the groups (p < .0051).

Analyzing Each Story Separately

The first two research questions, pertaining to the impact of a method or to the impact of a sequence, include two hypotheses. The first hypothesis is that a method or a sequence will have a general effect in all cases, and the second hypothesis is that a method or a sequence will have a specific effect, such as in one story only.
Table 10. Effects of Group, Story and Sequence on All Episode Scores--ANOVA

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<td>Sequence</td>
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<tr>
<td>Group * Sequence</td>
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<tr>
<td>Story * Sequence</td>
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<td>212.798</td>
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*p < .0035

Table 11. Means and Standard Deviations for Table 10

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<td>Group 2</td>
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Table 12. Effects of Group, Story and Sequence on All Detail Scores--ANOVA

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*p < .0051

Table 13. Means and Standard Deviation for Table 12

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</tbody>
</table>
The first hypothesis was not confirmed according to the analyses in the last two sections. The following section is an account of the analyses made in accord with the second hypothesis.

**Story I**

The researcher hypothesized that one of the methods or one of the instructional sequences would be more effective in the first listening experience, story I. Several tests were conducted to confirm this hypothesis (see, for example, Table 14). Significant results were not found, so the hypothesis, regarding a specific effect for story I, was rejected.

**Table 14. Effects of Sequences on Story I Data---ANCOVA**

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>Sums of Squares</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sequence</td>
<td>2</td>
<td>18.186</td>
<td>9.093</td>
<td>0.06</td>
</tr>
<tr>
<td>Grade</td>
<td>1</td>
<td>1460.730</td>
<td>1460.730</td>
<td>9.22*</td>
</tr>
<tr>
<td>Contrast 2 &amp; 3 vs. 1</td>
<td>1</td>
<td>8.445</td>
<td>8.445</td>
<td>0.05</td>
</tr>
</tbody>
</table>

* p < .0051.
Story II

The researcher hypothesized also that one of the methods or one of the instructional sequences would be more effective in the second listening experience, story II.

ANOVA tests were computed on the scores of story II only. When examining the results of an ANOVA conducted on episode scores, a tendency was detected for an advantage to instructional sequence 3 (viewing twice with computer-controlled videotape). (See Table 15.)

The ANOVA test indicated that sequence 3 was better than sequence 1 and 2 but not at the desired level of probability (\( p < .0755 \)). Therefore the pretest score was used as a covariate in order to check, if adjusting for different entering level of students can create a difference which is significant at a desired probability level (around \( p < .05 \)).

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>Sums of Squares</th>
<th>Mean Square</th>
<th>( F )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sequence</td>
<td>2</td>
<td>721.117</td>
<td>360.559</td>
<td>1.73</td>
</tr>
<tr>
<td>Contrast 1 &amp; 2 vs. 3</td>
<td>1</td>
<td>708.491</td>
<td>708.491</td>
<td>3.40*</td>
</tr>
</tbody>
</table>

* \( p < .0755 \).
The result of the ANCOVA test was that instructional sequence 3 was significantly better \((p < .0397)\) than sequences 1 and 2 in the episode scores of Story II (see Table 16 and Table 17). In the details scores there was also an advantage to sequence 3, but the difference was not significant.

The fact that detail scores were not exactly duplicating episode scores’ results indicate that probably there are at least two performances that a learner is involved in when listening to a "text." Using two measures (episodes and details) on each listening experience was worth while. The superior treatment mainly for episode performance was sequence 3 and the Discussion section of chapter V is elaborating on this finding.

Table 16. Effects of Sequences on Episode Scores of Story II--ANCOVA

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>Sums of Squares</th>
<th>Mean Square</th>
<th>F</th>
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</thead>
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<tr>
<td>Sequence</td>
<td>2</td>
<td>701.011</td>
<td>350.506</td>
<td>2.35</td>
</tr>
<tr>
<td>Grade</td>
<td>1</td>
<td>1866.658</td>
<td>1866.658</td>
<td>12.51*</td>
</tr>
<tr>
<td>Contrast 1 &amp; 2 vs. 3</td>
<td>1</td>
<td>694.591</td>
<td>694.591</td>
<td>4.65**</td>
</tr>
</tbody>
</table>

* \(p<.0014\). ** \(p<.0397\).
Table 17. **Means and Standard Deviations for Table 16**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sequence 1</td>
<td>66.162</td>
<td>15.803</td>
</tr>
<tr>
<td>Sequence 2</td>
<td>64.646</td>
<td>15.767</td>
</tr>
<tr>
<td>Sequence 3</td>
<td>75.556</td>
<td>10.861</td>
</tr>
</tbody>
</table>

**Interactions**

In this section the researcher addresses the third and fourth research questions, namely: is there an interaction between one of the methods and a subgroup of students? and: is there an interaction between one of the sequences and a subgroup of students? These questions could not be addressed by overall comparison procedures like ANOVA. The procedures chosen here were correlation and regression. The results were displayed on graphs. Always on the abscissa the pretest scores were plotted, which was the only measure to classify students in this study. On the ordinate of each graph one type of performance was plotted, e.g. number of episodes recalled in story I. After the individual points were plotted, the regression lines were also drawn.

Again the lines were drawn in order to observe which method and which sequence were most efficient to which type
of students (very low, low, medium, high, very high). But as stated in Hinkle et al. (1982): "The mere fact that we use our knowledge about the relationship between two variables, X and Y, to predict values of Y from known values of X does not imply that changes in X cause changes in Y, or vice versa" (p. 135). Thus regression lines are common prediction tools, but this procedure cannot establish causality like ANOVA or ANCOVA.

The following interactions were observed. One of the interesting findings was that the same type of performance varied between the first exposure (story I) and the second exposure (story II) as described below.

**Interaction of Methods with Pretest Scores**

**In episode performance.** Two graphs were drawn, one for each story (Figures 5 and 6). The abscissa was the scale of Hebrew vocabulary grade and on the ordinate number of episodes recalled. In story I there was not much of a difference which method was used. Still above grade 23 the computer-controlled video group performed slightly better. Knowledge of vocabulary (the skill observed in the pretest) had a low positive correlation to recall of story I episodes ($r_{cv} = 0.53; r_v = 0.44$). In story II the regression line of the computer-controlled video is always above the regression line of the video method. To summarize in the first exposure high and some medium level students performed better using computer-controlled video and low and some
medium level students performed better using video. However, in the second exposure all students performed better when listening to computer-controlled videotapes.

In detail performance. In detail performance there was not much of a difference between the two methods in Story I. The relationship of performance to vocabulary knowledge was about the same ($r_v=0.50; r_{cv}=0.55$). Still there was an

Figure 5. Methods: Video and computer-controlled video in episode performance - story I
interaction at about the grade 36. Above 36 computer-controlled video was beneficial and below 36 video produced better results (see Figure 7).

In the second story the picture is completely different (Figure 8). This time the interaction is very remarkable around the grade 28. Computer-controlled video is much better for the students with a grade above 28, and video is

![Figure 6. Methods: Video and computer-controlled video in episode performance - story II](image-url)
much better for the students with a grade above 28. Success with computer-controlled video depends largely on vocabulary knowledge ($r_{cv}=0.81$), but not so when you use the video program $r_v=0.23$).

To sum up, in the detail performance the same pattern was retained from first to second exposure: the computer-controlled program was beneficial to the upper half of students and the video was beneficial to the lower half of students.

![Figure 7](image_url)

**Figure 7.** Methods: Video and computer-controlled video in detail performance - story I.
students. In the first exposure the difference between the methods for each subgroup of students is minimal, while in the second exposure the difference between the methods is much larger.

Interaction of Sequences with Pretest Scores

Interactions of the three sequences with subgroups of students, as represented in their pretest scores were studied by the same procedure as the interactions of the

Figure 8. Methods: Video and computer-controlled video in detail performance - story II.
methods with subgroups of students. Graphs were drawn by the computer, where the pretest scores were plotted on the abscissa and performance scores on the dependent variables were plotted on the ordinate.

In episode performance. In story I there is little difference in performance between the students in sequence 1, 2 and 3 (Figure 9). But sequence 3 is related more than others to vocabulary knowledge ($r_1=0.44$, $r_2=0.43$, $r_3=0.72$).

![Figure 9](image-url)
In Story II there was considerable difference in performance between the students in sequence 1, 2 and 3 (see Figure 10). People in sequence 3 performed better than other sequences. The interaction occurred only at the grade

Figure 10. Three sequences in episode performance—story II
of 41. Above the grade of 41 sequence 2 had an advantage. Only seven students from the entire sample had a vocabulary grade of above 41. Sequence 3 was beneficial both to high and low students tending to minimize the difference among them ($r_3=0.20$). Sequence 2 had the highest relationship to vocabulary knowledge ($r_2=0.75$).

A pattern that was apparent before can be observed here: in the first exposure there is only a little difference in performance between the students in the different sequences, but still sequence 3 is beneficial to the upper group; in the second exposure sequence 3 is beneficial for most students and prior knowledge is not a good predictor for success any more ($r_3 = 0.20$).

**In detail performance.** In Story I there was little difference in performance between the students in sequence 1, 2 and 3 (see Figure 11). Sequence 2, however, was best for high students—above the grade 33. Sequence 2 was the most related to vocabulary knowledge ($r_1=0.50$, $r_2=0.65$, $r_3=0.36$).

**Summary**

**By Group Means**

The data failed to exhibit a pattern in an overall comparison. The statistical significance between treatments was observed, only when the second exposure data (story II) was analyzed. Sequence 3, twice administered computer-
controlled videotapes, produced significantly better listening comprehension performance in the episode criterion and also better results (but not significantly) in the details criterion. The implication of these findings are discussed in chapter V.
By Interactions

In this kind of analysis tendencies were observed. After one exposure the relatively upper part of each student group was performing better using computer-controlled videotapes. The rest of the students had a relatively low
performance but still videotapes were more efficient for them.

By the second exposure computer-controlled videotapes was the treatment most efficient for most or all students. The top group of students on the second exposure was sometimes more successful with videotapes. Implication of these findings are also discussed in chapter V.
CHAPTER V
DISCUSSION AND FUTURE RESEARCH RECOMMENDATIONS

This study was designed to provide needed knowledge for software development. The knowledge is needed by instructional designers when attempting to design and produce effective materials in an era of rapidly increasing knowledge and changing technology. This type of knowledge is also necessary to second-language educators, who would like to design or to purchase materials for their classrooms and to incorporate the new materials into their curricula and instructional plans. In addition this study can be categorized as an interdisciplinary study in discourse processing.

Materials Development

Because existing materials did not fulfill the learning objectives of this study, two original prototypes were designed and produced. First, two interview type stories were written; one about student life in Jerusalem and one about the resort city, Eilat. Next the videotapes were produced preserving the principles of authenticity on the one hand and of simplified language on the other hand. The variables which were implemented in the videotapes were
content, structure, signaling and pictures (see chapter III, Description of the Generic Listening Materials). The videotapes were used with a pilot group who listened and wrote recall protocols. Then results were analyzed and accordingly the computer-controlled component was conceptualized. The variables implemented in the computer-controlled component were: advance organizers, post-questions, mid-level retrieval cues and suggestions for macrostructures.

Analysis Procedure Development

Next the computer-controlled videotape programs were field-tested on a pilot group. Although data from both pilot tests was available, the question of how to analyze these data arose.

Several literature sources concerning scoring of recall protocols were consulted. The literature did not contain even one satisfactory model. Consequently, two separate existing procedures were adopted one to detect episodes and the other to detect details. Also a Data Sheet was developed to collect the scores from the two types of analysis (see Figure 6). The development of the procedures and the form enabled the researcher to render qualitative data (recall protocol) into quantitative data.

Study Design and Implementation

In the academic year 1985-86, during three consecutive quarters, students of Hebrew 102 came to the computer lab of
Edgar Dale Media Center and listened to the two stories in various modes. The students were randomly assigned to three sequences:

Sequence 1 - Story I video, Story II computer-controlled video

Sequence 2 - Story I computer-controlled video, Story II video

Sequence 3 - Story I computer-controlled video, Story II computer-controlled video.

The three sequences varied in the methods (video or computer-controlled video) and in the order the methods were presented. However, the order of the stories did not vary within the three sequences; all of the students listened to the Jerusalem story first and to the Eilat story second.

This arrangement was designed to answer questions regarding the impact of each method (as implemented in a medium) and also the impact of each sequence. In addition to statistically significant differences between groups (cells), one could expect an interaction between treatments and types of students (like High vs. Low).

Results of the Study

By group means. There was not a statistically significant difference between the two methods (video and computer-controlled video). Nor was there a sizeable difference either in the episode scores or in the detail scores.
In the analysis of all scores there was not a statistically significant difference between the three sequences either in episode scores or in detail scores.

The least important result was a significantly better performance of the High group versus the Low group. This happened in all cases: in episode scores and detail scores, when comparing methods and in episode scores and detail scores when comparing sequences.

Since a pattern was not found in a total score analysis, the researcher examined each story separately. There was not a significant result in the scores of story I (Jerusalem) neither from a method perspective nor from a sequence perspective. In story II (Eilat) one significant result was found: in an ANCOVA test sequence 3 (Story I computer-controlled videotape and Story II computer-controlled videotape) was significantly better than sequences 1 and 2, in only the episode scores.

To summarize, there was one significant finding in the data of Story II: students in sequence 3 significantly outperformed students from sequence 1 and sequence 2.

By interactions. The episode scores were divided by method (video and computer-controlled video) and plotted on a graph in relation to the Hebrew vocabulary grade. In Story I there was little difference as to which method was used. Still the computer-controlled video was more beneficial to the students with larger vocabularies (above
grade 23). In Story II the computer-controlled videotape line was always above the videotape line, almost in a parallel manner. The computer-controlled videotape, in this case, was beneficial to all levels of students.

