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# A Study of the Effectiveness of Annotations in Improving the Listening Comprehension of Intermediate ESL Learners

Ryan K. Rocque

*Brigham Young University - Provo*

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A STUDY OF THE EFFECTIVENESS OF ANNOTATIONS IN  
IMPROVING THE LISTENING COMPREHENSION  
OF INTERMEDIATE ESL LEARNERS

by

Ryan K. Rocque

A thesis submitted to the faculty of

Brigham Young University

in partial fulfillment of the requirements for the degree of

Masters of Arts

Center for Language Studies

Brigham Young University

August 2008

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BRIGHAM YOUNG UNIVERSITY

GRADUATE COMMITTEE APPROVAL

of a thesis submitted by

Ryan K. Rocque

This thesis has been read by each member of the following graduate committee and by majority vote has been found to be satisfactory.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Alan K. Melby, Chair

\_\_\_\_\_  
Date

\_\_\_\_\_  
Michael D. Bush

\_\_\_\_\_  
Date

\_\_\_\_\_  
Robert G. Erickson

BRIGHAM YOUNG UNIVERSITY

As chair of the candidate's graduate committee, I have read the thesis of Ryan K. Rocque in its final form and have found that (1) its format, citations, and bibliographical style are consistent and acceptable and fulfill university and department style requirements; (2) its illustrative materials including figures, tables, and charts are in place; and (3) the final manuscript is satisfactory to the graduate committee and is ready for submission to the university library.

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Date

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Alan K. Melby  
Chair, Graduate Committee

Accepted for the Department

---

Ray T. Clifford  
Director, Center for Language Studies

Accepted for the College

---

Gregory D. Clark  
Associate Dean, College of Humanities

## ABSTRACT

### A STUDY OF THE EFFECTIVENESS OF ANNOTATIONS IN IMPROVING THE LISTENING COMPREHENSION OF INTERMEDIATE ESL LEARNERS.

Ryan K. Rocque

Center for Language Studies

Masters of Arts

This study seeks to answer the age old question of what kind of input is best for ESL learners, but it approaches the question with a new perspective. There are many options when it comes to a choice of curriculum, both in terms of the method that is used and the materials that are available. Feature film is one important resource that has received increased attention in recent years. Curriculum specialists and teachers are incorporating various film clips into instruction to enhance a grammar point, to teach culture, or as a way to motivate learners. Yet adequate research does not yet exist that demonstrates how film can be used effectively. One possible solution to this problem that was explored in this study was the use of feature films in a self-study environment. Can using annotations of feature films, in this case definitions and pictures, improve a

student's listening comprehension when students interact with them independent of a teacher? So few studies look at how annotations are used in this way. Overall, this study found that intermediate English for second language learners participating in this study did show significant gains in their test scores as compared with the control group, which did not view the film. In the present study, however, in comparing the three groups, the scores for students using annotations and not using annotations were not significantly different, perhaps the result of a small sample size. Nevertheless, this study does provide many insights into the current research and can provide important guidance for future research in this area of interest. Listening comprehension is a vital subject for research, and film is an excellent tool to enhance that research.

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## CHAPTER 1

### Introduction

This thesis investigates how the listening comprehension of intermediate English as a Second Language (ESL) learners can be influenced by the availability of annotations. In this case, annotations include definitions and pictures created by the researcher about key lexical items within the film *The Sandlot*.

There are many types of film being used in the foreign-language classroom. Some are educational, others are entertaining, and some are a mixture of both, depending on the intent of the producers. The educational type of film is sometimes referred to as “simulated-authentic film” (Hellebrandt, 1990, p. 34), criticized by researchers at times for having low cultural content. Such criticisms arise because these films are designed to imitate an authentic environment, instead of being authentic. As a result, students experience what appears to look and feel authentic, but with the expectation that they are learning about language at the same time. This desired outcome makes simulated-authentic film educational because the producers are focused on teaching a concept to a language learner. There are many examples of this type of film, such as *Destinos* for teaching Spanish and *French in Action*.

The second type of film commonly used in a foreign-language classroom is an authentic film. These films are directed and produced by natives for a native audience, and there is nothing specifically educational that is driving the plot or the character development. An authentic film is the type of film a native would rent and watch at home on the weekend. For this reason, these films are recreational in nature, but typically will have higher cultural authenticity (Hellebrandt, 1990) than educational films. Although

these films are made mostly to entertain, they provide a rich and colorful source of foreign language and culture content. This is perhaps the main reason that so many teachers incorporate them into their lesson plans. In fact, the trend in language classrooms is to use more of these authentic materials in place of simulated-authentic films (Bacon & Finnemann, 1990). I chose to use authentic films in this study because their use is practical and because of their rich language and cultural content.

Language acquisition research typically focuses on one or more of the four major language skill areas: listening, reading, writing, and speaking. Of these, reading and listening, or more specifically the vocabulary acquisition aspects of these, skills have been the most extensively explored in connection with film. Not all researchers agree on the benefits of viewing films for vocabulary acquisition, however, and not all research is conducted in the same manner.

Within the four major skill areas, research is further divided between receptive skills and productive language abilities, with production being the less researched of the two areas. This study targeted listening comprehension as a means to investigate receptive ability. Productive language ability was beyond the scope of this study, with the reasons for this determination to be explored further in subsequent chapters.

Receptive ability deals with input, and the literature on second language acquisition amply documents the adaptation of input to make it more comprehensible and accessible to language learners. Few of the studies that have been conducted have dealt with film, primarily because films are not an easily accessible source of input for beginning or intermediate language learners. According to several researchers, the process of turning input into intake by just watching a film typically requires additional

activities to improve the process (e.g. Omaggio, 1979; Porter & Roberts, 1981; Swain & Madden, 1985). As a result, the major focus of this research study has been the development of materials that enable an authentic film to serve as a source of comprehensible input for improving listening comprehension.

### Significance of the Problem

To a large extent, the study of the use of feature films with foreign-language learners is a new area of research. Initial film research moved the direction of investigating the use of subtitles and advance organizers, and current research has followed a similar path (e.g. Baltova, 2000; Markham & Peter, 2002; Park, 2004; Taylor, 2005; Wilberschied & Berman, 2004). What these studies have in common is their conclusion that a student must rely on the teacher as an aid to the comprehension of the authentic material. Less common are studies that employ feature films in a laboratory setting, where students work independently with the film (e.g. Gruba, 2004; Hulstijn, 2003). Because of this fact, there are many options available within a study that incorporates the use of authentic input in a language-laboratory setting.

As a student watches a film on a computer, the computer becomes the catalyst for learning in the same way the teacher is the catalyst in the classroom. It is important for language teaching to allow students the opportunity for self-study of this kind. Creating an effective tool for making comprehensible input out of feature films, without teacher intervention, has important advantages. Specifically, it would allow more time for teachers to focus on learners with special needs or even to use class time for other important activities, making the viewing of films something learners do outside of class at their convenience. As an important area within language acquisition research, testing



the role of annotations for facilitating the learner's mental process of converting input from an authentic film to intake would increase understanding of that process. This would happen through the comparison of previous research that demonstrates a reliance on teacher intervention with research that is now in progress using computer-mediated instruction. This comparison can enhance our knowledge of best practices, as well as test the necessity of using the computer to improve listening comprehension.

There are many reasons that film is becoming an increasingly integral part of the foreign-language curriculum. First, many foreign language teachers understand the importance of visiting a foreign country to improve language skills, to learn culture, and to communicate with natives, but not many students have that opportunity. With the use of film, however, teachers are able to bring the foreign country into the classroom. Films make culture and language accessible and interesting, making the foreign-language classroom an ideal environment for the use of film (Bacon & Finnemann, 1990).

Second, film is interesting, primarily because of its ability to convey stories. It is perhaps the human element that raises interest in those stories that makes film so desirable (Hellebrandt, 1990). The interest that film creates among viewers translates to motivation in the language classroom, making film an advantageous investment for the foreign-language curriculum (Melvin & Stout, 1987). Because teachers want to engage learners in appropriate ways, film has become an excellent choice for accomplishing this objective.

Third, film has become popular because it is currently more flexible and accessible than it has ever been. Films can be purchased and played in a variety of languages in any country of the world. For example, films can be viewed with subtitles,

making them accessible for the hearing impaired and general language learners. The quality of these films is also much improved (Hadley, 2001). Thanks to the Internet and access to a computer or multi-region DVD-ROM drive, a person can purchase a film from anywhere in the world and have it shipped for viewing at home. The broad supply of foreign-language films implies that the demand for them is high, and people watching a film in a foreign language is more common than it once was. Due to these developments, teachers are showing more and more of these films in an increasing number of classrooms.

Fourth, a film can enable a teacher to provide their students with a new perspective of the subject area. Film can add color and life to history, geography, and social studies, if not all subjects. Film can be used to provide context in the foreign-language classroom for describing and reinforcing grammar and other language-specific concepts. Film can help students develop skills, provide examples of culture, demonstrate how to perform certain functions, and tell a story. All of these benefits of film help increase the links between the student's life on the one hand and the classroom and learning on the other. These reasons show that film has its place in the classroom, especially the foreign-language classroom.

Finally, film in the classroom helps to improve listening comprehension (Baltova, 2000; Hellebrandt, 1990). According to Rubin, film is "a haven to enhance listening comprehension" (1994, p. 204), which seems to indicate that film should be an integral part of any foreign-language curriculum. Learners need to be proficient in understanding language before they can produce it. The more authentic the film and the more accustomed the students become to deciphering the linguistic code within it, the better

prepared they will be for engaging in discourse in the foreign-language environment or in accomplishing other important tasks (Borrás & Lafayette, 1994).

To summarize, because of the language-learning motivation that film provides, and because of the accessibility of film and the important content found in this medium (be it culture specific, subject specific, or related to aspects of human life), film is a wonderful resource for the foreign-language teacher. It is for this reason that the researcher chose to investigate how film benefits the language learner and to what extent learners' listening comprehension can be improved through its use.

#### Purpose of Study

The purpose of this study is to determine whether the availability of annotations can help improve listening comprehension. Many teachers want to use authentic foreign films as part of their curriculum, but some are not able to because of the inherent language challenge for beginning and intermediate students. A solution needs to be found that can effectively meet the needs of teachers, with improved results for the students. Instructors and researchers understand the need for improving listening skills, as well as the need to find the most effective way to accomplish this objective.

#### Research Question

What is the impact of the availability of annotations of feature films on the listening comprehension of learners of English as a second language, as measured by both transcription and multiple-choice tests of listening comprehension?