Similarly, when detail scores of Story I were graphed, there was little difference as to which method one was using. Again, the interaction indicated that the computer-controlled video was more beneficial to the students with larger vocabularies (above grade 35). The plotting of the detail scores of Story II indicated remarkable differences between the groups. The interaction was at the grade of 28. If the score was lower than 28 the video was more advantageous. If the score was higher than 28 the computer-controlled video was more advantageous.

When episode scores were divided by sequence (Video --> Computer-controlled video; Computer-controlled video --> Video, Computer-controlled video --> Computer-controlled video) there was not a difference between sequences, except that success in sequence 3 was more related to vocabulary knowledge. In story II sequence 3 was better than the other two sequences. The interaction occurred only at the grade of 41. Sequence 3 was best for the students with scores under the grade of 41 (the majority of the students). Sequence 2 was best for students above the grade of 42. Sequence 3 was beneficial both to High and Low students. Thus there was less dependency on prior vocabulary knowledge.
(r_3 = 0.20). Sequence 2, which was best for only the very high vocabulary students, had the highest relationship to vocabulary knowledge (r_2 = 0.75).

Regarding detail scores the graph varied according to the story. In Story I the graph lines representing sequences were very close. However, sequence 2 was best for students with vocabulary grades above grade 34. Success in sequence 2 was related to vocabulary knowledge (r_2 = 0.65). In Story II there was a clear interaction around the grade 31. Sequence 2 was best for students above this point and sequence 1 was best for students below this point. Again sequence 2 was the sequence most related to vocabulary knowledge (r_2 = 0.81).

To summarize the methods perspective, there was a similar pattern of change from first to second exposure. In the first exposure, in both episode and detail scores, the upper group of students benefitted from the computer-controlled videotape treatment. In the second exposure there was a bit of a difference between episode scores and detail scores but the same trend was apparent: the computer-controlled videotape was best for all students in the episode scores and for relatively more students (in comparison to first exposure) in detail scores.

Regarding the three sequences, in the first exposure the high group was performing better once in sequence 3 (episodes) and once in sequence 2 (details). This apparent
difference is misleading: in the first exposure both sequence 3 and 2 were identical—listening with computer-controlled videotape. In the second exposure sequence 3 is beneficial for most students except the very top, who succeed with sequence 2 (in episode scores). In detail scores sequence 1 is beneficial for more than half of the students (low and medium) and sequence 2 was most efficient for the high level students. Again the difference is misleading: sequence 3 and 1 are identical in the second exposure—listening to computer-controlled videotape. Sequence 2 in the second exposure means listening to a videotape.

In summary, the upper group usually succeeded with the computer-controlled videotape on the first exposure. However, the lower group did not always succeed with the computer-controlled videotape on the first exposure. The upper group was usually more successful with the videotape on the second exposure (Story II). However, in the second exposure in most cases the lower group was more successful with the computer-controlled videotape.

Discussion

The Discussion section is divided into three subsections: Results By Group Means, Implications of the Effect of Two Exposures of the Computer-Controlled Video,
and Interaction Results. In each subsection the relevant results are discussed and supporting literature is cited.

Results By Group Means

There was not a significant difference in the two types of comprehension performance; episodes and details, when comparing methods which were implemented in different media, on a one exposure basis. This relates to Clark's (1983) conclusion that "media do not influence learning under any conditions." Clark differentiates between the "vehicle" and the "content of the vehicle." He states that a choice of vehicle will cause just administrative changes (cost, distribution) but "the content of the vehicle can influence achievement" (p. 445). In this study the difference between the two treatments was more than a difference in medium because the computer-controlled programs included additional variables. However there still was not a significant difference. It seems that differences due to content or instructional method, which Clark foresees, typically do not happen in a one exposure treatment.

The effectiveness of one exposure is weak not mainly due to the qualities of the mediated instruction, but mostly due to the level of expertise of the students. Gagné and Glaser (1987) introduce a modern psychological construct mental models. They are defined as: "knowledge structures that are schema-based, but also include perceptions of task demands and task performances . . . models can be built,
used and altered in the course of learning, and as proficiency is acquired" (p. 72). The knowledge one has about a particular domain affects the types of models constructed during comprehension say Gagné and Glaser (1987). High-knowledge people integrate new information into their existing understanding of a domain; high-knowledge individuals' recall is more detailed, well integrated and more sequentially correct than the recall of low-knowledge individuals (Gagné & Glaser, 1987). In this research project, the learners were novices to the language and were particularly inexperienced with listening activities. As low-knowledge individuals they should be expected to have comprehension and recall deficiencies, especially on their first exposure.

Also when the analysis of variance was conducted on grouping by sequence (two exposures) there was not a sequence that was significantly better: neither in episode performance nor in detail performance. Aggregating all the data of the two exposures fogged the results. Examining the results of the other analyses will explain this result.

The general performance of students in the listening research project was quite good, when considering that they were novices and inexperienced in listening activities. The good performance was in the episode criterion and the low performance was in the detail criterion. Group High had a mean of 75% in the episodes and group Low had a mean of 65%
in the episodes. (See Table 7.) Group High had a mean of
21% in the details, and group Low had a 16% in the details.
(See Table 9.)

This research project did not use an old "traditional"
treatment versus a sophisticated innovative treatment. Both
media were sophisticated and included research based
variables to promote comprehension and recall. Therefore
students performed fairly good on the average, and the extra
support provided by the computer-controlled video did not
show up in overall analysis.

Examining each story's data separately was fruitful.
The data from Story I did not exhibit any pattern neither
when the scores were divided by method nor when the scores
were divided by sequence. A treatment should not be
expected to influence learning on the first short encounter
as previously discussed. On the first encounter students
can use just their prior knowledge. Therefore a difference
between High vocabulary group and Low vocabulary group is
expected.

In the second story's data a pattern was found. Even
in the second story a method did not make a strong enough
effect to be significant. However one of the sequences
proved to be significantly better. The best sequence, on
the average, was sequence 3 (Story I Computer-controlled
videotape and Story II Computer-controlled videotape).
Sequence 3 was significantly better than sequence 1 and
sequence 2. This advantage was demonstrated in only the episode scores.

Sequence 3 was the only sequence that offered a repetition of a medium, therefore a training effect could be offered as an explanation to the superior performance of the students in sequence 3.

The improvement in the episode scores only, which did not follow in the detail scores can be explained as follows. The students, who were all novices in Hebrew had a high memory load when completing the listening comprehension tasks. After listening to the stories, they had to remember the episodes of the stories and the supporting details. They were allowed to review their notes before writing their recall protocols, but they had to rely only on their own memory during writing. In this situation of memory overload they chose to concentrate on the episodes. This is basically a mature reaction to the task, namely outlining the story.

Clark and Salomon (1986) foresee a major change in media research paradigm, as a result of the learners' interpretation of the instructional task. Previously, research on media centered on the means of instruction as independent variables and on learning outcomes in the form of knowledge or skill acquisition as dependent variables. This basic paradigm originates from behavioristic assumptions. Because cognitions are now widely recognized,
they can not only be considered as mediators but "also as partial determiners of the way learners experience the stimulus" (p. 471).

The fact that these students fulfilled only one instructional task, not two, is understood in lieu of the following: the students' thoughts or beliefs "about a particular mediated presentation, or class of media," can influence the learning result as much "as the medium itself." "This may include beliefs about the medium's difficulty level, its entertainment potential, the type of information usually presented, and typical instructional demands. Some of these anticipations are socially generated and shared" (Clark & Salomon, 1986, p. 472).

In addition, the students who significantly outperformed were in sequence 3. They were exposed twice to the computer-controlled treatment. The computer-controlled treatment was geared more to episode performance rather than detail performance. This treatment categorized each story to episodes, helped summarize each episode to a couple of statements and also provided suggestions for macrostructures. It seems plausible that students who are not used to listening to long "texts" would adopt the modeled "outlining" strategy, and would not take any more memory load.
Implications of the Effect of Two Exposures to the Computer-Controlled Video

This study yielded one significant result—the advantage of sequence 3 in episode scores. Another result which was similar in direction, but not significant was the advantage of sequence 3 in detail scores. In both cases sequence 3 in the second experience (Story II) was the treatment which proved to be most successful.

Several lines of explanation are offered: learning from media as explained by Clark (1983) and by Hannafin (1985); the development of metacognitions as explained by Brown (1978); prose learning strategies as explained by Levin (1982); and the learner control issue as reflected by Carrier (1984) and Johansen and Tennyson (1983).

Clark (1983) asserts that media do not affect learning, but some media incorporate "instructional methods that foster learning" (p. 449). The effective methods, according to Clark (1983), "seek to add structure, shorter steps, reduced verbal loads and self-pacing to lessons" (p. 449). Clark's statement applies to this study as well. The computer-controlled video treatment was the treatment that included these elements. The program included: structural cues (structural advance organizers); shorter steps (segmentation to episodes); reduction of verbal loads (post-questions were reducing the episodes to core ideas); and self-pacing.
Hannafin's (1985) review of the literature on learner attitude toward media adds another perspective. He claims that "Student effort during instruction appears to be affected by perceptions of the ease or difficulty of learning. . . . Students may be willing to invest more effort in tasks that are perceived as challenging or moderately difficult, versus those perceived as either too easy or too difficult" (p. 238). Since this study focused on novices in the second language, the videotape treatment was probably too difficult. Perhaps both methods (video and computer-controlled video) were difficult on the first exposure. Apparently, in the second exposure the computer-controlled videotape program became easier to master, however it was still moderately difficult. Hence it became worthwhile to invest effort in the treatment and positive results followed.

Brown (1978) is a prominent researcher in the metacognitive aspect of learning. According to her developmental perspective, studying text involves a whole array of strategies, such as retrieval-cue activities. The sophisticated strategies are relatively late in developing--typically in the high school years. These strategies enable text comprehension and text recall. As expected, the novice second-language learners did not yet develop text learning strategies of a second language. Thus the directions in the
computer-controlled program could have compensate for the lack of strategies.

Levin (1982) presents a model that divides text learning into four major activities: comprehension monitoring of macrostructure, comprehension monitoring of microstructure, memory monitoring of macrostructure and memory monitoring of microstructure. In his view each level needs attention for successful prose learning. By examining the computer-controlled video program in this study, one could see that it included elements which support processing in the level of microstructure (like pictures) and also in the level of macrostructure (suggestions for macrostructures).

Learner control is a favorite topic of proponents of new information technologies. Carrier (1984) asserts that: "There is a strong intuitive appeal for allowing students to choose the methods of instruction they will receive. However, empirical justification for such action is limited" (p. 16). On the contrary, Carrier (1984) reports that some researchers have found that performance under a preferred mode actually led to lower achievement than participation in a less preferred mode.

Johansen and Tennyson (1983) assert that "program control results in a better post-test performance than learner control." Their own research compared learner control group, partial learner control group, and advisement
learner control group. The latter group outperformed the other two. Apparently program control or "slightly supervised" learner control are more effective instructional methods.

In this study the videotape allowed for total learner control, while the computer-controlled videotape was mostly a program control method. In the videotape treatment, the instruction was mediated, but the learner was encouraged to rewind, sequence, decide about step-size and use his own strategies in order to comprehend and remember as much as possible from the Hebrew dialogue.

In the computer-controlled video treatment, the program presented a fixed order, step-size, suggestions for cognitive processings and criteria for evaluating performance. The student had an impact on the pace, and the amount of review for each segment and for the total program.

Control appears to be an important instructional variable. In this case it appears to interact with other important variables, such as strategies to support text memory and the general technique of short steps in self-pace.

Interactions Results

As mentioned previously, there were interactions in all the graphs, where regression lines crossed each other. Graphs of Story I data were different than graphs of Story II data. In Story I there were not any major differences
between methods or sequences. However in Story II in the same type of performance there are changes in the regression lines and one method gains an advantage for one group of students. (See for instance the difference between Figure 11 and Figure 12).

In general, the graphs reveal that the higher vocabulary group succeeded with the computer-controlled videotape in Story I, but the lower vocabulary group succeeded better with the video; yet not consistently. In Story II the lower group succeeded with the computer-controlled videotape and the higher group succeeded with the videotape; yet not always.

This result can be explained as follows: the computer-controlled videotape treatment included elements which Clark (1983) refers to as elements of methods. Accordingly, the elements of method "lead more directly and powerfully to learning." These elements as mentioned previously are: "structure, shorter steps, reduced verbal loads and self-pacing to lessons" (p. 449). Moreover, Clark (1982) also states that high ability students like more structured methods "which they believe will make their efforts more efficient" (p. 92). On the other hand, low ability students "typically report liking more permissive instructional methods, apparently because they allow them to maintain a 'low profile' so that their failures are not so visible" (p. 92). Perhaps the high ability students took advantage of
the structured program and performed better than the lower ability students. It appears that the lower ability students had problems mastering the features of the computer-controlled videotape in the first exposure, but on the second exposure already profited from it. The higher ability students went the other direction. They went from a structured method to an unstructured method, where their abilities could come into play even more.

Another aspect of individual differences among learners is stated by Hannafin (1985). Hannafin (1985) describes a typical computer-controlled video program as having imposed questions "at designer-specified review points." These questions have a potential for conflict with the individual schemata of the learners. Accordingly Hannafin (1985) states that rather than "deepening the depth of processing of instruction through directed questioning, learning may actually be weakened through the disarming of individual mental processing strategies" (p. 244). He concludes that "The more explicitly organizational structure is imposed through the use of embedded questions, the less able learners may be to fully utilize their individual strategies" (p. 245).

Similarly in this study, in the second story, the computer-controlled video treatment was beneficial to the lower vocabulary group perhaps because they needed a more structured approach. On the other hand the higher
vocabulary group did not need the embedded questions. The embedded questions probably interfered with their own learning strategies. Therefore the higher group was more successful with the video.

General Implications

This research project was primarily designed as research in instructional design. Thus implications for instructional designers will be listed first.

Instructional design has been a discipline which develops its knowledge base both in general theoretical issues (e.g. how to teach concepts) and in media related issues (e.g. "instructional strategies for computer-based education"). One implication of this study is that research with a lower level of generality—when subject-matter is specific, the task is specific, the medium is specific, and the method is well specified—might create a specific knowledge base.

Research in instructional design can focus upon general or specific knowledge bases. The "concept teaching" knowledge base is an example of a general knowledge base. This research base is composed of research results from concept teaching studies in many subject areas and across many age levels. A more fruitful approach could be to create several knowledge bases in instructional design each
one more specialized, e.g. concept teaching in second-language education.

Secondly, one research study sometimes does not yield a significant amount of knowledge. When one follows a research agenda the refinement of research questions and the improvement of learning materials are more likely to occur. Researchers in instructional design should also follow research agendas.

Thirdly, researchers in instructional design could also adopt subject matter specific constructs like "authentic language" and/or more general variables, derived from several branches of psychology or reading research, such as "retrieval cues." The wider array of constructs may enrich research and development efforts.

Fourthly, instructional design practitioners should include more subject-matter information in their work. The design process can be enhanced by including the discipline's constructs and research results. In this study knowledge about the learning task, teaching method, and criteria for evaluating student performance on the task came from disciplines outside instructional design.

Fifthly, attention will now focus upon implications regarding the FL education field. Typically media projects in FL education have been at the "testimonial" level as opposed to being research based. Although data collection and analysis would significantly contribute to FL education
knowledge base, a thorough description of the variables implemented in the software would be a step forward.

Sixthly, using culturally authentic materials in receptive skills' activities (reading or listening) creates a far more "integrated experience of language and culture and does not present culture as the 'fifth' skill" (Bernhardt, 1986).

The seventh implication focuses on the recall protocol as a good pedagogical tool (Bernhardt, 1986) and also a good research tool. In this research project only two types of performance were detected from the recall protocols, comprehension and memory for episodes, and comprehension and memory for details. However recall protocols are a wealth of information. By examining the recall protocols one could observe the differential "content structure" of each student, the macrostructures created by the students, the cultural schemata applied by the students etc. This research study has demonstrated that even a holistic tool, such as recall protocol can provide data for numerical analysis.

Eighthly the computer-controlled program was designed to make the students more "text bound" (Bernhardt, 1986). Comprehension of second language discourse has been considered as a matter of personal style. Styles range from being very text bound to using guessing strategies. In this study the hypothesis was that being as text bound as
possible is a preferred strategy for all learners because of their level of language proficiency (novice). The results of this study confirmed this hypothesis. The students who participated in sequence 3 significantly outperformed the students who participated in other sequences. In general the interactions indicated that most of the students, except the very top, were more successful with the computer-controlled program in the second exposure. Success with the computer-controlled treatment was not related to the initial vocabulary knowledge ($r_2 = 0.20$). Teaching students to be more text bound is a direction which should be further explored.

Ninthly, the computer-controlled program in this study was too linear. Thus one could explore the possibility of creating random access to previous segments in the "text," without neglecting the "text bound" strategy created by program control. Later the current treatment and the new possibility could be experimentally compared. Generally speaking, the use of computer controlled devices would afford more control of text learning mechanisms. Further study of text learning mechanisms would be a contribution to the field of learning, to FL education and to instructional design.
Recommendations for Future Research

This research project dealt with two media, video and computer-controlled video, designed with a specific configuration of variables hypothesized to facilitate learning for the learning task in question. Because it was an exploratory study, many specific and general research recommendations, can be made.

First it is recommended to continue to use the materials produced for the study and to produce new ones which adhere to the same principles. The original study encompassed sequences of two experiences. One could observe an improvement on the second experience. A research study with four listening experiences, would detect if the improvement is continuous or if a plateau effect occurs. In the original study sequence 3 (computer-controlled videotape for Story I and computer-controlled videotape for Story II) has proven to be the best. The question arises whether a sequence which includes only computer-controlled videotape treatments will continue to be the best in the third or the fourth experience.

Secondly, one could use the same materials or comparable materials and classify the students according to more measures and then observe the interactions. In the original study, the students were classified only by performance on a Hebrew vocabulary test. In most cases the students who had low and medium vocabulary levels benefitted
more from computer-controlled video in the second experience. However in the second experience the high and sometimes only the very high students benefitted from the video. Hence, students with high FL vocabularies may succeed with video and probably do not need the extra help provided by the computer-controlled component. However we do not know how other student variables relate to the two prototype materials.

Thirdly it is recommended to create higher level FL materials. These should be similar to the materials used in the study however the language pace should be quicker, closer to normal. Studies using these materials could explore which method (medium) and which sequence better prepares the students for this close-to-reality test.

Fourthly, it is recommended to create a questionnaire which would help the students identify story details. The question arises as to whether giving the students this tool during or after listening would significantly improve their detail scores.

Fifthly, the question of learner control vs. program control should be explored. As an example a second version of the computer-controlled program could be designed with a menu at the beginning. Another study could compare this program to the original program.

A sixth recommendation is the development of the performance assessment after listening. In the original
study two elements were identified as essential to comprehension: identification of component episodes, and recall of details. An analysis procedure could be developed to detect macrostructures (probably several levels of abstractness), schema or schemata expressed and coherence of text produced by learners. The description of the results using the new criteria might shed further light on the influence of video, computer-controlled video and the various sequences.

Seventhly, the manipulation of the computer-controlled component is another recommendation. There were six variables in the computer-controlled treatment: categorizing to component episodes, forward cues (advance organizers), backward cues (post-questions and intermediate level retrieval cues), suggestions for macrostructures and program's map. Study results indicated that one listening experience is not meaningful but sequence 3 was superior with two listening experiences. Therefore, it is recommended that research efforts be invested in the variables which are related to better performance. This line of research could use various configurations of the variables, in the computer-controlled program, to establish causality of increased performance.

Eighthly, it is recommended that further research should identify the variables which affect FL listening comprehension specifically, the variables applicable to the
computer-controlled video. Further research could compare the effectiveness of the materials from the original study versus the new materials.

Ninthly, it is recommended that further research should identify the variables which affect FL listening comprehension, specifically the variables applicable to video. Further research could compare the effectiveness of the materials from the original study versus the new materials.

Tenthly, it is recommended that further research should compare the effect of a mediated listening comprehension experiences (like in the original study) versus live listening experiences. Perhaps in the live listening experience, two natives could speak to each other in a slower than normal pace. A live experience has motivational advantages, but "one cannot rewind people."

Research in new technologies has just begun. Even when one would limit oneself to investigating one task--listening comprehension of novices to FL--there is still a long list of research possibilities.

Epilogue

This research project falls under the rubric of the field of instructional technology. This field has been defined by Gagné (1987):

the field may be viewed, first, as a set of professional people concerned with the development
and use of instructional techniques having the purpose of promoting effective human learning. The learning with which these people are concerned may occur in the school, in the industrial classroom, in the specialized learning center, or in the home. Learning is often initiated and brought about by communications to the learner, and these communications are frequently delivered by equipment and its associated procedures, commonly referred to as media. Currently, these media include such "high-tech" items as television and computer systems in their various forms. (p. 6)

The goals highlighted by Gagné (1987) have been the focus of this study. Effective learning was the objective, and it was indeed achieved, mainly in the episode performance. Media were designed and used to bring about learning which occurred in a natural setting, that of the computer laboratory of a media center.

In the design of the learning materials, the warning of Hannafin et al. (1985) was considered. Hannafin et al. (1985) describe the design of new information technologies: "we seem to be slipping into the hardware-dominated orientation that has plagued instructional innovations in the past, where the capability of the instructional hardware appears to be dominant. Our fascination with the 'toys' of the trade has obscured important questions of appropriate design and use" (p. 13). In this research project, an appropriate design approach was devised and implemented. Task and learner characteristics were researched first; next, variables affecting these characteristics were identified; finally, operational definitions for these
variables were produced in the form of video and computer-controlled video.

Computer-based instruction literature describes the "effect size" of computer instruction versus conventional instruction. The effect size is measured by tests designed to gauge the learning that occurs when students interact with the instructional materials. Instructional design literature does not emphasize the tests used in the different studies. Nevertheless, the advantages and disadvantages of tests as measuring devices contribute greatly to the "effect size" of each treatment. In this research study, literature from several fields was consulted to determine the most appropriate test for listening comprehension. Recall protocol has been a common procedure for this type of task. However, analyzing recall protocols is still difficult, since no agreed upon procedure has been established. The researcher in this study used two criteria to analyze recall protocols. The procedures yielded numerical values which were then analyzed by the computer. The procedures also suggest that student performance can be classified in two ways: episodes and details. The different results obtained from each analysis indicate a continuing need for a more fine-tuned approach to evaluating student performance.

From a research perspective, Clark's (1985) advice to avoid gross comparisons between a new medium and traditional
instruction has been respected. Two methods used in two new media were compared, and the construct treatment was used in two implementations: as a single-learning-experience termed Method, and as two-learning-experiences termed Sequence. One superior treatment was found, sequence 3, which included two listening experiences with a computer-controlled video. The idea of a sequence, which is defined as a treatment over time, proved to be successful and promising.

The results by group means show the superiority of sequence 3 in episode scores. The results by interactions indicate that most students, except the very top, perform better with computer-controlled video. These results are consistent with learner control literature. Unfortunately, learner control instructional programs did not yield satisfactory results. Therefore "researchers have successfully developed procedures that offer guidance upon which individual learner's decisions can be based" (Hannafin, 1984, p. 7). This study's Guided listening practice, the computer-controlled video, itself a variation of the "coaching" program where "learners make informed judgment regarding their instructional sequence, as opposed to making an uninformed decision" (Hannafin, 1984, p. 7), has been especially successful in the second learning experience.

According to Clark (1985), "those who conduct applied research are usually more concerned with effects than with
causes" (p. 252). This approach, in his view, is ultimately self-defeating because "since we do not know what causes the measured change, we cannot reliably repeat our successes or construct prescriptive theories" (p. 252). This study was exploratory in nature, both from the learning task perspective, namely listening comprehension of a FL, and from a design perspective, using computer-controlled video with a unique configuration of variables. Indeed in this applied study the researcher was more concerned with effects than with causes. Nevertheless directions for future research have been suggested, specifically with respect to identifying causal relationships between variables inherent in the listening materials and effective learning of listening comprehension.
REFERENCES CITED


APPENDIX A

Texts in English
Texts of the interviews which were recorded on videotape. An American graduate student has helped the author with the translation from Hebrew.

BATIA IS TELLING ABOUT STUDENT LIFE IN JERUSALEM

-- Hello Batia
-- Hello Esther
-- Today I would like (I want) to talk about Jerusalem.
-- O.K.
-- Are you familiar with (do you know) Jerusalem?
-- Yes. I am (I know Jerusalem).
-- Were you born there?
-- No. I was born in Tel-Aviv, but I studied at the university in Jerusalem.
-- Did you live there then?
-- Yes. I had to (needed) to live there.
-- How many years?
-- Five years.
-- Was it a good experience (good to you) in Jerusalem?
-- Great. I was single then, and it was a good experience (it was good to me) in this city.
-- Well, so tell us a little bit about Jerusalem.
-- Jerusalem is very beautiful and very interesting: There are new and modern things, and there are ancient and old things.
-- And where is the campus of the Hebrew University?
-- There are two campuses now. One is in the new part of the city--the western section (in west of the city). The other (and one) is in the old part of the city--the eastern section (in east of the city). It is near the Ancient City.
-- And where did you study?
-- I studied on the western campus.
-- And where did you live?
-- I lived in the student dorms near the campus.
-- And what is there in the western campus?
-- There are big buildings, several cafeterias, a very big library, a museum.
-- So what does a student (f.) do on campus?
-- Usually (on usual days), they go to courses, study at the library and also work.
-- How many days do they go to classes (study) in the university?
-- Six. Actually five and a half.
-- And what do they do on Friday night and Saturday?
-- It is best when they have a family (it is good that there is a family).
-- Did you have a family in Jerusalem?
-- No, but I had very good friends, and I used to go and visit them a lot. They lived (used to live) in a new
neighborhood in a very beautiful apartment. I also liked to go to the supermarket in the new neighborhood.

-- And on Friday what do they do with the family?

-- Uh. . .in afternoon they buy flowers for Saturday. In the evening there is a Kiddush. The adults and the children eat a big meal together (there is a big meal both to small and big, everybody together).

-- And after the meal what do they do?

-- The students like to go to a singing-night, and there are also those who go to a disco.

-- What is a singing-night? What do they do in a singing-night?

-- At a singing night: many students go (come) to the student union (club). . . there's a man who plays the accordion (stands a guy with an accordion) and they all sing old songs.

-- Israeli songs?

-- Yes, only Israeli songs.

-- Is it fun (is it pleasant)?

-- Yes a lot of fun (it is very pleasant). They meet students who they did not have time to see during the week (that there was no time to see them the whole week), and afterwards they sit and talk (it's possible afterwards to sit and talk).

-- And the disco?

-- They play American music (there is there American music), you know, Pop, Rock. People dance and also talk a little bit.

-- It is possible to talk there? To know new people?

-- Yes. You get to know new people, because the boys invite the girls to dance. But it is impossible to talk very much--the noise is so loud (strong).

-- So when did you get to see the city (when did you see Jerusalem)?

-- Usually in the evenings and on Saturday. On Saturday you can (it is possible to) walk around all day.

-- Where do they usually go in the evening (on a usual evening)?

-- Downtown (to the city).

-- By foot or by bus?

-- From campus they go by bus downtown. And there (in downtown) they go by foot. There are many streets with many lights, and people go window shopping (they look at the display windows). Sometimes they sit in a coffee-house.

-- What do they order there?

-- A cup of coffee, cake, ice cream. But we did not always have money (not always there was money) to go to (to sit at) a coffee-house. Many times we would (we used to) buy Falafel, and eat it while walking around (go in the street with the Falafel in the hand).