#### Overview of Study

To test the effectiveness of the annotations in the foreign-language classroom, the researcher selected samples of learners from intermediate ESL classrooms in the state of

Utah. These learners were ages twelve to seventeen and attended grades seven through twelve. The sample included students with various language backgrounds, the majority having Spanish as their first language. The students and their instructors voluntarily participated in this study.

Intermediate ESL students were chosen because they had the ability to speak English proficiently, but they still struggled with more advanced language—the type of language often found in authentic films. Beginners were not chosen because the researcher assumed they did not have a sufficient vocabulary base to benefit from the software to be used in the study. More advanced learners were not chosen because they would not show large enough gains in comprehension. This is largely due to the bottlenecking (or the decrease in proficiency gains) that sometimes occurs in a language learner's L2 proficiency development as they approach higher levels of proficiency in a foreign language (Doughty & Long, 2003b).

The study took place over a two-week time period during which all participating classes were placed into one of three groups: the annotation group (AN), the standard group (ST), and the control group (CT). All three groups were given a pre-test for listening comprehension. During the test, students heard listening prompts that contained key lexical items from the film itself. The test asked participants to first listen to the passage, which would be repeated twice. Subjects were then asked to (1) answer multiple-choice questions regarding the meaning of the lexical items and (2) transcribe in part the words from the phrase they heard. Both types of listening—for meaning and for recognition—have been shown to have an impact on a learner's understanding of the target input (Hulstijn, 2003).

After testing, the annotation group and the standard group watched the film over three to four class periods. Both groups had access to certain features depending on the player they were using, such as subtitles in English or Spanish, and the ability to pause and review material. The standard group, however, was limited to the functions provided by Windows Media Player, while the annotation group had greater functionality with their particular workstations, given that they watched the film using the EFR player. The third group did not watch the film during this portion of the experiment.

Following the treatment, all three groups were given the post-test, which was identical to the pre-test. From the results of the tests and the observations done in the classroom, some important conclusions were made concerning the effectiveness of the annotations in improving students' listening comprehension.

#### Definitions

1. Advance Organizer: A teaching intervention used to activate a learner's schema, or prior knowledge about the content of the film. It can include "any array of pedagogical aids, including pictures, titles, topic summaries, pre-posed questions, and the like" (Ausubel, 1961, p. 267). Advance organizers must precede input or content.
2. Academic Language: Based on a frequency analysis of the film, any word not part of the 1000 most commonly used words was used as academic or advanced language. Off-list words, names, and numbers were not part of this selection of words; only those words selected within a concordance program were tagged.
3. Annotations: Supplementary information, displayed on a computer screen, which was used to enhance the understanding of the listener. In this study, it refers to the

written definitions of key vocabulary items, enhanced with pictures or sound, as well as chapter summaries and comprehension questions within the EFR player software. It does not include subtitles. Annotations are not the same as advance organizers, but do act as advance organizers on certain occasions, when they precede the information the learner is presented with.

4. Authentic Film: A film produced by a native for a native audience. In other words, “intended for use by native speakers of the language and thus not tailored to a particular language-learning curriculum” (Hadley, 2001, p. 140).
5. Direct-Focused Learning: Knowledge about a film that requires in depth understanding of 80-100 percent of the film, going far beyond simply a general understanding of the film. It includes comprehending the plot, character development, and action taking place, and also extends to comprehending individual words within the film context.
6. Electronic Film Review (EFR): The learning approach using a personal computer equipped with a DVD-ROM drive and suitable software to provide educational “wrap-around” material (vocabulary with an associated picture, and scene summaries) available to the student on demand. The EFR Project is managed at BYU by Dr. Alan K. Melby.
7. Film: A DVD (not a VHS, laserdisc, or other video format) that is authentic. For this study, it refers to the target film, *The Sandlot*.
8. General Knowledge: Knowledge about a film that only takes into account five to ten percent of all there is to know about the film, which is usually just enough to

get by with, except in the case that the viewer is tested or required to recall more specific details about the film.

9. Listening Comprehension: The ability to extract meaning from a foreign language through aural stimuli, including but not limited to non-verbal and verbal cues. It is separate and distinct from other skills, such as reading, speaking, and writing. It is also seen as a receptive skill, not productive like speaking. Likewise, it is the ability to recognize a word from a listening passage or from other closely related word senses.
10. Schemata (Schema): “Knowledge represented in structures that are interconnected with, and embedded in, one another; sometimes related to the organization of conceptual knowledge or to all one knows about the physical, social, or mental world” (Alexander, Schallert, & Hare, 1991, p. 333). Schema pertains to a cognitive process dependent on the prior knowledge that an individual brings to the learning situation (Anderson, 1977).
11. Simulated-Authentic Film: A film produced for educational purposes, with a foreign-language learner in mind. Referred to as educational.
12. Subtitles: Full-text subtitles or captions that contain word-for-word textual representations of the words in the film. For the film *The Sandlot*, only English and Spanish subtitles were available.

#### Delimitations

One of the limits of this study is the population being studied. The research has focused only on intermediate students studying English as a Second Language. These learners are also part of a narrow age range, in only one area of the country.

Secondly, the ESL students who participated in this study come from various L1 backgrounds. Although some students spoke Spanish, and others Korean or Japanese, in the initial design this was not seen as having any bearing on the findings, and so it was not used as a blocking variable.

A third delimitation of this study is that the primary focus was on listening comprehension. There are many other possible outcomes when using annotations. These include speaking ability, grammar acquisition, productive and receptive vocabulary acquisition, writing abilities, etc.

Fourth, this study was set up to mimic a language-laboratory setting, where each student watches the film on his/her own computer. There was no classroom instruction included as part of the research, and the class as a whole did not watch the film together on one screen. Each individual was responsible for their own learning, and for the degree to which they are using the tools provided. The only constant between participants was the amount of time they were given to view the film.

Fifth, this study did not purport to judge simulated-authentic film better or worse than authentic film. In fact, this study in no way compared the types of film one should use as a teacher in the classroom.

Sixth, the study was limited by the film that was chosen. The researcher considered *The Sandlot* to be a good choice for the targeted age group (ages twelve through seventeen), but there were many other films that could have been used to test this construct, and it is very probable that the type of film used would have had an effect on the results of this study.



Another limitation is that this study only included intermediate learners from a very specific area of the population (schools in Utah Valley, Utah). These classes participated voluntarily and made up intact groups; they were also chosen because they had access to technology. It would have required either a much larger subject pool or a significant grant in order to improve on this research design. This was not the case, however, and only the three groups mentioned participated.

In addition, the design of this study did not assume that learners using annotations would comprehend the film, since no comprehension questions were included on the test. Alternatively, the test measured the effectiveness of annotations in improving the acquisition of key lexical items contained within the film, not knowledge of the film itself.

Finally, this study was also limited by the number of participants that were in each classroom. Unfortunately, the classes that chose to participate were small; in some cases they were too small to make comparisons with the other groups, a less than ideal situation.

### Chapter Summary

The purpose of this study was to identify how annotations effectively aid the listening comprehension of intermediate ESL learner viewing feature films. Previous research established the groundwork for the types of annotations used in this study, but this study is unique in that its purpose was to show how annotations do or do not improve listening comprehension among the intermediate ESL participants of this study within a language-laboratory environment.

In the rest of this document the following chapters will be presented. Chapter 2 will discuss how research has addressed the issue of listening, as well as annotation research with multimedia, establishing the theoretical underpinning of this study. Chapter 3 will contain a detailed overview of the methodology and procedures related to the study. The data analysis and reports will be included in chapter 4. Following this, the findings and limitations of the study, as well as direction for future research and how this study contributes to current teaching practices, are found in chapter 5.

## CHAPTER 2

### Review of the Literature

A context as rich as authentic film requires a deep understanding by the materials developer of every aspect of the film, from how the target film is perceived by learners to what may pose a problem for comprehension. It is also important to understand why film is a good source of input for foreign language students among all the other resources to which teachers have access. A review of the current research on how film can be useful will reveal the ways in which film has been used to improve listening comprehension. This will help researchers understand how the annotations within the EFR can be influential in this process.

In the foreign language classroom, input can appear in many forms, such as materials, teachers, and other students (Gass & Selinker, 2001; Oura, 2001). Even talking about language, which can be teacher centered or student centered, can be seen as input (Bacon, 1989). There is no question that input in language teaching is essential, but whether the input is a grammar lecture or is composed of natural speech makes a big difference, as does the input's degree of authenticity (Bacon & Finnemann, 1990). Having authentic input in the foreign language classroom is important because it is a key factor in the development of learners' communicative competence (Baltova, 2000, Weyers, 1999). The first step for effectively treating any source of input in the classroom, however, is meeting the optimal criteria for input. In other words, it must be comprehensible, interesting, and relevant (e.g. Hadley, 2001; Krashen, 1982; Oura, 2001).

Teachers need to consider how the learners' listening comprehension ability will be affected by adjusting the types of input the students are receiving (Gass & Selinker, 2001). It is easy to understand why many foreign-language teachers prefer to direct the class themselves, or to assign students to use newly acquired input in structured settings with their classmates; this is a testable method (Baltova, 2000). But the fact is that this type of environment is very different from what students experience in everyday life, which places them at a great disadvantage in their goal to acquire new language skills. Limited by this learning environment, students may not be able to notice or even have access to ordinary speech signals, non-verbal cues, or other patterns they would normally find in their native environment (Bacon, 1989). These and other factors are numerous and must be considered by teachers and students alike (e.g., Dunkel, 1991; Glisan, 1988).

In consideration of these factors some teachers might consider the benefit of using more authentic input in the classroom. "Curriculum must be designed to convince students to be willing to deal with authentic input" (Bacon & Finnemann, 1990, p. 469). In this case, authentic input means language in the target language, which is natural and communicative in nature. This type of authentic language is often avoided, as teachers worry about their students' ability to understand the input (Omaggio, 1979). In solving this dilemma, teachers must make the distinction between comprehensible input as the theory and comprehended input as the practice. This means that a pedagogical process should be in place to facilitate the transformation of input into intake.

### Types of Input

To understand and test hypotheses related to how input becomes intake, one must first come to understand what input is. Input comes as both verbal and non-verbal cues.

Gestures, for instance, can make up the majority of the communication between two people (Bacon, 1989). Input can be unidirectional, such as when you are watching a film or play or listening to a speaker or a teacher. Input can also be multidirectional, like when one speaks with a friend or family member (Doughty & Long, 2003b; Swain & Madden, 1985). Because the input changes from context to context, the complexity also varies. Consider, for example, how the input might change if one were to see two adults talking versus an adult and a teenager, or an adult and a child. Equally important are the speech acts that are learned through varying types of input: turn taking, apologies, promising, making demands, etc. (Gass & Mackey, 2002). Each new situation warrants a new type of input, and for a language learner, new signals that he/she must store away in memory. The more complex the input is, the more the brain must process (Gass & Mackey, 2002; Swain & Madden, 1985).