-- In Tel-Aviv we also eat Falafel in the street (people go
with the falafel in the hand). And on Saturday? What do they do on Saturday?

On Saturday they do not study. Then it is possible to visit the Ancient City. It is so pretty to see, you know, the roofs of the ancient buildings. The history of the city is still here!

Where do they go?

They go to the market, if they want to shop. There are (there) many interesting things. . . shops, and it's possible to buy beautiful things cheaply.

What else?

I was once in an Arab restaurant. There was excellent food there.

I heard that there are galleries in Jerusalem. Where are they?

Yes. In the Jewish Quarter in the Ancient City. There are many galleries; there are also ancient synagogues. There are simple houses where people now live. -- Do the boys and girls go together for the all day (and the guys go all day together with the girls)?

Most of the time (all the time) the boys (they) were with us, except for (but not on) Saturday afternoon.

Why?

Because Saturday afternoon there is soccer (football) and the guys love to go to soccer.

So, what is Jerusalem? A modern city or an ancient city?

Both (also this and also this). There is (in it) both old and new (also old and new).

Thank you Batia. Good-bye and I'll be seeing you (to-be-seen).

Bye, Bye.
BATIA IS TELLING ABOUT EILAT

Hello Batia
Hello Esther
Batia, are you familiar with (do you know) Eilat?
Yes. I was there (in Eilat) many times.
Why do people go to Eilat?
Because this is a place to enjoy oneself (to make life), mainly because of the sea. -- Well then, how do they get (go) to Eilat? How did you get (go) to Eilat?
I went by bus.
And I went by plane.
By bus it's cheaper.
Right! But by plane is quicker.
When people go by plane it is impossible to see the Negev.
This is also true (right). Who has time to see the Negev? Just a moment (a moment, a moment), we should (need to) talk about the people who go to Eilat. Who does go to Eilat?
Israelis that want to rest for a short period. . . a week, Uh. . . a couple after the wedding. Also tourists that are touring Israel and want to see Eilat, too. All these go by plane from Tel-A viv direct to Eilat.
So everybody by plane?
Just a moment (a moment). On the other hand (from the other side) there are many young people from Israel and other countries who want to get away from home, be far away from the whole world. . . to sit and talk with other young people. . . to think a little bit quietly. The youngsters have a lot of time, but no money. They go by bus and see the Negev.
Well (good) we are already in Eilat O.K. (good)? Once (we are) in Eilat where do people (is it possible to) eat and sleep?
There are many hotels near the sea: There are expensive ones and cheap ones. It is possible to eat in the dining-room (eating room) of the hotel; it's always possible to eat in a restaurant. -- Good, eat, eat. . . What do they do the rest of the day (the whole day)?
It's possible to water-ski (make water-ski).
Did you water-ski?
No. Never. It is also possible to go sailing (to sail in boats).
Did you go sailing in Eilat (Did you sail in Eilat in a boat)?
Sometimes, with friends who know how to sail (to sail boats). Do you know that there are yachts and other (very) expensive boats in the port of Eilat?
Oh, maybe you have a yacht, uh?
No, not yet.
So... so what did you do in Eilat?
I learned to dive in the water. There are many people diving in the water, because the water is warm there year around (the whole year).
Is this the profession of the people who dive in the water?
No, it is their hobby.
Uh... yes, it's possible to see the tropical fish, right?
Yes, yes. I dived in the water and I saw: blue water, green corals, white corals, orange fish... pretty, uh?
Marvelous. Uh, I remember: before my wedding when... after my wedding when I was in Eilat, in 1972, we went on a glass-boat... people go on the boat and look down and see the fish and the corals.
Right. Today too people go on a glass-boat, but it's more interesting to go to the under-water museum.
Why more interesting?
Because the museum is in the water. People go across (on) a little bridge, then down some steps (and descend to down), and there they can look through the windows (and from there see through the windows) the fish (really) from close-up... see all the colors of all the fish.
Yes, this is really (truly) beautiful. Just a moment (a moment, a moment), but does one need to buy a ticket to this museum (right)?
Sure, like to every museum in the world!
Let's think a minute (maybe we'll think): what would people do in Eilat without money?
With no money? Only a swim suit is needed. People enter the water white, and afterwards the body becomes brown or red.
In my case (with me) usually red... Well (good), so I know: in the morning people do sports, go to the sea to get sun tan or to look at the fish. What do people do at midday?
At midday it is very hot. It is so hot... it's good to return to the hotel and rest near the air-conditioner.
Mm... and afternoon?
Afternoon it is possible to walk in town. It's already pleasant outside.
And in the evening?
In the evening it's possible to sit outside in a little coffee-house and look at the people.
And at night?
If one stands (one who stands) on a high place in the town, he can see all the lights of the city. This city does not go to sleep early (so fast). There are also clubs and bars, people listen to music, dance...
Uh... they drink a little bit of wine, uh?
-- Wine too. But after the vacation is over (passed) one needs to fly back to work to Tel-Aviv.

-- And who stays in Eilat?

-- The Eilatniks and the "beach-bums" (beatniks). The people of Eilat live a usual life. They work in the hotels, in the restaurants, in the coffee-houses, in the banks, they work at the port. . . . do you know that in the port much merchandise arrives to Israel, and much merchandise from Israel passes through this port to many other places in the world? There are also teachers. . . . teachers in schools, there are physicians. . . . all the professions. Do you know that there are even movies, they make movies in Eilat?

-- What is it, Hollywood?

-- Not Hollywood. Not yet. But the weather there is warm and excellent year around (the whole year), so people have built (there) things that you can see in American movies. For instance, they built a place like Texas, built a place like the wild west.

-- It is really (truly) nice they have started to make movies there (to start with movies). Just a moment (a moment), where are the beach-bums (beatniks)?

-- They sit on the beach, near the sea, or they live in the village of Rafi Nelson.

-- Who is Rafi Nelson?

-- Rafi Nelson? He is the first Israeli beach-bum (beatnik). He built (to himself) a small village for (of) people who want to be far from the rest of the world (far from the world). -- So, what is it, Bilat? What is interesting there? The nature?

-- Both the nature and the people (also the nature and also the people). . . . all. . . . everything is different, everything is special in Bilat.

-- Thank you Batia. Good-bye and I'll be seeing you (to-be-seen).

-- Bye, bye.
APPENDIX B

Instruments for Data Analysis
Instruments for analysis of the recall protocols. For every story two instruments were developed: one to establish identification of episodes (main parts) and one to count details mentioned in the story.

**INSTRUMENT FOR EPISODES: JERUSALEM**

<table>
<thead>
<tr>
<th>Episode #</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 Greetings</td>
<td></td>
</tr>
<tr>
<td>#2 Batia's relationship with the city of Jerusalem</td>
<td>studied there; 5 years; positive attitude</td>
</tr>
<tr>
<td>#3 General statement about the city</td>
<td>beautiful; interesting; old; new</td>
</tr>
<tr>
<td>#4 The Hebrew University</td>
<td>2 campuses; Batia in western; campus description</td>
</tr>
<tr>
<td>#5 Activities on weekdays</td>
<td>courses; library; work 5 1/2 days</td>
</tr>
<tr>
<td>#6 Family &amp; friends (a digression)</td>
<td>good to have a family; Batia didn't have one in Jerusalem; visited friends in their apartment &amp; shopped in the supermarket</td>
</tr>
<tr>
<td>#7 Friday night meal</td>
<td>big meal; the family together; Kiddush</td>
</tr>
<tr>
<td>#8 The singing-night</td>
<td>singing together; Israeli songs; meeting other students</td>
</tr>
<tr>
<td>#9 The disco</td>
<td>American music; get to know people; dance; too much noise</td>
</tr>
<tr>
<td>#10 Downtown</td>
<td>in the evening; by bus; stroll; window shop; coffee-houses; Falafel</td>
</tr>
<tr>
<td>#11 Saturday in the Arab section</td>
<td>Saturday; ancient part; market; Arab restaurant</td>
</tr>
<tr>
<td>#12 The Jewish Quarter</td>
<td>galleries; synagogues; houses</td>
</tr>
<tr>
<td>#13 Soccer</td>
<td></td>
</tr>
</tbody>
</table>
criteria: Saturday afternoon; only guys; watch soccer

Episode #14  A summary statement
criteria: both old and new

Episode #15  Greetings
INSTRUMENT FOR EPISODES: EILAT

Episode #1 criteria:
Greetings & the relationship of Batia to Eilat was there; many times

Episode #2 criteria:
The reason people go to Eilat enjoyment; resort; sea-shore

Episode #3 criteria:
Means of transportation bus; plane; pluses and minuses of each choice

Episode #4 criteria:
Kinds of people who go to Eilat Israelis; tourists; youngsters who want to take a "break"

Episode #5 criteria:
Conditions for stay hotels; restaurants

Episode #6 criteria:
Water-related activities water-ski; sailing; yachts

Episode #7 criteria:
Diving to see the tropical fish Batia's activity; hobby; see corals and fish

Episode #8 criteria:
Glass-bottomed boat Esther's activity; watching the underwater life

Episode #9 criteria:
The underwater museum in the water; a look from close-up; buy a ticket

Episode #10 criteria:
Without money... be in the water; get tan; no expense

Episode #11 criteria:
Summary of the morning & description of midday sports in the morning; get tan in the morning; look at the fish in the morning; hot at midday; be near the air conditioner

Episode #12 criteria:
Afternoon walk in town; pleasant outside

Episode #13 criteria:
Evening coffee-house; watch people

Episode #14 criteria:
Night lights of the city; city is awake; bars; music & dance; wine

Episode #15 criteria:
After the vacation vacation is over; go back to work; to Tel-Aviv
Episode #16  The Eilatniks
criteria:  local "squares" and beachbums; eight professions of the locals

Episode #17  the beachbums
criteria:  on the beach; with Rafi Nelson

Episode #18  A summary statement
criteria:  nature; people; different; special

Episode #19  Greetings
INSTRUMENT FOR DETAILS: JERUSALEM

E: Hello Batia

B: Hello Esther.

E: Today
   I would like to talk about Jerusalem.

B: O.K.

E: Are you familiar with Jerusalem?

B: Yes
   I know Jerusalem

E: Were you born there?

B: No
   I was born in Tel-Aviv
   but I studied
   at the university
   in Jerusalem.

E: Did you live there then?

B: Yes
   I had to live there.

E: How many years?

B: Five years.

E: Was it a good experience in Jerusalem?

B: Great
   I was single then
   and it was a good experience
   in this city.

E: Well so
   tell us
   a little bit
   about Jerusalem.

B: Jerusalem is very
   beautiful
   and very
   interesting
   there are new
   and modern things
   and there are ancient
   and old things.
E: And where is the campus of the Hebrew University?

B: There are two campuses now one in the new part of the city the western section the other one is in the old part of the city the eastern section near the Ancient city.

E: And where did you study?

B: I studied on the western campus.

E: And where did you live?

B: I lived in the student dorms near the campus.

E: And what is there in the western campus?

B: There are big buildings several cafeterias a very big library a museum.

E: So what does a student do on campus?

B: Usually they go to courses study at the library and also work.

E: How many days do they go to classes in the university?

B: Six actually five and a half.

E: And what do they do on Friday night and Saturday?

B: It is best when they have a family.
E: Did you have a family in Jerusalem?

B: No
but I had very
good
friends
and I used to go
and visit them
a lot
they used to live in a new
neighborhood
in a very
beautiful
apartment
and I liked
to go to the supermarket
that is in the new
neighborhood.

E: And on Friday, what do they do with the family?

B: In the afternoon
they buy flowers
for Saturday.
In the evening
there is a Kiddush
there is a big
meal
both
to small
and big
everybody together.

E: And after the meal
what do they do?

B: The students like to go to a singing night
and there are also those
who go to a disco.

E: What is a singing night?
What do they do in a singing night?
B: At a singing night
many students
come
to the club
there stands a guy
with an accordion
and they all sing
old songs.

E: Israeli songs?
B: Yes
only Israeli songs.

E: Is it fun (pleasant)?

B: Yes
a lot of fun (very pleasant)
they meet students
who they did not have time to see
during the week,
and afterwards
they sit
and talk.

E: And the disco?

B: There is American
music there
you know
pop
Rock.
People dance
and also talk
a little bit.

E: Is it possible to talk there
to know new people?

B: Yes
you can get to know new people
because
the boys invite the girls to dance
but it is impossible to talk very much.
The noise is so loud.

E: So when did you get to see Jerusalem?

B: Usually
in the evenings
and on Saturday.
On Saturday you can walk around
all day.

E: Where do they go on a usual evening?

B: To the city (downtown).

E: By foot
or by bus?

B: From campus they go by bus
downtown
and there they go by foot,
there are many streets
with many lights
and people,
and look at the display windows
sometimes they sit in a coffee-house.

E: What do they order there?

B: A cup of coffee
cake
ice cream
but not always there was money to sit in a coffee-house
many times we would buy Falafel
and go in the street with the Falafel in hand.

E: In Tel-Aviv, too,
people go with the Falafel in hand.
And on Saturday?
What do they do on Saturday?

B: On Saturday they do not study
then it is possible to visit the Ancient city it is so pretty
to see you know the roofs
of the ancient buildings.
The history of the city is still here.

E: Where do they go?

B: They go to the market if they want to shop
there are many interesting things
shops.
and it is possible to buy beautiful things cheaply
201 E: What else?

202 B: I was
203 once
204 in an Arab
205 restaurant;
206 there was excellent
207 food there.

208 E: I heard
209 that there are galleries in Jerusalem.
210 Where are they?

211 B: Yes
212 in the Jewish quarter
213 in the Ancient City.
214 there are many
215 galleries
216 there are also ancient
217 synagogues;
218 there are simple
219 houses
220 where people now
221 live.

222 E: Do the boys and girls go together
223 for the whole day?

224 B: All the time (most of the time)
225 they were with us
226 except for Saturday afternoon.

227 E: Why?

228 B: Because on Saturday afternoon
229 there is soccer
230 and the guys love
231 to go
232 to soccer.

233 E: So what is Jerusalem,
234 a modern city
235 or an ancient city?

236 B: Both
237 there is in it
238 both old
239 and new.

240 E: Thank you Batia
241 good-bye
242 and I'll be seeing you.
243 B: Bye-bye
INSTRUMENT FOR DETAILS: EILAT

1 E: Hello Batia
2 B: Hello Esther
3 E: Batia, are you familiar with Eilat?
4 B: Yes
5 I was there
6 many times.
7 E: Why do people go to Eilat?
8 B: Because this is a place to enjoy oneself (to make
9 life)
10 mainly
11 because of the sea.
12 E: Well,
13 then how do they get to Eilat?
14 B: I went
15 by bus.
16 E: And I went
17 by plane.
18 B: By bus it's cheaper.
19 E: Right
20 but by plane is quicker.
21 B: When people go by plane it is impossible to see the
Negev.
22 E: This is also true
23 who has time to see the Negev?
24 just a moment
25 we should talk about the people who go to Eilat
26 who goes go to Eilat?
27 B: Israelis
28 that want to rest
29 for a short period
30 a week
31 Uh... a couple after the wedding
32 also tourists
33 that are touring Israel
34 and want to see Eilat too
35 All these go by plane
from Tel-Aviv
direct to Eilat.

E: So everybody by plane?

B: Just a moment
on the other hand
there are many
young people
from Israel
and from other countries
who want to get away from home
be far away from the whole world
sit
and talk with other young people
think
for a little while
quietly
the youngsters have a lot of
time
but no money
they go by bus
and see the Negev.

E: Well
we are already in Eilat O.K.?
we are in Eilat.
Where is it possible to eat
and to sleep?

B: There are many
hotels
near the sea.
there are expensive ones
and cheap ones.
it is possible to eat in the dining room of the hotel
it is always
possible to eat in a restaurant.

E: Well
eat, eat... .
what do they do all day?

B: It is possible to water-ski.

E: Did you water-ski?

B: No
never.
It is also possible to go sailing (sail in boats).

E: Did you sail in Eilat
in a boat?

B: Sometimes
  with friends
  who know how to sail boats.
  Do you know that there are yachts
  and other expensive boats
  in the port of Eilat?

E: Oh
maybe you have a yacht
uh?

B: No
not yet.

E: So
what did you do in Eilat?

B: I learned to dive in the water
  there are many
  people diving in the water
  because the water is warm there
  yeararound.

E: Is this the profession of the people who dive in the water?

B: No
it is their hobby.

E: Uh... yes
it is possible to see the tropical fish, right?

B: Yes, yes
I dived in the water
and I saw
blue water
green corals
white corals
orange fish
pretty uh?

E: Marvelous
Uh
I remember
before the wedding when...
after the wedding
when I was in Eilat
in 1972
we went on a glass boat...
people go on the boat
look downward
and see the fish
and the corals.

B: Right
Nowadays, too, people go on glass boat
but it is more interesting
to go to the under-water
museum.

E: Why more interesting?

B: Because the museum is in the water
people go on a little
bridge
go down
and from there they
can see
through the windows
the fish really
from close up
see all the colors
of all the fish.

E: Yes
this is really
beautiful
just a moment
but does one need to buy a ticket to this museum
right?

B: Sure
like to every museum
in the world.

E: Let's think a minute
what would people do in Eilat without money?

B: With no money?
only a swim-suit is needed
people enter the water
white
and afterwards the body becomes brown
or red.

E: In my case usually
red.
Well
so
I know
in the morning
164 people do sports,
165 go to the sea
166 to get sun tan,
167 or to look at the fish.
168 What do people do at midday?

169 B: At midday it is
170 very
171 hot.
172 It is so hot
173 it is good to return
174 to the hotel
175 and rest
176 near the air-conditioner.

177 E: Mm. . .
178 and afternoon?

179 B: In the afternoon
180 it is possible to walk in town;
181 it is already
182 pleasant outside.

183 E: And in the evening?

184 B: In the evening
185 it is possible to sit outside
186 in a small
187 coffee-house
188 and look at the people.

189 E: And at night?

190 B: One who stands on a high place
191 in town
192 can see all
193 the lights
194 of the city.
195 This city does not go to sleep
196 so fast.
197 There are also clubs
198 and bars
199 people listen to music
200 dance.

201 E: Uh. . .
202 they drink a little bit
203 of wine
204 Uh?

205 B: Wine too
206 but after the vacation is over
207 one needs to fly
208 back
209 to work
210 to Tel-Aviv.

211 E: And who stays in Eilat?

212 B: The Eilatniks
213 and the beachbums.
214 The people of Eilat live a usual life:
215 they work in the hotels,
216 in the restaurants,
217 in the coffee houses,
218 in the banks.
219 They work at the port.
220 Do you know
221 that in the port much
222 merchandise arrives to Israel
223 and much
224 merchandise from Israel passes through this port
225 to many
226 other places
227 in the world?
228 There are also teachers
229 teachers in schools
230 there are physicians
231 all the professions.
232 Do you know
233 that there are even
234 movies
235 they make movies in Eilat.

236 E: What is it, Hollywood?

237 B: Not Hollywood
238 not yet
239 but the weather there is warm
240 and excellent
241 yeararound
242 so people have built there things
243 that you can see in American movies
244 for instance
245 they have built a place like Texas
246 built a place like the wild west.

247 E: It is really nice they have started
248 to make movies there.
249 Just a moment
250 Where are the beachbums?

251 B: They sit on the beach
near the sea
or they live in the village of Rafi Nelson.

E: Who is Rafi Nelson?

B: Rafi Nelson?
he is the first Israeli beachbum.
he built for himself a small village of people who want to be far from the world.

E: So
What is Eilat?
What is interesting there?
The nature?

B: Both the nature and the people everything is different everything is special in Eilat

E: Thank you, Batia
Good-Bye and I’ll be seeing you

B: Bye-bye
APPENDIX C

Interactive Programs
YOU ARE ABOUT TO PARTICIPATE IN A LISTENING ACTIVITY. YOU WILL WATCH AN INTERVIEW IN HEBREW ABOUT STUDENT LIFE IN JERUSALEM. MRS. ESTHER JAVETZ IS INTERVIEWING MRS. BATIA AVISAR.

YOU WILL ALSO SEE PICTURES AND SOUNDS FROM ISRAEL—WHERE THE EVENTS THAT ARE DISCUSSED TOOK PLACE AND STILL DO. THE COMPUTER WILL GUIDE YOU THROUGH THIS LISTENING ACTIVITY IN ENGLISH.

NO VTR SEGMENT.
THIS BRANCHES TO # 2

PLEASE LISTEN AND WATCH CAREFULLY. AT THE END OF THE LISTENING ACTIVITY YOU WILL BE REQUIRED TO WRITE A REPORT. YOU WILL NOT BE ASKED TO RECALL THE INTERVIEW WORD-FOR-WORD.

BUT YOU WILL BE ASKED TO RETELL IN ENGLISH THE CONTENT OF THE INTERVIEW—WITH AS MUCH DETAIL AS POSSIBLE. HAVE FUN!
NEXT VTR SEGMENTS 1 TO 2
THIS BRANCHES TO # 3

PAGE # 3 K PAGE

WOULD YOU LIKE TO LISTEN AGAIN?

Y
NEXT VIDEO SCENES 2 TO 2
THIS RESPONSE BRANCHES TO 3

YES
NEXT VIDEO SCENES 2 TO 2
THIS RESPONSE BRANCHES TO 3

N
NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 4

X
NEXT VIDEO SCENES X TO X
"DEFAULT" PAGE...
THIS RESPONSE BRANCHES TO 4
CORRECT ANSWER IS # 123

PAGE # 4 K PAGE

LISTEN AND FIND OUT BATIA'S
RELATIONSHIP WITH THE CITY OF
JERUSALEM...

X
NEXT VTR SEGMENTS 3 TO 3
THIS BRANCHES TO # 5

PAGE # 5 K PAGE

***** THINK *****
W-H-E-N WAS BATIA IN JERUSALEM?
H-O-W L-O-N-G DID SHE SPEND THERE?
WHAT IS HER A-T-T-I-T-U-D-E TOWARD
THE CITY?

IF YOU ARE NOT SURE -- YOU CAN LISTEN
AGAIN...

NO VTR SEGMENT
THIS BRANCHES TO # 6

PAGE # 6 K PAGE
CARE TO LISTEN AGAIN?

Y
NEXT VIDEO SCENES 3 TO 3
THIS RESPONSE BRANCHES TO 5

YES
NEXT VIDEO SCENES 3 TO 3
THIS RESPONSE BRANCHES TO 5

N
NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 7

X
NEXT VIDEO SCENES X TO X
"DEFAULT" PAGE...
THIS RESPONSE BRANCHES TO 7
CORRECT ANSWER IS # 123

PAGE # 7 1 PAGE

******** REMEMBER ********
W-H-E-N
H-O-W L-O-N-G
WHAT A-T-T-I-T-U-D-E

X
NO VTR SEGMENT.
THIS BRANCHES TO # 8

PAGE # 8 1 PAGE

SOMETHING GENERAL TO SAY ABOUT THE CITY...

X
NEXT VTR SEGMENTS 4 TO 4
THIS BRANCHES TO # 9

PAGE # 9 1 PAGE

***** THINK *****
CAN YOU THINK OF AT LEAST T-W-O QUALITIES OF THE CITY?

IF NOT -- YOU ARE WELCOME TO LISTEN AGAIN...

NO VTR SEGMENT.
THIS BRANCHES TO # 10
PAGE # 10 I PAGE

DO YOU WISH TO LISTEN AGAIN?

Y
NEXT VIDEO SCENES 4 TO 4
THIS RESPONSE BRANCHES TO 9

YES
NEXT VIDEO SCENES 4 TO 4
THIS RESPONSE BRANCHES TO 9

N
NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 11

X
NEXT VIDEO SCENES X TO X
"DEFAULT" PAGE...
THIS RESPONSE BRANCHES TO 11
CORRECT ANSWER IS # 123

PAGE # 11 I PAGE

******** REMEMBER ********
(AT LEAST) T-W-O QUALITIES.

X
NO VTR SEGMENT...
THIS BRANCHES TO # 12

PAGE # 12 I PAGE

THERE IS A PLACE YOU WOULD PROBABLY LIKE TO KNOW ABOUT...

X
NEXT VTR SEGMENTS 5 TO 5
THIS BRANCHES TO # 13

PAGE # 13 I PAGE

***** THINK *****
THE PLACE WAS REALLY TWO PLACES!
W-H-A-T ARE THEY?
W-H-E-R-E ARE THEY?
TO WHICH O-H-E WAS BATIA RELATED?

CAN YOU LIST SOME OF THE THINGS
THERE?
IF YOU ARE NOT SURE—GO AHEAD AND LISTEN AGAIN...

NO VTR SEGMENT
THIS BRANCHES TO # 14

PAGE # 14 I PAGE

WOULD YOU LIKE TO LISTEN AGAIN?

Y
NEXT VIDEO SCENES 5 TO 5
THIS RESPONSE BRANCHES TO 13

YES
NEXT VIDEO SCENES 5 TO 5
THIS RESPONSE BRANCHES TO 13

N
NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 15

X
NEXT VIDEO SCENES X TO X
"DEFAULT" PAGE...
THIS RESPONSE BRANCHES TO 15
CORRECT ANSWER IS # 123

PAGE # 15 I PAGE

****** REMEMBER ******
T-W-O PLACES.
BATIA WAS RELATED TO O-N-E OF THEM.
THERE ARE SOME FAMILIAR THINGS THERE.

X

NO VTR SEGMENT
THIS BRANCHES TO # 16

PAGE # 16 I PAGE

IT IS SO TYPICAL...

X
NEXT VTR SEGMENTS 6 TO 6
THIS BRANCHES TO # 17

PAGE # 17 I PAGE

***** THINK *****
DO YOU KNOW THIS ROUTINE?

IF NOT -- WHY NOT LISTEN AGAIN?

NO VTR SEGMENT.
THIS BRANCHES TO # 18

PAGE # 18 K PAGE

LISTEN AGAIN?

Y

NEXT VIDEO SCENES 6 TO 6
THIS RESPONSE BRANCHES TO 17

YES

NEXT VIDEO SCENES 6 TO 6
THIS RESPONSE BRANCHES TO 17

N

NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 19

X

NEXT VIDEO SCENES X TO X
"DEFAULT" PAGE...
THIS RESPONSE BRANCHES TO 19
CORRECT ANSWER IS # 123

PAGE # 19 I PAGE

******* REMEMBER *******
THE ROUTINE.

X

NO VTR SEGMENT.
THIS BRANCHES TO # 20

PAGE # 20 I PAGE

ESTHER NEEDS TWO MORE THINGS FOR COMPLETION OF THE PREVIOUS ROUTINE, BUT BATIA BRINGS UP SOMETHING ELSE...

X

NEXT VTR SEGMENTS 7 TO 7
THIS BRANCHES TO # 21

PAGE # 21 I PAGE
***** THINK *****
W-H-A-T do the students need then?
DID BATIA HAVE THIS?
W-H-O were the people and what was their

YOU HAVE A CHOICE TO WATCH AGAIN...

NO VTR SEGMENT.
THIS BRANCHES TO # 22

PAGE # 22 I PAGE
DO YOU CHOOSE TO WATCH IT AGAIN?

Y
NEXT VIDEO SCENES 7 TO 7
THIS RESPONSE BRANCHES TO 21

YES
NEXT VIDEO SCENES 7 TO 7
THIS RESPONSE BRANCHES TO 21

N
NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 23

X
NEXT VIDEO SCENES X TO X
"DEFAULT" PAGE...
THIS RESPONSE BRANCHES TO 23
CORRECT ANSWER IS # 123

PAGE # 23 I PAGE

****** REMEMBER ******
THE PEOPLE AND W-H-E-R-E THEY LIVED,
THEIR R-E-L-A-T-I-O-N-S-H-I-P with BATIA
AND W-H-A-T SHE LIKED TO DO WITH THEM.