In order for a language learner to understand and eventually produce all of these complex varieties of language, they must initially be introduced to them. Authentic input is very important, even essential to the ultimate achievement of a language learner (Bacon, 1989; Rogers & Medley, 1988). Hadley (2001) also believes in the need for authentic input in the foreign language proficiency-based classroom. The most obvious reason is that authentic language provides the best source of culturally rich input (e.g. Hadley, 2001; Hellebrandt, 1990; Krashen, 1982). Having an authentic film means that it includes all the complexities of register, speech acts, morphology, syntax, phonology, pauses, and even occasional errors (Porter & Roberts, 1981). Such a film incorporates the type of language that you would experience if you were to be immersed in the native environment.

Of course, when dealing with students learning a foreign language, the decision to use authentic text is never so clear-cut. Basically, there are three views or types of input available to the foreign language teacher: (1) language produced by a native for a native—this is the authentic material that has been discussed; (2) language that contains a communicative goal that is unplanned and unrehearsed, without a script (many times this is in the form of a role play, done spontaneously and filmed in the foreign language environment); and (3) language that is descriptive and contains natural characteristics, but that is scripted. This third type is typically referred to as simulated-authentic material or educational film. Only the first and third types—authentic and simulated-authentic materials—have bearing on this study. The second type is most often seen in a classroom as a source for memorized dialogues, role plays, skits, and other impromptu activities.

#### Authentic versus Non-Authentic Input

One of the forms of input increasingly used in the foreign-language classroom is authentic film (Geddes & White, 1978; Schrum & Glisan, 2000). Authentic film is a good source of input for many reasons, but most importantly, because unlike all other forms, it is the only type of input to provide a slice of real life (Altman, 1989; Garza, 1996; Kramsch, 1993; Lonergan, 1984). The reality factor makes these types of film as authentic as photos, illustrations, magazines, and news articles (Tillman, 1986).

Film is also attractive because, as both Altman (1989) and Garza (1996) indicate, it is so accessible, inexpensive, and easy to manipulate. “Videos expose students to authentic learning materials and to voices, dialects, and registers other than the teacher’s and provide cultural contexts for the language” (Chung, 1999, p. 297). Film also provides learners the opportunity to develop many types of competencies they need: linguistic,

structural, cultural, and functional (Garza, 1996; Lonergan, 1984). The learner needs these various competencies in order to improve language ability. Also, when compared to listening and reading activities without visual support, it is clear that more sound-meaning relationships are established by watching film (Altman, 1989). In addition, film actually helps in comprehension by reducing the possible interpretations of aural stimulus (cf. Kintsch, 1988). Film also provides a context for language learning to take place by reinforcing what students are learning in the classroom in a dramatized, authentic production (Brinton, 1991; Gebhard, 1996). Authentic films also improve cultural awareness by depicting native environments and lifestyles (Clark, 1999; Herron & Seay, 1991). Perhaps the most convincing argument for using film in the classroom is the motivation it provides the students (Baltova, 2000; Lin, 2002).

Film also has its drawbacks, however. A distinguishing factor between watching film and communicating face-to-face with someone as a source of input is the lack of negotiation of meaning as defined by most scholars in language acquisition (Bacon & Finnemann, 1990; Faerch & Kasper, 1986; Omaggio, 2001). Making film watching an effective means of improving listening comprehension requires getting other means of feedback, beyond what the film has to offer (e.g. Bacon, 1989; James, 1986; Long, 1986; Lund, 1990; Melby, 2003). If this additional feedback is lacking, then comprehension can be incomplete or incorrect. Teachers should not just assume that the students understand the film, because in many cases they do not, especially if the learner is a beginner (Altman, 1989).

In many cases authentic film is not useful to beginning or intermediate language learners because of the language skills required to comprehend it (Plass, Chun, Mayer, &

Leutner, 2003). For understanding to take place, the learner must be able to break down the speech stream and make it comprehensible. Instead of this happening, the common result is language breakdown—nothing is internalized and comprehension is lost (Omaggio, 1979). In certain situations, the culprit behind this language breakdown is anxiety; when excessive anxiety results while trying to listen, it is often difficult or impossible for comprehension to occur (e.g. Byrnes, 1984; Joiner, Adkins, & Eykyn, 1989; Meyer, 1984). The listener is so worried about all of the details in the input that they forget to attend to meaning (Dunkel, 1991; Ur, 1984). This is directly related to the Input Hypothesis, as described by Krashen (1982) which implies that input should be presented that is at a level slightly beyond the skill level of the student, which Krashen represents as  $i+1$ :

The best methods are therefore those that supply “comprehensible input” in low anxiety situations, containing messages that students really want to hear. These methods do not force early production in the second language, but allow students to produce when they are “ready,” recognizing that improvement comes from supplying communicative and comprehensible input, and not from forcing and correcting production. (p. 54)

From this discussion, it is clear that the source of anxiety does not come from the input itself, but from the teacher expecting production too soon.

Another type of film is simulated authentic. Simulated-authentic films are produced to overcome some of the limitations of authentic film for language learners. While simulated-authentic films include many of the cultural aspects inherent to authentic film, the main difference is that scripted simulated-authentic film adapts and



changes the language, making it more comprehensible (Hellebrandt, 1990). Simulated-authentic films often include less difficult grammatical forms, more careful and slower rates of speech, and the intended audience is language learners. Examples of simulated-authentic films are *French in Action* (Capretz, 1987) and *Destinos* (VanPatten, 1992). In theory, these types of films should be easier for a language learner to comprehend. In addition, they were developed so that learners could work independent of a teacher, in a language laboratory for instance, or even at home.

The drawbacks of simulated-authentic film include the opinion that it is contrived and unnatural (Morley, 1990) and that it lacks the lexical items heard in normal speech (Glisan, 1988). In simulated-authentic film, speech production is thought to be slower, with more pauses, repetitions, and unnatural intonation (Porter & Roberts, 1981). The seeming result of this type of film is a lack of richness and depth. Geddes and White (1978) used simulated-authentic sources. They feel the use is warranted, though they note that there are some shortcomings, “mainly along linguistic lines” (p. 137), including problems with suprasegmentals, morphology, phonology, and syntax. Two debatable advantages are that it does not contain the grammatical errors of native speech and that the pace is slower. Those who use and produce simulated-authentic film claim to have a product that resembles authentic speech (Collentine, 1998; Morley, 1990).

In addition, despite the potential drawbacks, simulated-authentic film may be a good resource for intermediate or beginning language learners because the content is easier to digest and more coherent. The problem that may arise, however, is that if learners are never exposed to authentic text, they may be inhibited in their language gains and lack the ability to speak and comprehend in a manner similar to that which is

observed in native language (Krashen, 1982). In one study that compared authentic and simulated-authentic films, however, there was no difference in listening comprehension improvement (Hellebrandt, 1990).

#### Authentic and Simulated-Authentic Film Research

Parry and Meredith (1984) did a study of college students who were studying Spanish. Some students watched videotapes with Spanish dialogues, while others only heard the dialogues on audiocassette. The college students' listening scores—taken from multiple-choice questions—were compared to those of native speakers. Of all the groups, these first and second year students who viewed the videotapes performed the best on the listening test. The results of the study would support the use of authentic video over audio. The definition of *authentic* in Parry and Meredith's study is beyond the scope of this research, given that dealt more with cultural boundaries and the differences in audio and video recordings.

Hellebrandt (1990) took the research a step further. In his study, two types of “authentic” film were used: one that was *less authentic* and another that was *more authentic*, and these were compared to using just audiotapes. The less authentic film mimicked a simulated-authentic or educational film. For the study, Hellebrandt used videotapes that accompany *Dos Mundos*, which is a Spanish textbook. A television newscast was chosen for the more authentic film, which included Spanish video recordings from SCOLA. The audiotapes all came from the *Dos Mundos* textbook series. Instructional materials to accompany these materials were also developed by the researcher to review and summarize the topics. This study showed no significant difference between the two types of authentic film. The researcher did find that the visual

stimulus that was provided by the film improved listening comprehension more than the audio stimulus alone, a finding confirmed by other research (e.g. Snyder & Colon, 1988; Weissenrider, 1987).

Rather than examining whether authentic or simulated-authentic film was a better predictor of listening comprehension gains, Collentine (1998) considered discourse and pragmatic features. Her study looked at intermediate learners' fourth semester of Spanish and found that the simulated-authentic learners had higher test scores on a listening comprehension test. However, the authentic learners had a deeper and better understanding on the phrasal level, meaning they could understand the details in the form, but they lost the broader meaning. According to the researcher, the reason for the difference in scores was the lack of coherence, or the complexity, of the authentic film materials.

Porter and Roberts (1981) have also compared authentic and simulated-authentic film styles, finding results similar to those of Collentine. Their focus was on pace and morphosyntactic complexity as opposed to discourse and pragmatic features. They found that using simulated-authentic film results in higher listening comprehension test scores than using authentic film.

As previously mentioned, some researchers opposed to using authentic film are confirmed that its use causes unnecessary anxiety for learners (Bacon & Finnemann, 1990). Many agree, however, that some of the anxiety is due to learning styles and other variables. The possibility also exists that the tasks required by instructors is causing the anxiety (Eykyun, 1993; Shohamy & Inbar, 1991). This possibility was raised by Shrum and Glisan (2000), who felt that the task and not the input should be changed to best help

the foreign-language learner. Hellebrandt (1990) also suggested that the authentic input should not be changed or altered; but instead, the task level required of students should be lowered to match their ability. In other words, authentic input could be made more manageable by altering the way it is presented (Hadley, 2001) as well as the tasks students are expected to accomplish.

Despite the complexity of the debate, many researchers still feel that instead of trying to create various simulated-authentic forms of input. Indeed, one might ask what is being done to lessen the limitations of authentic input (Duquette, Dunnette, & Papalia, 1987). In addition, researchers report a positive overall effect of using authentic materials (Herron & Seay, 1991; Rubin, 1990; Secules, Herron, & Tomasello, 1992). All of these studies provide evidence for the importance of input in instruction, as well as for having input that is authentic. However, none of the research just cited seems to support the use of authentic film for intermediate learners without either some imposed change to the instructional materials or other specific teacher-focused intervention.

To summarize, the research has shown that whether a simulated-authentic film or an authentic film is chosen, extra measures must be taken to encourage the learner to attend to meaning, to make the input become intake. Students who are working independently will not always attend to form and meaning; that process requires the use of outside sources, whether it be the teacher, an instructional tutorial, or another means. As more teachers turn to authentic film as a source of input in the classroom, especially in a beginning or intermediate classroom, techniques for the use of film are essential to ensure that students comprehend the input.