X
NO VTR SEGMENT.
THIS BRANCHES TO # 24

PAGE # 24 I PAGE
BACK TO THE STUDENTS' WAY OF LIFE...

X
NEXT VTR SEGMENTS 8 TO 8
THIS BRANCHES TO # 25
P A G E # 2 5  I  P A G E

**** THINK ****
W-H-A-T DO MOST OF THE STUDENTS DO ON THAT DAY?

IF YOU ARE NOT SURE -- YOU MIGHT LISTEN AGAIN.

NO VTR SEGMENT .
THIS BRANCHES TO § 2 6

P A G E # 2 6  I  P A G E

WOULD YOU LIKE TO BE SURE?

Y
NEXT VIDEO SCENES 6 TO 8
THIS RESPONSE BRANCHES TO 2 5

YES
NEXT VIDEO SCENES 6 TO 8
THIS RESPONSE BRANCHES TO 2 5

N
NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 2 7

X
NEXT VIDEO SCENES X TO X
"DEFAULT" PAGE . . .
THIS RESPONSE BRANCHES TO 2 7
CORRECT ANSWER IS # 1 2 3

P A G E # 2 7  I  P A G E

******* REMEMBER *******
W-H-A-T DO THEY DO THAT DAY?
WHAT T-I-M-E OF THE DAY?
W-H-O PARTICIPATES?

X
NO VTR SEGMENT .
THIS BRANCHES TO § 2 8

P A G E # 2 8  I  P A G E

A F T E R W A R D S THERE ARE TWO CHOICES.
THE FIRST CHOICE . . .

X
NEXT VTR SEGMENTS 9 TO 9
THIS BRANCHES TO # 29

PAGE # 29 I PAGE

***** THINK *****
W-H-O DO THEY MEET THERE?
W-H-A-T DO THEY DO TOGETHER?

DID YOU GET THE WORDS INSPIRE OF THE MUSIC?
IF YOU WOULD LIKE TO LISTEN AGAIN TO THE WORDS AND/OR MUSIC -- SAY SO!

NO VTR SEGMENT .
THIS BRANCHES TO # 30

PAGE # 30 I PAGE

SO -- WHAT DO YOU SAY?

Y
NEXT VIDEO SCENES 9 TO 9
THIS RESPONSE BRANCHES TO 29

YES
NEXT VIDEO SCENES 9 TO 9
THIS RESPONSE BRANCHES TO 29

N
NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 31

X
NEXT VIDEO SCENES X TO X
"DEFAULT" PAGE...
THIS RESPONSE BRANCHES TO 31
CORRECT ANSWER IS # 123

PAGE # 31 I PAGE

********* REMEMBER *********
THE KIND OF M-U-S-I-C .

X
NO VTR SEGMENT .
THIS BRANCHES TO # 32

PAGE # 32 I PAGE
AND THE SECOND CHOICE...

X
NEXT VTR SEGMENTS 10 TO 10
THIS BRANCHES TO # 33

PAGE # 33 I PAGE

***** THINK *****
WHAT IS P-O-S-S-I-B-L-E THERE?
WHAT IS I-M-P-O-S-S-I-B-L-E THERE?

HOW ABOUT GOING THERE AGAIN?

NO VTR SEGMENT.
THIS BRANCHES TO # 34

PAGE # 34 I PAGE

DO YOU WANT TO LISTEN TO THE TAPE AGAIN?

Y
NEXT VIDEO SCENES 10 TO 10
THIS RESPONSE BRANCHES TO 33

YES
NEXT VIDEO SCENES 10 TO 10
THIS RESPONSE BRANCHES TO 33

N
NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 35

X
NEXT VIDEO SCENES X TO X
"DEFAULT" PAGE...
THIS RESPONSE BRANCHES TO 35
CORRECT ANSWER IS # 123

PAGE # 35 I PAGE

******** REMEMBER ********
The Type of H-B-S-I-G.
WHAT YOU C-A-N DO THERE AND WHAT YOU C-A-N-N-O-T DO THERE.

X
NO VTR SEGMENT.
THIS BRANCHES TO # 36

PAGE # 36 I PAGE
THERE ARE OTHER THINGS TO DO AT OTHER TIMES.

ONE IS...
NEXT VTR SEGMENTS 11 TO 11
THIS BRANCHES TO # 37

PAGE # 37 1 PAGE

***** THINK *****
W-H-E-N DO THEY DO THIS?
H-O-W DO THEY GET THERE?
W-H-A-T DO THEY EAT?
WHAT DID ESTHER SAY?

LISTEN AGAIN IF YOU NEED TO.

NO VTR SEGMENT.
THIS BRANCHES TO # 38

PAGE # 38 K PAGE

WHAT DID YOU DECIDE?

Y
NEXT VIDEO SCENES 11 TO 11
THIS RESPONSE BRANCHES TO 37

YES
NEXT VIDEO SCENES 11 TO 11
THIS RESPONSE BRANCHES TO 37

N
NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 39

X
NEXT VIDEO SCENES X TO X
"DEFAULT" PAGE...
THIS RESPONSE BRANCHES TO 39
CORRECT ANSWER IS # 123

PAGE # 39 1 PAGE

********* REMEMBER *********
W-H-E-N DO THESE THINGS HAPPEN?
H-O-W DO THE STUDENTS GET THERE?
W-H-A-T DO THEY EAT?
W-H-A-T WAS TRUE FOR ESTHER TOO?

X
NO VTR SEGMENT.
AND ON THIS SPECIAL DAY...

***** THINK *****
WHAT DAY IS IT?
WHICH PART OF THE CITY IS IT?
CAN YOU LIST TWO PLACES WHICH WERE MENTIONED?
YOU COULD TRY THESE PLACES AGAIN...

ARE YOU GOING TO BE THERE?

Y
NEXT VIDEO SCENES 12 TO 12
THIS RESPONSE BRANCHES TO 41

YES
NEXT VIDEO SCENES 12 TO 12
THIS RESPONSE BRANCHES TO 41

N
NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 43

X
NEXT VIDEO SCENES X TO X
"DEFAULT" PAGE...
THIS RESPONSE BRANCHES TO 43
CORRECT ANSWER IS # 123

******** REMEMBER ********
THE DAY OF THE WEEK.
THE PART OF THE CITY.
THE TWO ACTIVITIES AND
WHY THOSE ARE DONE THERE.
NO VTR SEGMENT .
THIS BRANCHES TO # 44

PAGE # 44 I PAGE

BUT THERE ARE OTHER PLACES ESTHER IS
INTERESTED IN...

X
NEXT VTR SEGMENTS 13 TO 13
THIS BRANCHES TO # 45

PAGE # 45 I PAGE

***** THINK *****
BATIA ANSWERS MORE THAN ESTHER'S
SPECIFIC QUESTION.
SHE NAMES T-H-R-E-E TYPES OF ITEMS IN
THAT SECTION OF THE CITY.

DO YOU REMEMBER WHAT THEY ARE?
YOU STILL HAVE AN OPTION...

NO VTR SEGMENT .
THIS BRANCHES TO # 46

PAGE # 46 K PAGE

WOULD YOU OPT FOR LISTENING AGAIN?

Y
NEXT VIDEO SCENES 13 TO 13
THIS RESPONSE BRANCHES TO 45

YES
NEXT VIDEO SCENES 13 TO 13
THIS RESPONSE BRANCHES TO 45

N
NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 47

X
NEXT VIDEO SCENES X TO X
"DEFAULT" PAGE...
THIS RESPONSE BRANCHES TO 47
CORRECT ANSWER IS # 123
REMEMBER THE SECTION OF THE CITY AND WHAT IT INCLUDES.

A VERY IMPORTANT ASPECT OF SOCIAL LIFE...

IF YOU WOULD LIKE TO KNOW WHAT THIS GAME IS CALLED IN HEBREW... JUST LISTEN AGAIN!

LISTEN AGAIN?

Y

YES

N

X

DEFAULT PAGE...
THIS RESPONSE BRANCHES TO 51
CORRECT ANSWER IS # 123

PAGE # 51 I PAGE

******** REMEMBER ********
The T-I-M-E OF THE DAY.
The V-I-E-W-E-R-S.
The G-A-K-E.

X

NO VTR SEGMENT .
THIS BRANCHES TO # 52

PAGE # 52 I PAGE

AT THE END OF THE INTERVIEW - WE
WOULD ALL EXPECT A GENERAL STATEMENT...

X

NEXT VTR SEGMENTS 15 TO 15
THIS BRANCHES TO # 53

PAGE # 53 I PAGE

***** THINK *****
CAN YOU NAME THOSE T-W-O MAJOR QUALITIES
OF THE CITY?

IF NOT - GO AHEAD AND LISTEN TO THE
WAY BATIA SUMMARIZES HER EXPERIENCE...

NO VTR SEGMENT .
THIS BRANCHES TO # 54

PAGE # 54 K PAGE

LISTEN IN HEBREW AGAIN?
Y

NEXT VIDEO SCENES 15 TO 15
THIS RESPONSE BRANCHES TO 53

YES

NEXT VIDEO SCENES 15 TO 15
THIS RESPONSE BRANCHES TO 53

N

NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 55

X
NEXT VIDEO SCENES X TO X
"DEFAULT" PAGE...
THIS RESPONSE BRANCHES TO 55
CORRECT ANSWER IS # 123

PAGE # 55 I PAGE

********** REMEMBER **********
THERE ARE T-W-O MAJOR QUALITIES TO THIS CITY.

X
NO VTR SEGMENT
THIS BRANCHES TO # 56

PAGE # 56 I PAGE

AND WHAT DOES ONE SAY BEFORE QUITING?

X
NEXT VTR SEGMENTS 16 TO 16
THIS BRANCHES TO # 57

PAGE # 57 K PAGE

A SECOND TIME?

Y
NEXT VIDEO SCENES 16 TO 16
THIS RESPONSE BRANCHES TO 57

YES
NEXT VIDEO SCENES 16 TO 16
THIS RESPONSE BRANCHES TO 57

N
NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 58

X
NEXT VIDEO SCENES X TO X
"DEFAULT" PAGE...
THIS RESPONSE BRANCHES TO 58
CORRECT ANSWER IS # 123

PAGE # 58 I PAGE

WE HOPE YOU ENJOYED LISTENING AND
LEARNING ABOUT JERUSALEM AND ITS YOUNG PEOPLE.

ON THE FOLLOWING PAGE YOU WILL BE PROVIDED WITH HINTS HOW TO ORGANIZE ALL THE INFORMATION IN YOUR THOUGHTS IN ORDER TO WRITE A GOOD REPORT.

NO VTR SEGMENT.
THIS BRANCHES TO # 59

PAGE # 59 I PAGE.

****** REVIEW ******
ORGANIZE YOUR THOUGHTS ACCORDING TO ONE OR MORE OF THE FOLLOWING IDEAS:
1) --- TIME --- WHAT DO THE STUDENTS DO ON DIFFERENT DAYS OF THE WEEK?

2) --- PLACE --- THE DIFFERENT SECTIONS OF THE CITY AND WHAT IS DONE THERE.
3) --- PEOPLE --- WITH WHOM DO STUDENTS INTERACT AND WHEN.

NO VTR SEGMENT.
THIS BRANCHES TO # 60

PAGE # 60 I PAGE

4) --- QUALITIES OF THE CITY --- HOW ARE THE TWO QUALITIES CHARACTERISTIC OF PEOPLE PLACES AND EVENTS?

5) --- BATIA --- WHAT EVENTS REALLY HAPPENED TO HER?

NO VTR SEGMENT.
THIS BRANCHES TO # 61

PAGE # 61 I PAGE

WHERE TO GO NOW
1. WATCH THE VIDEOTAPE INDEPENDENTLY!! VIDEO 001 TO 016. NEXT PAGE# 061
2. JUST LISTEN - NO PICTURES! VIDEO 000 TO 000. NEXT PAGE# 062
3. GO THROUGH THIS PROGRAM AGAIN! VIDEO 000 TO 000. NEXT PAGE# 001
4. QUIT! VIDEO 017 TO 017. NEXT PAGE# 063
CORRECT ANSWERS ARE 1, 2, 3.
COULD YOU SAY IN H-E-B-R-E-W "BYE-BYE
AND SO LONG"?

SAY IT...AND TURN OFF THE COMPUTER!
(THE SWITCH IS ON YOUR LEFT).

NO VTR SEGMENT.
THIS BRANCHES TO 0
YOU ARE ABOUT TO PARTICIPATE IN A LISTENING ACTIVITY. YOU WILL WATCH AN INTERVIEW IN HEBREW ABOUT THE CITY OF EILAT. THE INTERVIEWER IS MRS. JAVETZ AND THE INTERVIEWEE IS MRS. AVISAR.

YOU WILL ALSO SEE PICTURES AND SOUNDS FROM ISRael — WHERE THE EVENTS THAT ARE DISCUSSED TOOK PLACE AND STILL DO. THE COMPUTER WILL GUIDE YOU THROUGH THIS LISTENING ACTIVITY IN ENGLISH.

NO VIR SEGMENT.
THIS BRANCHES TO 2

PLEASE — LISTEN AND WATCH CAREFULLY. AT THE END OF THE LISTENING ACTIVITY YOU WILL BE REQUIRED TO WRITE A REPORT. YOU WILL NOT BE ASKED TO RECALL THE INTERVIEW WORD-FOR-WORD.

BUT YOU WILL BE ASKED TO RETELL IN ENGLISH THE CONTENT OF THE INTERVIEW WITH AS MUCH DETAIL AS
POSSIBLE.