## Theories on Input

The Input Hypothesis, introduced by Krashen (1982), became known among some researchers as the *sine qua non* (Baltova, 2000) of language acquisition. The key element of his theory focuses on input at or just above the students' ability to comprehend, referred to as *i+1* by Krashen (1982). His theory did not focus on production at early stages of learning; rather he stressed supplying communicative and comprehensible input to the learner, which would in the end lead to improvements in proficiency. Stated another way, L2 acquisition is thereby improved when learners focus on the meaning of contextually rich input, instead of on the form (the grammar) being introduced to them (Krashen, 1982). This theory provided a foundation on which other researchers could build, providing a basis for the idea of having comprehension-based classrooms that focused on communication. However, a number of these researchers conjecture that the concept of *i+1* is not the only element necessary to make input comprehensible. For example, one must also consider *how* intake is occurring (Dunkel, 1991; Hadley, 2001; Morley, 1990; Rost, 1990).

While some researchers emphasize input as being the key to language acquisition (Krashen, 1982), others seem to place greater weight on output (Hadley, 2001), or noticing (Doughty & Long, 2003b). The main concern that researchers in the latter group have with Krashen's Input Hypothesis is that it does not focus enough on learning outcomes.

Faerch and Kasper (1986) agree that total comprehension, based solely on raw input, is impossible. In order for the learner to understand the input, they must first have some general linguistic knowledge, due to the fact that input by itself may not necessarily

lead to comprehension. Perhaps the question should be, is total comprehension necessary? If it is, then the lack of available knowledge to decipher the linguistic code by language learners would indicate the vital role instruction plays in improving the comprehensibility of input provided to learners, explaining why many of the film-based tutorials sometimes found in the language classroom mimic teaching practices. When implemented, these tutorials often provide pre- and post-activities, highlight key grammar items, and emphasize important vocabulary words the students need to know in order to be successful (e.g. Duquette et al., 1987; Garza, 1991; Herron, York, Cole, & Lindon, 1998; Omaggio, 1979).

Other researchers have also discussed the concept of intake in connection with Krashen's Input Theory (Gass & Madden, 1985; Guthrie, 1983; Lightbown & Spada, 2006). In general, intake refers to "what a learner notices and/or retains in second language input or instruction" (Lightbown & Spada, 2006, p. 205). They noted for instance that in proficiency-based classrooms (where meaning is emphasized more than form), intake would occur most often after repetitions, clarification requests, and metalinguistic feedback, as opposed to using recasts. Therefore, the language acquisition theory that maintains that input must become intake supports the idea that making input comprehensible is more important than teaching how language works.

### Listening Comprehension

Of all the skills necessary for second-language learning development, listening is the least understood (Mueller, 1980). The means for teaching listening comprehension are also not fully agreed upon (Moyer, 2006). Most research focuses on listening from a cognitive standpoint, in which the learner's mind is primed for the task at hand as

preparation for the learner to grasp the new words and concepts they are hearing (Omaggio, 2001; Shohamy & Inbar, 1991). The perspective of the current research reflects the need to develop not only an understanding of the processing strategies required to accomplish a listening task in another language, but also to find the best methods to present that material to learners.

Researchers have employed many techniques to study the effects of listening comprehension, focusing on text characteristics, interlocutor characteristics, task characteristics, listening characteristics, and process characteristics (Rubin, 1994). Of these, text characteristics, and process characteristics will be explored. In addition to these factors that influence a learner's ability to comprehend aural input due to the methodological procedures employed, task-based language teaching, pedagogic procedures, background knowledge, and schema theory will also be discussed.

### *Text Characteristics*

Speech rate is the first characteristic to be considered within the realm of text characteristics. The normal rate of English speech is between 165 and 180 words per minute (Rubin, 1994), with the rate increasing or decreasing depending on the language that is spoken and the people speaking it. Generally, one would assume that a language with a faster rate of speech than one's native tongue would be more difficult to learn. Some researchers (e.g. Moyer, 2006, Zhao, 1997) purport that speech rate is indeed a factor in second-language learning. Rader (1991), however, concluded that the rate of speech has no impact on comprehension.

Research has shown that text type influences listening comprehension ability (Moyer, 2006; Rader, 1991; Rubin, 1994). Usually, there are three types of language the

learner deals with: written text, spoken dialogue, and monologue. Rubin (1994) says that language without an interlocutor is much easier to understand than listening without having an interlocutor. One reason is that most conversational discourse moves chronologically. This characteristic makes it easy to anticipate what is coming next, because of the context of the present situation, what has previously been said, the prior knowledge of these types of conversations, and so forth. The nature of the text type in film, however, is such that it does not have the same advantages as the paired-speech discussed by Rubin. Because film uses spoken discourse to convey a message without interaction, a film can in many ways be more difficult to comprehend than written language (Shohomy & Inbar, 1991).

In summary, text types have advantages and disadvantages depending on the learner. Researchers and teachers must consider the benefits of each text type on the group of students being studied, such as determining the complexity of the vocabulary within an authentic film itself or including text types with spoken dialogue and spoken monologue, which are usually easier for language learners to comprehend because of their chronological movement. In addition, speech rate may pose a factor for some learners, although not all researchers believe this.

### *Task-Based Language Teaching*

As mentioned earlier, the tasks assigned to the listener will greatly affect the overall success of language learning with film input. Task-based language teaching (TBLT) is referred to by Doughty and Long (2003a) as an effective teaching strategy for CALL and distance language programs. Rubin (1994) lists the various tasks that can be required of students when testing their listening abilities. In general, teachers should



avoid tasks that excessively taxes memory or writing abilities with multiple-choice exercises reported to be the best type of task. The theory that multiple-choice questions are best for testing listening comprehension is based on the idea that the learner is being tested on the level of cognitive load they can handle while accomplishing a task. In order to avoid exceeding the ideal level of cognitive load, it is essential to moderate the task type to match the learner's abilities when testing listening comprehension.

In terms of what Doughty and Long (2003, p. 52) refer to as MPs or methodological principles for administering a successful TBLT program, the following should be considered: (1) Use tasks, not texts, as the unit of analysis. (2) Promote learning by doing. (3) Elaborate input (do not simplify; do not rely solely on "authentic" texts). (4) Provide rich (not impoverished) input. (5) Encourage inductive ("chunk") learning. (6) Focus on form. (7) Provide negative feedback. (8) Respect "learner syllabuses"/developmental processes. (9) Promote cooperative/ collaborative learning. (10) Individualize instruction (according to communicative needs, and psycholinguistically).

### *Pedagogic Procedures*

Doughty and Long (2003a) go on to describe additional pedagogic procedures, which act as "language universals" (p. 53), and can also impact the success of a CALL or distance language program. According to Doughty and Long (2003a) these PPs include: (1) teacher philosophy and preference; (2) learner age, proficiency, literacy level, aptitude, and cognitive style; (3) the class of target linguistic features for which the procedures are to be use; and (4) the nature of the learning environment. These language universals are accepted by other researchers (e.g. Feyton, 1991; Moyer, 2006).

In other research it was also found that there is a “statistically significant relationship between listening ability and foreign language oral proficiency skills” (Feyton, 1991, p. 178). As the students increase in proficiency, the memory span increases; students tend to remember more if they are more proficient. Feyton’s research also demonstrated that the majority of retention occurs at the beginning and end of instructional events in a classroom. He also found that proficiency is linked to attention and self-worth, in that students who believe they can understand are more able and willing to pay attention to foreign speech. Based on these findings, it seems that attitude may also affect comprehension in some way. For example, having confidence in their ability to understand a film may have an impact on the learners’ actual comprehension. It is the learners’ preconceived ideas about themselves, not the film, that have an impact on their comprehension of the film (Hadley, 2001).

Understanding the complexity that results from the possible combinations of both language universals and methodological principles can help teachers and researchers in choosing the appropriate film for their classes, as well as in selecting instructional strategies to make the film comprehensible to all learners at all levels in a self-study environment. Not understanding these universals and principles can limit the successfulness of these types of language programs.

### *Background Knowledge*

Not only do activities used after the listening process help the learner’s comprehension and overall success, but the importance of the tasks that precede listening should also not be overlooked (Carr & Curran, 1994; Schmidt-Rinehart, 1994). In fact, one of the most significant factors in listening comprehension is the learner—their

personal history, interests, preconceived ideas, and cultural background (Gass, 1997; Hadley, 2001). Hadley (2001) has stressed the importance of helping the learner understand spoken dialogue by making it meaningful and familiar. To accomplish this, the input, like any other new information presented to the learner “must be clearly relatable to existing knowledge that the learner already possesses” (Ausubel, 1961, p. 269). In a similar way, if a film is to be meaningful, it must in some way relate to the background knowledge of the learner. If sufficient background knowledge is not present at the outset, then the teacher must provide additional bridging information that will help make the connection between what is known by the learner and what is presented in the film. Unknown elements of the film might have to do with cultural or historical content or might be presented using previously unknown language structure or vocabulary.

Alexander et al. (1991) discuss what learners might bring to the task of comprehension: (1) metacognitive knowledge (thinking about their own thinking), (2) sociocultural knowledge (knowledge of the cultural norms of the society being studied), and (3) conceptual knowledge (knowledge of specific content—how the structure of the text works, the vocabulary it contains, and how speakers relate and communicate under certain conditions). Of course, the more knowledge the learners have in each of these areas, the more they can comprehend when they are listening (Alexander et al., 1991).

Similar possibilities for what learners might already know were given by Hadley (2001): (1) linguistic information, (2) knowledge of the world, and (3) knowledge of discourse structure. All three are applicable to this study, since knowledge of discourse structure, which is “the understanding of how various kinds or types of discourse are generally organized” (p. 144), will aid in the learners’ understanding of the film. Their

knowledge of the world will help them connect with the film, and linguistic information will make the connection between the language of the film to their own interlanguage.

Yorio (1971) isolated similar factors in the reading process that likewise relate to what a learner knows prior to receiving input and how that knowledge effects the overall comprehension of a text. The factors he looked at included: (1) knowledge of the language, (2) ability to predict or guess in order to make correct choices, (3) ability to remember previous cues, and (4) ability to make the necessary association between the different cues selected. In his study, thirty ESL participants reported that they forgot what they had just read because they were focusing on the current sentence or anticipating what would happen next. The learners were at a great disadvantage because they had to perform so many different tasks at once. This problem is especially apparent with beginning and intermediate students, who focus too much on the words, their meaning, and the grammar (Hadley, 2001).

The value of interventions to teach students how to bridge the gap between a learners current knowledge and what the researcher anticipates the learner will need to know in order to accomplish a given task was confirmed by Long (1990). In his study, a group of third-quarter university students of Spanish listened to two passages: one passage was less familiar to them (about the gold rush), and a second passage that was more familiar (about a popular rock group). The researcher asked the students about their prior knowledge of these two topics before measuring their recall and retention. The researcher found that those who knew more about the topic did significantly better than those who did not.

### *Schema Theory*

What a learner already knows is often referred to as their schemata. Schema is defined as “an abstract representation of a generic concept for an object, event, or situation” (Rumelhart, 1977, p. 266). Schemata are essentially a person’s “previously acquired knowledge structures” (Carrell & Eisterhold, 1983, p. 556). Schema theory, a cognitive science model to describe how one views the world, is therefore directly linked with background knowledge. In fact, Carrell and Eisterhold term this type of schemata “content schemata” (p. 561). They also define a second type of schema, “formal schemata” (p. 561) which relates to the knowledge of different types of texts. Whether one uses the definitions of Carrell and Eisterhold (1983), Alexander et al. (1991), or Hadley (2001), how our minds deal with our schemata will ultimately affect how learners perceive and comprehend a film. According to Coady (as cited in Carrell & Eisterhold, 1983) general intellectual capacity interacts with a student’s background knowledge to produce comprehension. Because language learners are not blank slates, instructional techniques must strive to facilitate the connections between new content and the learner’s individual schemata. According to Rumelhart (1977), “misunderstanding happens when students have found the wrong schema for a given concept or event” (p. 266).

That being said, using a film that is a text-type familiar to most should give learners an advantage in comprehending the film. A learner’s previous knowledge of how a film is constructed and how the events are sequenced can provide direction to the learner. Using knowledge of schema theory in developing a research methodology can be a benefit to beginning and intermediate learners, since considering prior knowledge of the

formal schema of film production as well as content specific schema relating to the plot of the film, can allow for better comprehension of the film overall (Hadley, 2001).

To summarize briefly, many different learning characteristics can affect listening comprehension. A learner's prior knowledge or schema must be acknowledged, and appropriate ways of bridging that prior knowledge with current understanding must be developed. Also both a learner's attitude and opinions about their own learning, as well as their actual language proficiency and other factors all can affect to what extent a learner is able to internalize input they receive in a foreign language.

### *Processing Characteristics*

One final area of difficulty regarding the comprehension of authentic foreign films is cognitive load, or, the way in which learners' strategies affect their ability to comprehend the input. Much research has been done concerning cognitive processing in relation to listening comprehension. Understanding cognitive processes involves finding out which linguistic structures a learner will retain when listening; how the learner then encodes that structure in memory; and then how that abstract representation stored away in memory resurfaces later, such as on a test.

Beginners, unlike advanced learners, tend to utilize language transfer to comprehend text. This means they will apply to the L2 abstract rules that are related to their L1, resulting in multiple mismatches, often defined as "interference." Of course, for transfer to occur, the learner must have some abstract knowledge about the L2 (Carrell & Eisterhold, 1983; Hadley, 2001; Rubin, 1994). However, this knowledge does not have to include rules or grammar; it could just be vocabulary such as cognates or other memorized forms. This transfer of knowledge from L1 to L2 is very important for

beginners because it allows them to start to understand input. In fact, transfer is so important to some researchers that they feel all L2 comprehension models should incorporate some form of native language transfer if they are to be effective (Faerch & Kasper, 1986). The problem then becomes limiting the degree to which transfer occurs and then accounting for the mismatches between actual rules and the abstract rule formulations generated by the learners. Regrettably, understanding and affecting language transfer is not always easy to control.

One factor over which language teachers have limited control is the attention span of the learner. “Focused attention is required for structural learning to occur, at least when complicated or ambiguous structures are the objects of learning” (Rubin, 1994, p. 226). But focused attention, especially for prolonged periods of time, is difficult when dealing with complex human beings, or in this case with teenagers, who may lack the energy or motivation to attend to a task that requires serious cognitive load (Lin, 2002; Plass et al., 2003; Vogely, 1995). Still, it is necessary to somehow provide that motivation through proper strategies, or the learners will never understand “aural” input (Vogely, 1995).

Film might just be what can offer this essential motivation. In fact, research seems to indicate that film is a wonderful source of motivation. Film is interesting to language learners, and, when the film is understood, the learner will exhibit less anxiety. Reducing anxiety leads to a greater enjoyment of language learning, which may impact proficiency gains (Geddes & White, 1978; Bacon, 1989). Joiner (1997) states it this way: “The most effective medium for teaching listening is the medium that will be used the

most frequently by students and instructors” (p. 91). Because of its near universal appeal, this medium could be film.

Another important strategy is the monitoring of one’s own learning. Learners who successfully monitor themselves by making inferences or reflecting consciously on what they are hearing will improve more than those who do not, regardless of proficiency level (O’Malley & Kuper, 1989; Vogely, 1995). Some of the ways this monitoring can be accomplished, such as with visual input and advance organizers, will be discussed later.

It is clear from the research that “listening is not simply a receptive act—multiple physiological and cognitive processes are engaged simultaneously” (Meskill, 1996, p.180). As a result, language learners have to be able to handle large amounts of information at once as they watch a foreign film. Because of the demanding cognitive load this process entails, learners incorporate numerous strategies, including transfer, focusing their attention, visualizing, inferencing, making connections, self-monitoring, and relying on background knowledge to make the task easier, all discussed in the previous sections. All of these characteristics, as well as designing a program based on correct principles and language universals will impact how learners perceive the input they are given, retain what they hear, and continue to grow more proficient in the foreign language, because the ultimate goal of a motivated learner is comprehension. Because every learner is different (including the fact that some are more motivated than others), teachers and researchers need to help the student access the best strategies, thereby ensuring successful comprehension.



## Making Film Accessible

One of the initial means of facilitating comprehension by language learners has come through the use of advance organizers. As has been discussed above, activation of background knowledge helps learners' understanding of a foreign language at the beginning, intermediate, and advanced levels (e.g. Long, 1990; Hadley, 2001; Yorio, 1971). Ausubel found that improved comprehension through the use of advance organizers occurred through the activation of various schemata, although he did not call it that. It was other researchers who defined this process as schema theory, a body of theory from cognitive science that has already been discussed (e.g. Carrell & Eisterhold, 1983; Rumelhart, 1977; Hadley, 2001). Many researchers have applied aspects of these theories to the language-learning experience (Herron 1994; Herron, Hanley, & Cole, 1995; Herron et al., 1998). What these researchers have realized is that annotations facilitate comprehension by creating a bridge between what the learner knows and the new language structures that appear in the input. These advance organizers, therefore, serve an important role in helping learners overcome their lack of essential schemata that would otherwise limit the amount of intake that could occur.

### *Advance Organizers*

There are many types of advance organizers available, such as pictures, gestures, summaries, and pantomime. Based on the type of advance organizer used, the teacher can provide them as handouts, write them on the board, or act them out for the students. Whatever the advance organizer, it is a given that it must be presented prior to the available input.

One study that tested the effects of using visual advance organizers to improve listening comprehension was conducted by Mueller (1980). The researcher investigated the effects of contextual visual cues on listening comprehension recall, or, more specifically, he researched whether learners remembered more if the visual was given before or after hearing a listening package. Mueller included the variable aptitude in the study to see if this might also affect the results and found that the high-aptitude groups outperformed the low-aptitude groups in all three conditions (visual before, visual after, no visual). In addition, the visual in general aided comprehension and recall, but when the visual was seen before hearing the passage, the greatest amount of listening comprehension recall occurred. These findings confirm the conclusions other studies that considered comprehension and recall (Bransford & Johnson, 1972; Chung, 1994).

Herron (1994), conducting research on her own as well as with various associates, (Herron et al. 1995; Herron et al., 1998), has done extensive work in the area of advance organizers for L2 film viewing. They advocate the need for advance organizers and other interventions because “comprehension is aided by simplifying the message, by negotiating meaning between interlocutors, and by using linguistic and extralinguistic context, such as familiar structures, background knowledge, and gestures” (Herron, 1994, p. 192). The first study (Herron 1994) included the control group, which watched a film in the L2 without any advance organizer, and the treatment group, which received six sentences written on the board describing the upcoming scenes in French. The subjects were 38 learners in a French 102 beginning class who viewed the film series *French in Action*. The intact groups were not randomized, but results showed no inherent variability between the groups. Students were tested using a discrete point listening comprehension

test, and the results showed that the use of an advance organizer improved listening comprehension. Additional findings showed that the more specific the statements on the board were, the easier it was for the students to retain the information. For instance, creating advance organizers that include character names, emotional states, and other pertinent information is helpful in improving comprehension.

Later in a similar study (Herron et al., 1995), two types of advance organizers (AO) were used—one which was “static”, containing summary sentences of passages, and another which was “dynamic”, including the summary sentences accompanied by a photo. The photo did not in any way reflect the material covered in the film. The students could not take notes during the film viewing. After viewing the film, the students completed a discrete point test. The test showed that the learners who had the AO that included a picture outscored those who were given only the static AO.

These findings regarding the additional benefits of pictures are supported by a study in FLES Chinese classrooms (Wilbershield & Berman, 2004). This study involved 61 elementary students learning English. The visual AOs shown to the students were “snapshots” from the film itself, while another group saw a “static AO” that consisted of words and sentences also taken directly from the film. The idea was to determine whether a visual AO increased listening comprehension more than a static AO, and the visual AO proved to be the better option.

In a similar study to their 1995 study, Herron and her fellow researchers investigated two different types of advance organizers: one was a declarative type of advance organizer and the other an interrogative type (Herron et al., 1998). The purpose was to determine whether asking questions was as helpful as making statements in

eliciting background knowledge and activating the learner's schema. Each pre-activity included six statements or questions that were read aloud, and then the students watched the film. After the film, the students completed a discrete point test of listening comprehension that showed no significant difference in the type of AO used, declarative or interrogative.

Finally, Herron et al. (1995) used yet another type of advance organizer to test the effectiveness of advance organizers. In this study, fifth-grade English-speaking French students read texts after either (1) seeing a related video clip or (2) seeing four pictures as the teacher simply read the text in the related video clip. In this case, the video clip used as an advance organizer had a more significant positive impact on listening comprehension than presentation accompanied by the pictures.

In summary, the use of advance organizers is an effective teaching strategy, because AOs enhance listening recall by activating prior knowledge or schema. Not all advance organizers, however, are equal. The kinds of advance organizers that have been studied are pictures, interrogative statements, declarative statements, and video clips. Few studies have investigated advance organizers presented with gestures or pantomime. From the studies described, it is obvious that pictures and video clips shown prior to viewing are the most effective advance organizers. If pictures or video clips are used, they should be simple, clear, and relative to the film or text.