HAVE FUN!
NEXT VTR SEGMENTS 1 TO 2
THIS BRANCHES TO # 3

PAGE # 3 I PAGE

***** THINK *****
H-O-W DOES BATIA KNOW ABOUT EILAT?

YOU CAN CHOOSE TO GO BACK AND FIND OUT...

NO VTR SEGMENT.
THIS BRANCHES TO # 4

PAGE # 4 I PAGE

GO BACK?

Y
NEXT VIDEO SCENES 2 TO 2
THIS RESPONSE BRANCHES TO 3

YES
NEXT VIDEO SCENES 2 TO 2
THIS RESPONSE BRANCHES TO 3

N
NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 5

X
NEXT VIDEO SCENES X TO X
"DEFAULT" PAGE...
THIS RESPONSE BRANCHES TO 5
CORRECT ANSWER IS # 123

PAGE # 5 I PAGE

********* REMEMBER *********
H-O-W SHE KNOWS.

X
NO VTR SEGMENT.
THIS BRANCHES TO # 6

PAGE # 6 I PAGE
THIS PLACE IS FOR ISRAELIES -- LIKE ????????????? FOR AMERICANS...

X
NEXT VTR SEGMENTS 3 TO 3
THIS BRANCHES TO # 7

PAGE # 7 I PAGE

***** THINK *****
W-H-Y DO PEOPLE GO THERE?

IF YOU ARE NOT SURE - YOU ARE WELCOME TO GO BACK...

NO VTR SEGMENT.
THIS BRANCHES TO # 8

PAGE # 8 I PAGE
AGAIN?

Y
NEXT VIDEO SCENES 3 TO 3
THIS RESPONSE BRANCHES TO 7

YES
NEXT VIDEO SCENES 3 TO 3
THIS RESPONSE BRANCHES TO 7

N
NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 9

X
NEXT VIDEO SCENES X TO X
"DEFAULT" PAGE...
THIS RESPONSE BRANCHES TO 9
CORRECT ANSWER IS # 123

PAGE # 9 I PAGE

******** RECALL ********
THE REASON TO GO TO EILAT.

X

NO VTR SEGMENT.
THIS BRANCHES TO # 10

PAGE # 10 I PAGE
BEFORE PEOPLE GO THERE - THEY HAVE A CHOICE BETWEEN THE FOLLOWING TWO...

X
NEXT VTR SEGMENTS 4 TO 4
THIS BRANCHES TO # 11

PAGE # 11 I PAGE

***** THINK *****
HOW CAN PEOPLE GET THERE?
HOW DID BATIA GO? HOW DID ESTHER?
WHAT ARE THE PLUSES AND MINUSES OF EACH OF THE CHOICES?
YOU CAN STILL LISTEN AGAIN...
NO VTR SEGMENT.
THIS BRANCHES TO # 12

PAGE # 12 I PAGE

WILL YOU?

Y
NEXT VIDEO SCENES 4 TO 4
THIS RESPONSE BRANCHES TO 11

YES
NEXT VIDEO SCENES 4 TO 4
THIS RESPONSE BRANCHES TO 11

N
NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 13

X
NEXT VIDEO SCENES X TO X
"DEFAULT" PAGE...
THIS RESPONSE BRANCHES TO 13
CORRECT ANSWER IS # 123

PAGE # 13 I PAGE

********** REMEMBER **********
The T-W-O CHOICES.
W-H-A-T EACH ONE OF THE LADIES CHOSE.
The ADVANTAGES AND DISADVANTAGES OF EACH

X
NO VTR SEGMENT.
THIS BRANCHES TO # 14

PAGE # 14 I PAGE

AND THOSE WHO GO...

X

NEXT VTR SEGMENTS 5 TO 5
THIS BRANCHES TO # 15

PAGE # 15 I PAGE

***** THINK *****
CAN YOU LIST THE T-H-R-E-E TYPES OF
PEOPLE THAT WERE MENTIONED?
WHAT MEANS OF TRANSPORTATION EACH GROUP
TYPICALLY Chooses AND WHY?

WE WOULD RECOMMEND THAT YOU SEE THE
PEOPLE AND LISTEN AGAIN TO SATIA
GROUPING THEM...

NO VTR SEGMENT...
THIS BRANCHES TO # 16

PAGE # 16 K PAGE

ARE YOU GOING TO?

Y

NEXT VIDEO SCENES 5 TO 5
THIS RESPONSE BRANCHES TO 15

YES

NEXT VIDEO SCENES 5 TO 5
THIS RESPONSE BRANCHES TO 15

N

NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 17

X

NEXT VIDEO SCENES X TO X
"DEFAULT" PAGE...
THIS RESPONSE BRANCHES TO 17
CORRECT ANSWER IS # 123

PAGE # 17 I PAGE

********* REMEMBER *********
T-H-R-E-E TYPES OF PEOPLE.
BY W-H-A-T MEANS THEY CHOOSE TO GO AND W-H-Y.

NO VTR SEGMENT.
THIS BRANCHES TO # 18

PAGE # 18 I PAGE

AFTER ARRIVAL -- WHAT'S NEXT...

X
NEXT VTR SEGMENTS 6 TO 6
THIS BRANCHES TO # 19

PAGE # 19 I PAGE

***** THINK *****
W-H-A-T ARE THOSE PLACES?
W-H-O IS USING THEM?
W-H-A-T IS THE DIFFERENCE AMONG THEM?

IF YOU WANT TO KNOW MORE -- THE NEXT PAGE WILL GIVE YOU AN OPTION...

NO VTR SEGMENT.
THIS BRANCHES TO # 20

PAGE # 20 I PAGE

WOULD YOU OPT FOR LISTENING AGAIN?

Y
NEXT VIDEO SCENES 6 TO 6
THIS RESPONSE BRANCHES TO 19

YES
NEXT VIDEO SCENES 6 TO 6
THIS RESPONSE BRANCHES TO 19

N
NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 21

X
NEXT VIDEO SCENES X TO X
"DEFAULT" PAGE...
THIS RESPONSE BRANCHES TO 21
CORRECT ANSWER IS # 123

PAGE # 21 I PAGE
********** REMEMBER **********
THE DIFFERENT PLACES AND HOW THEY ARE USED.

X

NO VTR SEGMENT.
THIS BRANCHES TO # 22

PAGE # 22 I PAGE
SOME THINGS TO DO...

X

NEXT VTR SEGMENTS 7 TO 7
THIS BRANCHES TO # 23

PAGE # 23 I PAGE

***** THINK *****
W-H-A-T WERE THE ACTIVITIES?
W-H-I-C-H ONES DID BATIA EXPERIENCE?
W-H-I-C-H ONES BATIA DIDN'T EXPERIENCE?

X

NO VTR SEGMENT.
THIS BRANCHES TO # 24

PAGE # 24 I PAGE
LISTEN AGAIN?

Y

NEXT VIDEO SCENES 7 TO 7
THIS RESPONSE BRANCHES TO 23

YES

NEXT VIDEO SCENES 7 TO 7
THIS RESPONSE BRANCHES TO 23

N

NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 25

X

NEXT VIDEO SCENES X TO X
"DEFAULT" PAGE...
THIS RESPONSE BRANCHES TO 25
CORRECT ANSWER IS # 123
REMEMBER

THE A-C-T-I-V-I-T-I-E-S AND IN
W-H-I-C-H OF THOSE DID BATIA TAKE PART?

X

NO VTR SEGMENT
THIS BRANCHES TO \# 26

ONE MORE THING TO DO...

X

NEXT VTR SEGMENTS 8 TO 8
THIS BRANCHES TO \# 27

***** THINK *****
W-H-Y DO PEOPLE DO THIS IN EILAT?
W-H-O ARE THE PEOPLE WHO DO THIS?
W-H-A-T DO THE PEOPLE GET FOR DOING
THIS ACTIVITY?

W-H-A-T DID BATIA DO?
IF YOU ARE NOT SURE — SWIM BACKWARDS...

NO VTR SEGMENT
THIS BRANCHES TO \# 28

BACK TO UNDER THE WATER?

Y

NEXT VIDEO SCENES 8 TO 8
THIS RESPONSE BRANCHES TO 27

YES

NEXT VIDEO SCENES 8 TO 8
THIS RESPONSE BRANCHES TO 27

N

NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 29

X

NEXT VIDEO SCENES X TO X
DEFAULT PAGE...
THIS RESPONSE BRANCHES TO 29
CORRECT ANSWER IS # 123

PAGE # 29 I PAGE

******** REMEMBER ********
THE A-C-T-I-V-I-T-Y.
W-H-Y IT IS DONE IN EILAT.
THE K-I-N-D OF PEOPLE WHO DO IT.
W-H-A-T DO THEY GET OUT OF IT.
X
NO VTR SEGMENT.
THIS BRANCHES TO # 30

PAGE # 30 I PAGE

ESTHER TOO HAS SOMETHING TO SAY ABOUT
THESE KINDS OF THINGS...

X
NEXT VTR SEGMENTS 9 TO 9
THIS BRANCHES TO # 31

PAGE # 31 I PAGE

***** THINK *****
W-H-E-N DID ESTHER GO TO EILAT?
AROUND W-H-I-C-H OCCASION DID SHE GO
THERE?
W-H-A-T KIND OF THING DID SHE DO?

YOU CAN OF COURSE -- GO BACK TO
ESTHER'S MEMORIES...

NO VTR SEGMENT.
THIS BRANCHES TO # 32

PAGE # 32 K PAGE

WOULD YOU LIKE TO GO BACK?

Y
NEXT VIDEO SCENES 9 TO 9
THIS RESPONSE BRANCHES TO 31

YES
NEXT VIDEO SCENES 9 TO 9
THIS RESPONSE BRANCHES TO 31

NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 33

X
NEXT VIDEO SCENES X TO X
'DEFAULT' PAGE...
THIS RESPONSE BRANCHES TO 33
CORRECT ANSWER IS # 123

PAGE # 33 I PAGE

******** REMEMBER ********
THE PERIOD OF T-I-M-E AND THE
O-C-C-A-S-I-O-N THAT BROUGHT ESTHER
THERE.
THE A-C-T-I-V-I-T-Y SHE DID.

X
NO VTR SEGMENT.
THIS BRANCHES TO # 34

PAGE # 34 I PAGE

BUT BATIA HAS MORE CURRENT
INFORMATION...

X
NEXT VTR SEGMENTS 10 TO 10
THIS BRANCHES TO # 35

PAGE # 35 I PAGE

***** THINK *****
W-H-A-T IS THIS PLACE?
W-H-E-R-E IS IT LOCATED?
W-H-A-T IS THE ADVANTAGE OF THIS PLACE
IN COMPARISON TO OLDER FACILITIES?

IF YOU ARE NOT SURE IN ONE OF THESE
POINTS — YOU KNOW WHAT TO DO...

NO VTR SEGMENT.
THIS BRANCHES TO # 36

PAGE # 36 I PAGE
WHAT DID YOU DECIDE?

Y
- NEXT VIDEO SCENES 10 TO 10
- THIS RESPONSE BRANCHES TO 35

YES
- NEXT VIDEO SCENES 10 TO 10
- THIS RESPONSE BRANCHES TO 35

N
- NO VTR SEGMENTS
- THIS RESPONSE BRANCHES TO 37

X
- NEXT VIDEO SCENES X TO X
- "DEFAULT" PAGE...
- THIS RESPONSE BRANCHES TO 37
- CORRECT ANSWER IS # 123

PAGE # 37 I PAGE

****** REMEMBER ******
THE R-E-A-S-O-N THAT THIS FACILITY IS
BETTER THAN PREVIOUS ONES.

X
- NO VTR SEGMENT
- THIS BRANCHES TO # 38

PAGE # 38 I PAGE

BUT THERE IS ONE LITTLE PROBLEM...

X
- NEXT VTR SEGMENTS 11 TO 11
- THIS BRANCHES TO # 39

PAGE # 39 I PAGE

***** THINK *****
W-H-A-T DOES ONE NEED FOR THE PREVIOUS
FACILITY?
W-H-A-T KIND OF PEOPLE ARE NOT GOING TO
GO THERE?  W-H-Y?

W-H-A-T IS THEIR ALTERNATIVE?
IF YOU MISSED ONE OF THESE — YOU MIGHT
AS WELL TRY IT AGAIN...

X
- NO VTR SEGMENT
- THIS BRANCHES TO # 40
ARE YOU GOING TO TRY?

Y
NEXT VIDEO SCENES 11 TO 11
THIS RESPONSE BRANCHES TO 39

YES
NEXT VIDEO SCENES 11 TO 11
THIS RESPONSE BRANCHES TO 39

N
NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 41

X
NEXT VIDEO SCENES X TO X
"DEFAULT" PAGE...
THIS RESPONSE BRANCHES TO 41
CORRECT ANSWER IS # 123

******** REMEMBER ********
PREVIOUS ACTIVITY IN COMPARISON TO THE
O-P-T-I-O-N THAT WAS JUST DESCRIBED.

X
NO VTR SEGMENT
THIS BRANCHES TO # 42

A SUMMARY OF WHAT WE HAD AND A
BEGINNING OF SOMETHING ELSE...

X
NEXT VTR SEGMENTS 12 TO 12
THIS BRANCHES TO # 43

***** THINK *****
W-H-A-T ARE THE ACTIVITIES MENTIONED IN
THE SUMMARY?
W-H-A-T IS THE TIME OF THE DAY THAT
THEY ARE DONE?
W-H-A-T HAPPENS LATER AND WHY?
The summary and the later activity are available for you to review...

NO VTR SEGMENT.
THIS BRANCHES TO # 44

PAGE # 44 I PAGE

WOULD YOU LIKE TO REVIEW?