### *Subtitles and Captions*

Chung (1999) took the research a step further by not only looking at advance organizers, but also looking at how the use of L2 captions affects listening comprehension. He looked at four groups of students who were studying English in

Taiwan: group one combined captions with an advance organizer; group two saw only captions; group three saw only advance organizers; group four (the control group) saw nothing. The results showed that group one (the combined group) retained the most, followed by the caption-only group, the AO-only group, and then the control group. The study demonstrated the importance of captions in bridging the gap between listening and reading and supported the importance of using film in the classroom.

Confirming Chung's findings, Vanderplank (1988, 1990) demonstrated that L2 subtitles aid the listening comprehension of film. He encouraged the use of subtitles or captions because they help those who are "hard-of-listening" (Vanderplank, 1990, p. 221). In the 1988 study, looking at how captions make television accessible to language learners, it was found that captions helped with most programs. This finding was also seen in the 1990 study, which looked at a more heterogeneous group of learners and found that those who had subtitles could effectively use phrases previously unfamiliar to them after watching the television broadcasts. In addition to this, the subjects were able to mimic correct accentuation of new phrases, understand and appreciate the humorous passages, make links to and modify their interlanguage to include these new phrases, and develop new learning strategies for watching television with subtitles.

Similarly, Garza (1991) studied 70 English speakers learning Russian from two different universities to see if the use of captions increased comprehension. This study determined that captions increase comprehension because the students tended to focus on the captions instead of listening to the film, thereby making native language comprehensible. Also, captions increased the memorability of the text and provided exposure to new words from context that the learners were able to use.

Three types of language captions were used in another study: English only, Spanish only, and no captions (Markham & Peter, 2002). The 213 Spanish L2 participants were split into three groups before they watched a DVD on the *Apollo 13* space mission with Spanish audio. All the groups then completed a multiple-choice listening comprehension test. The researchers found that the subjects had significantly higher scores on listening and reading tests after viewing the film with English captions than with Spanish captions, and that the subjects also had significantly higher scores with Spanish captions than with no captions. One of the reasons the researcher cites for these findings may have been due, in part, to the literacy of the students in both Spanish and English. If one considers the complex language skills required to view this style of documentary film it is clear why the learners had to rely more on the L1 to ensure comprehension, rather than being able to attend to the foreign language for meaning. Nevertheless, this does show the helpfulness of subtitles in Spanish or English on the improvement of listening comprehension, which is what was originally found by Markham (1999).

Baltova (2000) looked at the effects of subtitles with film input on the learning and retention of content and vocabulary in a second language. This film documentary was published in both English and French versions, and French subtitles were added to both English and French versions so the study could be completed. Her study involved 93 eleventh-grade French students who experienced three levels of subtitles and then completed a vocabulary test based on the content of the film. Level one implemented “reversed subtitles” (p. 34) a treatment during which the students watched an authentic documentary in English with French subtitles. The level two treatment was “bimodal” (p.

34), in which the movie and the subtitles were both in French. Level three was the control group, where the film was in French with no subtitles. Using a “Vocabulary Knowledge Scale” and “C-Cloze” (p. 57) test to measure vocabulary learning, as well as a content test to measure content learning, Baltova was able to see the gains in vocabulary retention across the three groups from pre-test to post-test. The results showed that the “reversed subtitle” group scored higher than the control group on the post-test, but the bimodal group scored higher than the other two groups on the post-test. The researchers also noted that the students had a positive experience with the French subtitles, stating that the subtitles helped the students score well on the tests.

By modifying the subtitles, showing only keywords, Guillory (1998) was able to find if a keyword subtitle improved listening comprehension. So instead of seeing every word spoken on the screen, the learners only see words that describe the general ideas being conveyed. This is similar to providing learners with extensive word lists, in the order of word appearance, as they are watching the film. The basic premise for the method would be to reduce the amount of information given the learner to process. In theory, if the cognitive load is lower, retention will improve (Plass et al., 2003). In comparing three types of subtitles—keyword subtitles, full-text subtitles, and no subtitles— Guillory found that the students who received full-text subtitles outscored the other groups. In other words, the keyword subtitles were not as helpful as having every spoken word shown on the screen. This was replicated recently with Park (2004), who looked at the effects of partial versus full captions on Korean learners of English and found results similar to those of Guillory (1998)—that the full text subtitles yielded the highest scores on listening comprehension tests.

From these studies, one can see how important subtitles are for the language learner. The general advantage of subtitles is that “information coming through two input forms—dialogue and scripts—is more thoroughly processed than if either dialogue or scripts is presented alone” (Guillory, 1998, p. 91). The best results on listening comprehension tests occurred when full-text subtitles appeared in the L2 along with L2 audio. Although some researchers considered the subtitles “distracting” (Markham & Peter, 1990), it seems that the motivational effect provided by using subtitles outweighs any disturbance learners may experience (Taylor, 2005). Of all these studies reviewed, the most creative was that of Chung (1999), because he looked at subtitles as well as advance organizers. As was mentioned, the combination of both of these textual cues improved listening comprehension more than either one used separately.

### *Interactive Video*

In addition to annotations and advance organizers, which have been primarily teacher driven in the research, current research has explored other ways of helping learners gain the necessary skills to comprehend foreign input through computer-controlled media. An innovation that promoted research in this area came with the interactive videodisc or laserdisc (e.g. Conrad & Veteto-Conrad, 1997; Fletcher, 1990). Fletcher, who was working for the naval academy, needed a way of making authentic video available to more than just their most advanced students, and “adding computer controlled interactivity to the authentic video which [they] receive[d]...proved an ideal means of making foreign-language materials accessible to [their] students from their very first week of instruction” (p. 859).



Now the digital versatile disc or DVD has replaced the laser disc as the preferred format for interactive video (e.g. Bush, 2000; King, 2002). Films shown in the DVD format are helpful because they incorporate “interactive menus, theatrical trailers, behind-the-scenes commentary, foreign languages, captions or subtitles, and immediate scene access . . . [providing] a rich resource of intrinsically motivating material for learners” (King, p. 509).

Although a great deal has been published regarding L2 acquisition and film, less research has been published concerning computer-controlled multimedia. Cardillo (1996) conducted a study that used different annotations that had previously been proven to improve the comprehension of film. The students in his study watched a DVD with captions, supplemented with a foreign language computer-based dictionary. The findings showed that a multimedia program accompanying a DVD was one of the most effective ways of improving L2 language proficiency. The learners could do things with the program that are impossible with a DVD alone, such as answer questions and review grammar. Another advantage this computer-based viewing had was the ability to see the movie and all these tools on the same screen simultaneously.

Another tool used for interactive video is the Electronic Film Review, or EFR. This new technology allows the learner a greater ability to control the authentic film than even a DVD can provide. EFR is an interface used for DVD playback, but it serves as computer-controlled multimedia by providing a learner definitions of key vocabulary items from the film (many of which are linked to pictures), chapter summaries, character identification, and comprehension questions (Keeler, 2005; Melby, 2003). With EFR, teachers are able to create play lists (selected film clips) to target specific scenes, and

teachers or researchers can also change the definitions and pictures available to learners to help learners understand the vocabulary of the film.

Another important aspect of EFR is listener control. The EFR system gives the learner the ability to stop, pause, and review clips from the film. This ability for listener control is a valuable tool, noted in other reading research on listening (Joiner, 1997). Joiner mentions pausing, rewinding, and re-listening as important steps in recursive reading, which has been very successful in improving reading comprehension. Joiner also adds that with multimedia applications, listening activities in many ways resemble face-to-face communication, making these multimedia programs excellent teaching devices, well suited for the language-lab environment.

There have been few studies looking at the effectiveness of computer-controlled multimedia programs, including the Electronic Film Review. The EFR is a multimedia program that accomplishes the same principle of previous interactive video models, but now with DVDs shown on personal computers. This study seeks to find out if the annotations within the EFR have any effect on listening comprehension by intermediate ESL learners within this self-directed computer-controlled environment.

### Conclusions

1. Input is a complex yet essential resource for learning that must be explored by researchers. Film as a source of input comes in many varieties; both simulated-authentic and authentic types of film were discussed. Adapting the type of film to different types of learners, will have an impact on listening comprehension.
2. Listening comprehension can be sub-divided into three major categories: text characteristics, learner characteristics and task type, and processing

characteristics. Each of these categories has been manipulated in some way by researchers or teachers to enhance comprehension.

3. For text characteristics, the speech rate and text type have been looked at, with speech rate having no effect on listening comprehension. Text type, however, did have a large impact on the listening comprehension of learners.
4. For learner characteristics and task type, background knowledge (including schema theory), and individual learner differences have been explored. The research showed that what learners do with the input they receive can be a significant determinant of successful comprehension. Accepting the current proficiency level of learners and constructing tasks that move from simple to complex will prove more advantageous. Schema Theory incorporates these ideas with great success. It was shown that activating prior knowledge inevitably improves beginning and intermediate learners' comprehension rates. Finally, individual characteristics such as proficiency level or motivation can determine how learners comprehend L2 oral texts.
5. For processing characteristics, it was shown that intermediate learners instinctively process language through their L1 unless corrected. Listening strategies (such as top-down processing), enhanced by activating background knowledge through annotations, will impact the way learners process foreign material.
6. Annotations and advance organizers are essential for making authentic input accessible to beginning and intermediate language learners. These tools are

essential in that they create a bridge of understanding between a learner's prior knowledge and the input they are processing.

7. Computer-controlled multimedia software and computer-assisted tools have been developed to aid in the comprehension of foreign materials by incorporating annotations and advance organizers. These tools are motivating to learners and provide additional features that may positively impact listening comprehension.
8. The Electronic Film Review (EFR) is one of these computer-controlled multimedia tools. It is also the interface the researcher will use to test the effectiveness of the availability of annotations on the listening comprehension of intermediate ESL students.

## CHAPTER 3

### Methodology

This study sought to answer the question: What is the impact of the availability of annotations on the listening comprehension of learners of English as a Second Language? Annotations were shown to bridge prior knowledge with current knowledge, thereby improving listening comprehension. In considering the increased use of feature films in the language classroom, however, it must be shown how computer-controlled multimedia annotations can effectively accomplish the same target. Based on the definition given of listening comprehension, this target will be measured with a transcription and multiple-choice test. The test was designed so the learner hears words from the film, but within a novel listening passage, in order to eliminate the possibility of memorization. This chapter will discuss the methodology that supports these tests, as well as how the experiment will be conducted.

### Data Sources

#### *Subjects*

The three groups that made up the sample came from four intact “Intermediate English as a Second Language” (ESL) classes from three junior high schools and one high school in Alpine School District in Utah. Two classes functioned as treatment groups (annotation and standard), and the other two classes combined formed a control group. Both the annotation and standard groups viewed the film, but the control group did not. Personal information was collected from a questionnaire given to the students at the beginning of the study. Table 1 is a summary of the information for the three groups. See

Appendix D for the questionnaire and Appendix E for a complete summary of the student questionnaire data.

Table 1: True Summary of Groups

Parameters	Control Group	Standard Group	Annotation Group
Age 12	3	0	7
Age 13	6	0	2
Age 14	3	3	0
Age 15	1	2	0
Age 16	0	6	0
Age 17	0	4	0
Number Males	7	10	6
Number Females	6	5	3
Cantonese	0	1	0
Chinese	0	0	1
Japanese	1	2	0
Korean	0	4	1
Spanish	12	8	7
Average Years Studying English	2.9	4.0	4.8
Average Years in the U.S.	3.0	1.6	5.0
Total Subjects	13	15	9

The designation “Intermediate ESL” is a course title assigned by the schools themselves.

Placement in Intermediate ESL was based on tests the school districts administered to

assess the students' ability, or based upon successful completion of previous classes. No formal testing was done as part of this research to select participants for the study. Because the groups were made up from intact classes, there was no randomization between them. The classes were selected for the study because their teachers were interested in using films to enhance their teaching. The teachers were all contacted previously and agreed to be involved in the research.

All participants signed an Institutional Review Board (IRB) form in order to participate, and because the students were minors, parental permission was also obtained. In addition, because the research was conducted in a public school, written permission to conduct the study was obtained from both the classroom instructors and the principals of the schools. These forms can be seen in Appendix A.

### *Film*

The film that the participants viewed was *The Sandlot*. This movie takes place in a country town somewhere in the United States. One of the main characters, Scotty Smalls, has just moved in and soon finds out that to be accepted in this town, you have to play baseball. Unfortunately, Smalls does not even know how to catch a baseball, but with the help of his stepfather and Benny Rodriguez, the neighborhood baseball all-star, he soon becomes a confident player. Smalls and his new friends spend the summer playing baseball on a sandlot (a baseball field in the middle of town) and getting into trouble. The real trouble starts when Smalls brings his stepfather's baseball, which had been autographed by Babe Ruth, to a game. One of the boys hits the ball over the fence and right into the backyard of "the beast" (a massive dog that eats baseballs). The rest of

the film consists of the boys trying every imaginable scenario to retrieve the lost ball before the stepfather finds out his ball was stolen.

*The Sandlot* was chosen for several reasons:

1. The film relates a story that is interesting to an audience of this age group, based on the characters and the subject matter presented. Both the girls and boys participating in the study can relate to the conflicts presented in the film.
2. The film was already fully annotated and prepared for use with EFR software by students at Brigham Young University.
3. A sufficient number of copies of the film were available for use in the study, thereby reducing the overall cost of the study. Each computer workstation was required to have an original copy of the film.
4. The researcher deemed the film well suited to the linguistic abilities of the learners because it does not contain multiple story lines, nor does it contain a large amount of academic vocabulary. The characters and situations resemble those found in the students' lives.
5. The film allowed the ESL instructors to accomplish their course goals and objectives. Some of these objectives included being able to retell simple stories, answer questions in complete sentences, recognize parts of speech, and follow multi-step directions.

During the experiment, the researcher managed the use of all DVD equipment, EFR software, and instructions. The participants in all three groups (four classes) received the same instructions related to the use of the tools and technologies. The instructions were given in English at the beginning of the study.



## Procedures

### *Instruction*

The first of the variables considered were the teachers. Obviously, the teachers in these classrooms were different; however, the teachers were not a significant factor in this study because they did not provide any direct instruction. The research question sought to measure the effectiveness of the annotations within the EFR player in a self-guided environment. Teachers acted as casual observers, disciplining if necessary, but they did not explain the meaning of words or answer questions about the film. Students worked independently on their assigned computers. If they had any technical or other problems, the researcher resolved them. In the annotation group, the researcher used verbal prompts to remind the students to use the annotations.

### *Materials*

Each participant in the treatment groups was given a copy of the DVD, *The Sandlot*. Every student also had access to a computer capable of showing the film. No participant shared a computer with another student during any part of the study. Finally, a pair of headphones for each student was provided to eliminate distractions during the experiment.

As part of the study, the treatment groups were videotaped. Video cameras were mounted on tripods and set in stationary positions to capture the students' use of the player features. The position of the video cameras was adjusted every 20 minutes to see different angles of the room and to capture different students. Not every participant was videotaped—only those who consented. The footage on the videotapes was transferred to DVDs to facilitate analysis.

Prior to the beginning of the study, the researcher installed the EFR software on the annotation group's computers and performed tests to ensure the software was working appropriately. In the standard group's classroom, the researcher made sure the films played correctly.

The film annotations are viewed through an Electronic Film Review (EFR) Player, created for video-playback. For a detailed account of this process refer to Keeler (2005). The EFR player includes a screen to display the film and wraps, which is a separate screen to display the annotations (see Figure 1). The wrap screen will begin with three options for the participants, to see a chapter synopsis of the current clip, to see chapter questions, or to see vocabulary helps. The chapter synopsis is a brief overview of the current clip being viewed (see Figure 2). Chapter questions were not created when this movie was authored and therefore nothing is displayed when this hyperlink is clicked. The vocabulary help section is of primary importance, however, as it contains the definitions of the lexical items, as well as the pictures describing those lexical items and this is the section the students will use. See Figure 3.

Figure 1: EFR Video Player with Wraps

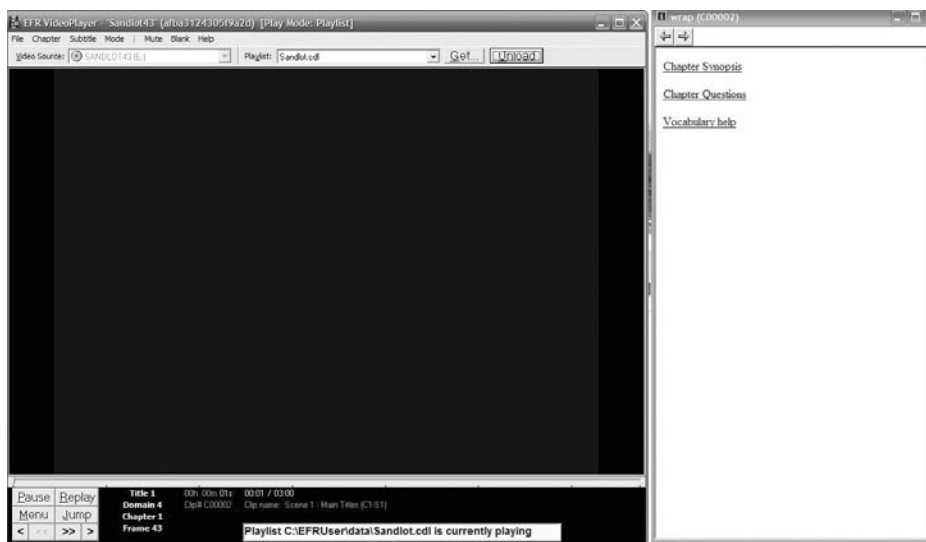


Figure 2: EFR Video Player Chapter Synopsis



Figure 3: EFR Video Player with Annotations



As learners scroll over the vocabulary words, a definition is given, and in some cases a picture is provided. Learners also had the option of turning on subtitles in English or in Spanish. The film *The Sandlot* was already authored or prepared for viewing, but the researcher made minor changes to some of the images and the definitions.

## Research Design

The study followed a basic one-shot design and was completed in two weeks, or five 80-minute class periods. The study included two treatment groups and one control group, following a binary pre-test post-test design.

At the onset of the study, all three groups were given a pre-test, which will be described later, in the instrument section. The test contained sixty-four items: twenty-four multiple choice items and forty transcription items. The pre- and post-tests were identical—containing the same questions and the same words—and the participants heard the same listening prompts. To ensure the tests were delivered in an identical fashion, the researcher administered the tests in each of the four classrooms, giving the same instructions in every case. During testing, the researcher, the teacher, and other teachers proctored the students. All participants filled out the questionnaire shown in Appendix D at the time of their pre-test.

Figure 4: Standard Player



Following the pre-test, the annotation group and standard-player group viewed the entire film. The standard-player group watched the film with Windows Media Player on a

personal computer (see Figure 4). During the viewing of the film, the participants had the ability to rewind, pause, or repeat sections of the DVD, and they could choose whether or not to have subtitles shown on the screen. Participants had three full class periods to view the film, giving them a total of 240 minutes to view the film as many times as possible.

The annotation group watched the same film as the standard group, but the annotation group had the EFR software installed on their computers (see Figure 3). Both the annotation and standard groups had the same number of class periods and the same amount of time to watch the film. In addition, both the standard and annotation groups were videotaped during the time they watched the film.

### *Instrument*

All participants in each of the three groups were tested at the beginning and end of the study. The test, written and administered in English, was piloted to ensure the language was understandable and the directions clear. The details of the pilot study are provided later in the chapter. Part one of the test contained the transcription items, and part two the multiple-choice items. For the transcription items, participants heard an audio passage twice and were then asked to transcribe portions of that passage on their answer sheets. The audio passages contained key lexical items from the film but were not passages from the film. This was done by placing the lexical items in sentences unrelated to the content of the film. In this way the researcher was certain that participants were not just memorizing lines from the film and then reciting them on the test. In addition, these made-up audio passages, recorded by different people, assured that the students had learned the words sufficiently well to recognize them in a novel context. By using novel

phrases recorded by different people, not only was there no reference to the film itself, but the accent and tone of the original actor's voice was different as well.

To identify key lexical items, the entire list of words from the film was analyzed for frequency using a tool called WEB VP (<http://www.lex tutor.ca/>). Based on this frequency analysis, the most academic words in the film were identified. From these words, a random sample of thirty-four lexical items was selected for the test. The audio passages containing the lexical items can be found in Appendix B.

The final 34 testable lexical items were put into a context that matched the original meaning and grammatical function (i.e. noun, verb, adjective) of the word in the film, but with different words surrounding the lexical item. To construct the new phrases, the researcher used words and expressions identified by searching the British National Corpus (<http://www.natcorp.ox.ac.uk/>) using the restriction "spoken utterances". Because the BNC is a corpus of spoken language, the results of the search contained oddities that would not normally appear in written passages. Some of the oddities were selected to match the type of input learners would hear while watching the film.

For this study, male and female college students recorded the new audio passages. The college students were native speakers of English. Each passage was recorded with an equal number of phrases recorded with a male voice as with a female voice to ensure no preference for a certain voice or gender. The final CD containing all 34 recorded passages served as the basis for the listening comprehension pre- and post-tests.