Y
NEXT VIDEO SCENES 12 TO 12
THIS RESPONSE BRANCHES TO 43

YES
NEXT VIDEO SCENES 12 TO 12
THIS RESPONSE BRANCHES TO 43

N
NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 45

X
NEXT VIDEO SCENES X TO X
"DEFAULT" PAGE...
THIS RESPONSE BRANCHES TO 45
CORRECT ANSWER IS # 123

PAGE # 45 I PAGE

********* REMEMBER *********
THE A-C-T-I-V-I-T-I-E-S IN THE SUMMARY.
THE T-I-M-E OF THE DAY THEY HAPPEN.
THE P-L-A-C-E PEOPLE GO AFTERWARDS AND W-H-Y.

X
NO VTR SEGMENT.
THIS BRANCHES TO # 46

PAGE # 46 I PAGE

AND STILL LATER...

X
NEXT VTR SEGMENTS 13 TO 13
THIS BRANCHES TO # 47

PAGE # 47 I PAGE
***** THINK *****
W-H-A-T TIME OF THE DAY IS IT?
W-H-A-T DO THEY DO THEN?
W-H-Y?

IF YOU ARE NOT SURE — YOU CAN GO
BACK TO THE STREETS OF EILAT...

NO VTR SEGMENT.
THIS BRANCHES TO # 48

PAGE # 48 K PAGE
LISTEN AGAIN?
Y
NEXT VIDEO SCENES 13 TO 13
THIS RESPONSE BRANCHES TO 47
YES
NEXT VIDEO SCENES 13 TO 13
THIS RESPONSE BRANCHES TO 47
N
NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 49
X
NEXT VIDEO SCENES X TO X
'DEFAULT' PAGE...
THIS RESPONSE BRANCHES TO 49
CORRECT ANSWER IS # 123

PAGE # 49 I PAGE

********** REMEMBER **********
THE T-I-M-E OF THE DAY.
THE A-C-T-I-V-I-T-Y
W-H-Y IT IS DONE THEN.

X

NO VTR SEGMENT.
THIS BRANCHES TO # 50

PAGE # 50 I PAGE
AND STILL LATER...

X
NEXT VTR SEGMENTS 14 TO 14
THIS BRANCHES TO # 51
***** THINK *****
W-H-A-T TIME OF THE DAY IS IT?
W-H-E-R-E ARE THEY?
W-H-A-T DO THEY DO?

YOU CAN FIND OUT FOR SURE BY LISTENING AGAIN...

NO VTR SEGMENT.
THIS BRANCHES TO # 52

PAGE # 52 I PAGE

CARE TO LISTEN AGAIN?

Y
NEXT VIDEO SCENES 14 TO 14
THIS RESPONSE BRANCHES TO 51

YES
NEXT VIDEO SCENES 14 TO 14
THIS RESPONSE BRANCHES TO 51

N
NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 53

X
NEXT VIDEO SCENES X TO X
"DEFAULT" PAGE...
THIS RESPONSE BRANCHES TO 53
CORRECT ANSWER IS # 123

PAGE # 53 I PAGE

******** REMEMBER ********
THE T-I-M-E OF THE DAY.
THE P-L-A-C-E.
THE A-C-T-I-V-I-T-Y.

X
NO VTR SEGMENT.
THIS BRANCHES TO # 54

PAGE # 54 I PAGE

AND EVEN LATER...
X
NEXT VTR SEGMENTS 15 TO 15
THIS BRANCHES TO # 55

PAGE # 55 I PAGE

***** THINK *****
W-H-A-T TIME OF THE DAY IS IT?
W-H-A-T DO THEY DO THEN?

YOU CAN OF COURSE GO BACK TO BE EXTRA SURE...

NO VTR SEGMENT
THIS BRANCHES TO # 56

PAGE # 56 I PAGE

GO BACK?

Y
NEXT VIDEO SCENES 15 TO 15
THIS RESPONSE BRANCHES TO 55

YES
NEXT VIDEO SCENES 15 TO 15
THIS RESPONSE BRANCHES TO 55

N
NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 57

X
NEXT VIDEO SCENES X TO X
"DEFAULT" PAGE...
THIS RESPONSE BRANCHES TO 57
CORRECT ANSWER IS # 123

PAGE # 57 I PAGE

********** REMEMBER **********
THE T-I-M-E OF THE DAY.
THE A-C-T-I-V-I-T-I-E-S.

X
NO VTR SEGMENT
THIS BRANCHES TO # 56
AN END OF ONE THING AND A BEGINNING
OF SOMETHING ELSE...

X
NEXT VTR SEGMENTS 16 TO 16
THIS BRANCHES TO # 59

W-H-A-T DO THEY DO TO RELAX?
AND AFTERWARDS - W-H-E-R-E-E DO THEY GO
AND W-H-Y?

YOU CAN GO BACK AND WATCH THIS ABRUPT
CHANGE...

NO VTR SEGMENT.
THIS BRANCHES TO # 60

WATCH AGAIN?

Y
NEXT VIDEO SCENES 16 TO 16
THIS RESPONSE BRANCHES TO 59

YES
NEXT VIDEO SCENES 16 TO 16
THIS RESPONSE BRANCHES TO 59

N
NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 61

X
NEXT VIDEO SCENES X TO X
"DEFAULT" PAGE...
THIS RESPONSE BRANCHES TO 61
CORRECT ANSWER IS # 123

********** REMEMBER **********
THE P-L-A-C-E THEY GO THE NEXT DAY.
THE R-E-A-S-O-N THEY GO THERE.

X
NO VTR SEGMENT.
But there are other people...

Next VTR segments 17 to 17
This branches to # 63

***** Think *****
What are the T-W-O types of people?
To W-H-I-C-H type does the list of occupations refer to?

There are E-I-G-H-T occupations listed there - how many can you list?
It was a long segment to watch and listen - you might as well listen again...

No VTR segment
This branches to # 64

Listen again?

Y
Next video scenes 17 to 17
This response branches to 63

Yes
Next video scenes 17 to 17
This response branches to 63

N
No VTR segments
This response branches to 65

X
Next video scenes X to X
"Default" page...
This response branches to 65
Correct answer is # 123

Remember

Page # 65 1 page
THE T-W-O TYPES OF PEOPLE.

X
NO VTR SEGMENT.
THIS BRANCHES TO # 66

PAGE # 66 I PAGE

AND THE OTHER TYPE OF PEOPLE...

X
NEXT VTR SEGMENTS 18 TO 18
THIS BRANCHES TO # 67

PAGE # 67 I PAGE

***** THINK *****
W-H-A-T KIND OF PEOPLE ARE THEY?
IN WHICH T-W-O PLACES ONE CAN FIND THEM?

W-H-O IS RAIF NELSON?
IF YOU WOULD LIKE TO KNOW - CHOOSE TO LISTEN AGAIN...

NO VTR SEGMENT.
THIS BRANCHES TO # 66

PAGE # 66 K PAGE

SO - WHAT DO YOU CHOOSE?

Y
NEXT VIDEO SCENES 18 TO 18
THIS RESPONSE BRANCHES TO 67

YES
NEXT VIDEO SCENES 18 TO 18
THIS RESPONSE BRANCHES TO 67

N
NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 69

X
NEXT VIDEO SCENES X TO X
"DEFAULT" PAGE...
THIS RESPONSE BRANCHES TO 69
CORRECT ANSWER IS # 123
******** REMEMBER ********
The T-Y-P-E of people.
The T-W-O locations.
Mr. Rafi Nelson.

NO VTR SEGMENT.
THIS BRANCHES TO # 70

PAGE # 70 I PAGE

AND A SUMMARY STATEMENT FOR THE END...

NO VTR SEGMENT.
NEXT VTR SEGMENTS 19 TO 19
THIS BRANCHES TO # 71

PAGE # 71 I PAGE

***** THINK *****
WHAT ARE THE T-W-O ASPECTS OF EILAT?
HOW DOES BATIA DESCRIBE THEM BOTH?
FIND OUT MORE BY LISTENING AGAIN...

NO VTR SEGMENT.
NEXT VTR SEGMENTS 19 TO 19
THIS BRANCHES TO # 72

PAGE # 72 I PAGE

THE SUMMARY AGAIN?

YES
NEXT VIDEO SCENES 19 TO 19
THIS RESPONSE BRANCHES TO 71

YES
NEXT VIDEO SCENES 19 TO 19
THIS RESPONSE BRANCHES TO 71

N
NO VTR SEGMENTS.
THIS RESPONSE BRANCHES TO 73

X
NEXT VIDEO SCENES X TO X
"DEFAULT" PAGE...
THIS RESPONSE BRANCHES TO 73
CORRECT ANSWER IS # 123
**REMEMBER**

THE T-W-O ASPECTS OF EILAT.
THEIR MUTUAL CHARACTERISTIC.

X

NO VTR SEGMENT.
THIS BRANCHES TO # 74

PAGE # 74 I PAGE

AND WHAT ONE SAYS BEFORE QUITING?

X

NEXT VTR SEGMENTS 20 TO 20
THIS BRANCHES TO # 75

PAGE # 75 I PAGE

AGAIN?

Y

NEXT VIDEO SCENES 20 TO 20
THIS RESPONSE BRANCHES TO 75

YES

NEXT VIDEO SCENES 20 TO 20
THIS RESPONSE BRANCHES TO 75

N

NO VTR SEGMENTS
THIS RESPONSE BRANCHES TO 76

X

NEXT VIDEO SCENES X TO X
'DEFAULT' PAGE...
THIS RESPONSE BRANCHES TO 76
CORRECT ANSWER IS # 123

PAGE # 76 I PAGE

WE HOPE YOU ENJOYED LISTENING AND LEARNING ABOUT EILAT - THE SOUTHERN CITY OF ISRAEL.

ON THE FOLLOWING PAGE YOU WILL BE PROVIDED WITH HINTS HOW TO ORGANIZE ALL THE INFORMATION IN YOUR THOUGHTS IN
ORDER TO WRITE A GOOD REPORT.

NO VTR SEGMENT.
THIS BRANCHES TO # 77

PAGE # 77 I PAGE

***** REVIEW *****
ORGANIZE YOUR THOUGHTS AROUND ONE OR
MORE OF THE FOLLOWING IDEAS;
1) ORDER OF PRESENTATION—WHY PEOPLE
GO THERE; MEANS OF TRANSPORTATION;

THE KINDS OF PEOPLE WHO GO THERE;
FACILITIES AVAILABLE THERE; ACTIVITIES TO
DO; A TYPICAL DAY; TWO TYPES OF LOCAL
PEOPLE; THEIR OCCUPATIONS AND A GENERAL
STATEMENT ABOUT EILAT

NO VTR SEGMENT.
THIS BRANCHES TO # 78

PAGE # 78 I PAGE

***** REVIEW(CONT.) *****
2) THE QUALITY OF THE CITY— IN WHAT
WAY IS IT CHARACTERISTIC OF ITS NATURAL
SURROUNDINGS; ITS PEOPLE; AND ITS
ACTIVITIES.

3) BATIA AND ESTHER— HOW DID EACH
ONE GO TO EILAT; WHAT DID EACH ONE DO
THERE.

4) EILAT’S DEVELOPMENT— WHAT DO YOU
THINK WAS ALWAYS THERE; WHAT’S NEW.

NO VTR SEGMENT.
THIS BRANCHES TO # 79

PAGE # 79 K PAGE

WHERE TO GO NOW>
1. WATCH THE VIDEOTAPE INDEPENDENTLY!
   VIDEO 001 TO 020. NEXT PAGE # 079
2. JUST LISTEN — NO PICTURES!
   VIDEO 000 TO 000. NEXT PAGE # 080
3. GO THROUGH THIS PROGRAM AGAIN!
   VIDEO 000 TO 000. NEXT PAGE # 001
4. QUIT!
   VIDEO 021 TO 021. NEXT PAGE # 081
CORRECT ANSWERS ARE 1, 2, 3, 4,
COULD YOU SAY IN H-E-B-R-E-W 'IT WAS VERY NICE TO MEET YOU'?

SAY IT...AND TURN OFF THE COMPUTER!
(THE SWITCH IS ON YOUR LEFT).

NO VTR SEGMENT.
THIS BRANCHES TO # 0
APPENDIX D

Hebrew Vocabulary Pretest
APPENDIX E

Texts in Hebrew
Batia is Telling About Student Life in Jerusalem
Batia is Telling About Eilat

Batia is telling about Eilat.

Tell me about Eilat. Batia.

Batia is telling about Eilat.

Tell me more about Eilat. Batia.

Batia is telling about Eilat.

Tell me even more about Eilat. Batia.

Batia is telling about Eilat.

Tell me everything about Eilat. Batia.

Batia is telling about Eilat.

Tell me the whole story about Eilat. Batia.
APPENDIX F

DATA FROM PILOT TESTING
Her name was Batia. 
She lived in Israel for 5 years. 
She also went to school in Israel. 
There were two campuses. 
The one she went to had a cafeteria, library, and music. 
There is a supermarket in the city. 
There is also a disco that has pop and rock music. 
The students sit and talk which is very pleasant she says. 
Batia takes a bus to the city then once in the city she walks. 
On Saturdays she does not study. 
Esther said Thank you very much and I’ll be seeing you. 
Batia said Good-bye and that was the end.

Protocol of Videotape Jerusalem--Mike.
Batia and Esther were talking about student life in Israel. (Esther was asking Batia questions.)

Batia goes to school at a university in Jerusalem. She was born in Tel Aviv. There are two campuses in Jerusalem and she goes to [guess]. She lives with other students. Her family lives somewhere else. She sees them on weekends for Sabbath dinner. They go to the supermarket to prepare for dinner.

The students study during the week and have fun on the weekends. They go to discos and dance. They also gather together to sing and talk with each other. They go to cafeterias and order cake, ice cream, and coffee. On Saturday, they travel to different places in Israel. If they are going somewhere where they cannot walk, they take the bus. Saturday at noon there are soccer games. There are 500 students at the university.

She also described Jerusalem as a very pretty land, and that she likes living on campus.

Protocol of Videotape Jerusalem--Ina.
Disco scene from the Jerusalem interview