The 34 audio passages were randomly divided between the transcription and multiple-choice sections. The distracters on the multiple-choice portion of the test were created by the researcher, with the aid of various dictionary tools and Word Net

(<http://wordnet.princeton.edu/>). On the multiple-choice section, a selection of “I don’t know” was included to avoid guessing.

For part one of the test, the participants answered ten transcription questions. Participants heard the passage twice aloud, and then they had to correctly write the missing words onto their answer sheet. The testable item was always one of the words requested, and the other requested words were high frequency words, which the learners recognized easily. So although there were only ten questions, there were actually 40 total missing words that the learners wrote down. The following is an example:

*The participants heard the following played on the CD twice.*

There is lots of books that I've got, either the father or the brother cleaning, and it's not just the mother and the daughter.

*The participants read the following on their answer sheet.*

1. Please fill in the blank(s) with the missing words from the sentence you hear.

There is \_\_\_\_\_ of books that I've got, either the \_\_\_\_\_ or the brother \_\_\_\_\_, and it's not just the \_\_\_\_\_ and the daughter.

For part two of the test, the participants answered 24 multiple-choice questions.

These multiple-choice test items directly targeted the lexical items selected. Consider the following example:

*The participants heard the following phrase played on the CD twice.*

I mean if you want to play you play it! If you don't, fair enough you can have all the sports you want! Are there good opportunities for women to play football if they want to? Of course.

*The participants saw the following question on their answer sheet.*

1. What is the best meaning of the word **sports** in this sentence?
  - a. teams
  - b. loyalty
  - c. word play
  - d. athletics
  - e. I don't know

The transcription portion of the test was scored slightly differently from the multiple-choice portion. The multiple-choice questions were worth one point each, and each blank/word on the transcription portion was worth one point. Points were not deducted on the transcription portion for spelling and on the multiple-choice section; a selection of “I don't know” still caused the student to miss the question. The test instrument is included in Appendix D for reference.

#### *Reasoning behind the Instrument*

Many researchers have used a multiple-choice format to assess listening comprehension (e.g. Herron et al., 1998; Parry et al., 1984). When creating the multiple-choice test there were two choices: the test could either ask specific questions about the plot of the film or ask participants to be able to define the lexical items. In the end the researcher chose to ask questions about the definition of the target words, which could give a better understanding of how the students in the annotation group used the annotations. The transcription test is less commonly used to assess listening comprehension.

Listening abilities can be assessed using either lower-order thinking skills or by using questions that target more higher-order thinking skills (Hadley, 2001; O'Malley & Kupper, 1989; Shohamy & Inbar, 1991; Wagner, 2001). These same researchers assert that until the proficiency of the learner increases, it is impractical to test higher-order skills. In fact, beginning and intermediate learners often rely on “verbatim responses in



answering questions” (Wagner, 2001, p. 5). The learners in this study were assessed in a similar way, looking at word recognition and identifying word senses. By combining the multiple-choice and transcription assessments of listening comprehension, the participants’ overall progress (or regression) through the study could be measured.

This assessment was novel because it does not model listening tests found elsewhere (multiple-choice) and a test that more closely mimics true listening (transcription). It was also novel in that the instrument incorporated the essence of the feature film by using vocabulary directly related to the film the participants had viewed, but without copying verbatim the lines from the film.

### Analysis

#### *Estimating Reliability and Validity*

After the administration of the test, a classical item analysis followed to determine item difficulty and item discriminating power. After the item analysis, the Kuder-Richardson 20 formula was calculated to measure the internal consistency of the test. Finally, to determine the degree to which both the transcription and multiple-choice sections of the test were measuring the same construct a Pearson product moment correlation coefficient was calculated.

#### *Data Analysis*

Because of the research question, this study tested the null hypothesis at a .05 significance level. To do this the researcher employed an analysis of covariance known as ANCOVA. This statistical test was a good fit because of the research design used, where all three groups do not receive all the treatments, and where the groups were made up of intact classrooms. Also, this test was a good starting point for future research of this kind.

The ANCOVA compared the pre- and post-test scores, using the pre-test score as a covariate, for all three groups—standard, annotation, and control.

This analysis of covariance was run on the test results of all three groups to find a difference in the least squares means between and within groups. In short, all possible combinations of the three groups were paired against one another separately, to see if any differences occurred. Apart from the ANCOVA, a test of correlation, known as the Tukey-Kramer test, was run to show any possible relationship among the three groups. This test was designed to show where the effect of the independent variables occurs, not just the main effect.

To have a clearer understanding of the effects of using EFR annotations by means of the pre- and post-test, the researcher compared gains across the three groups. In addition, the researcher compared the standard and annotation groups to the control group to see if the treatments had a positive effect or a negative effect.

Other factors were considered after the initial analysis was conducted, which included the student's age, how many years the student had been in the United States, the student's L1, the percentage of time English was spoken at home, the percentage of time English was spoken at school, and whether or not the student had seen the film prior to the study. All this information, received from the questionnaire, allowed the researcher to provide additional insights on the interpretation of results.

#### *Analysis of the Video*

Another part of the procedure included an analysis of the video made while the annotation and standard groups viewed at the computer. The video provided information on how the annotations and computers were used and on the attitudes of learners.

### Pilot Study

The listening comprehension test was piloted before the actual test was given to the participants in the study. This piloted test was given to college ESL students who attend Brigham Young University's English Language Center (ELC). These foreign students passed the Test of English as a Foreign Language (TOEFL) prior to admittance into the university. The draft test was given to "intermediate" ESL students after they were asked if they had already seen the film *The Sandlot*.

After the test, some of the participants were questioned about the clearness of the directions, the difficulty of the test items, and the length of the test. Because students at the ELC are required to volunteer for research conducted by the university, permission forms were not needed to conduct the pilot study.

In addition to these non-native students, the draft test was given to 25 native English-speaking students in the same age group as the study participants. This native group was tested to ensure the words were understandable to native speakers, and to see if someone in this age group would answer the questions the same way as the researcher.

### *Findings*

All native participants agreed completely on the answers to the transcription items, but there were some discrepancies to the answers to the multiple-choice items and the answer the researcher thought was right was not always the one selected by native speakers. Based on the feedback from the pilot study, some of the definitions to the multiple-choice questions were changed. Also based on feedback from the pilot study, the rate at which the readers said the listening prompts was decreased. The natives and non-

natives both felt that the speakers talked too fast; therefore, the samples were re-recorded at a slower speech-rate.

### Conclusion

As one of few research studies conducted to assess the effectiveness of computer-controlled multimedia annotations, this study hopes to reach some important conclusions on how the annotations presented to students improved their comprehension of the feature film. The instrument used to assess this construct is novel and will provide important knowledge on the best way of measuring listening comprehension when assessing annotations with feature films. The following chapter will summarize the results that were found.

## CHAPTER 4

## Results

The goal of this study was to analyze the impact of the availability of annotations on the listening comprehension of English as a Second Language (ESL) learners who were watching a feature film. It was hypothesized that the availability of annotations would have a positive effect on listening comprehension. Contrary to expectations, however, the results did not show that the annotations had any effect on the learner's gain scores in listening comprehension. The study included three groups, one that watched the film with annotations, the second that watched the film with Windows Media Player, and the third that did not watch the film (the control group).

Table 2: Distribution of Groups

Annotations	Standard	Control	
Junior High 1	High School 2	Junior High 3	Junior High 4
<i>n</i> =9 students	<i>n</i> =15 students	<i>n</i> =6 students	<i>n</i> =7 students

*Instrument Results*

In looking at analysis of covariance of the results of the test, and in particular the gain scores of the students on the multiple-choice section of the test, some unexpected findings occurred. The analysis revealed that there were no significant differences between the three groups on the multiple-choice section of the test, ( $F(1, 33) = 1.73, p > .05$ ) and ( $F(2, 33) = 0.09, p > .05$ ). In addition, on this section the annotations, standard, and control groups did not show significant gains ( $t(33)=1.75, p=0.090$ ), ( $t(33)=1.89, p=0.067$ ), and ( $t(33)=1.60, p=0.120$ ). When looking at the average gain scores from all three groups on the multiple-choice section of the test, however, the control group

improved more than the standard group (see Table 3). Since the control group improved more than one of the treatment groups, it prompted additional tests to see how the multiple-choice test correlated with the transcription section of the test.

Table 3: Average Total Gain Scores on the Multiple-Choice Section of the Test

Control Group	Annotation Group	Standard Group
+1.538	+1.778	+1.333

To test the hypothesis that the multiple-choice section did not correlate with the transcription section of the test a classical analysis of the results of the listening comprehension post-test was run to estimate the reliability and validity of the instrument. The results showed that the multiple-choice section was a factor in the results of the listening comprehension test. This was based on the three tests that were used, with the first analysis comparing the two sections of the test to reveal the degree of correlation, based on a Pearson product moment correlation coefficient. This test showed a rather low correlation between the transcription and multiple-choice sections of the listening test,  $r = 0.395$ , an indication the two sections of the test are probably not testing the same construct. The weak correlation between the two sections led to a review of the results of the classical item analysis as well as the calculations of the Kuder-Richardson 20 (KR-20) for the whole test and each of the two subsections.

The index of item difficulty as well as the index of item discriminating power included all 64 test items, with the first 40 items belonging to the transcription portion of the test, and the final 24 items belonging to the multiple-choice section. A good test item has an item difficulty around 50% and a discriminating power of 0.50. According to these data, it was seen that many items on the multiple-choice test had a negative

discriminating power and others had very low item difficulty percentages, which indicated the question was too difficult for these learners. When the multiple-choice test was removed from this analysis, then the results improved. These data can be seen in Appendix F. In these data there are no items with negative discriminating power, and the item difficulty percentages were nearer to the 50% target than what was seen with the multiple-choice test.

After the item analysis, the KR-20s were calculated to estimate internal consistency. For the entire test, the  $KR-20 = 0.88$ , which included both the transcription and multiple-choice sections. When the separate sections were evaluated the results changed. The  $KR-20 = 0.88$  for the transcription portion of the test, and the  $KR-20 = 0.72$  for the multiple-choice portion of the test.

According to these classical analysis techniques, it was determined that only the transcription portion of the test would be included in the analysis, for reasons of reliability and internal consistency. Therefore, the final ANCOVA analysis only included part one or the transcription portion of the listening comprehension test.

#### Research Question 1

What is the impact of the availability of annotations of feature films on the listening comprehension of learners of ESL, as measured by both transcription and multiple-choice tests of listening comprehension?

#### *Listening Test Results*

The researcher used an ANCOVA, or analysis of covariance, to compare the three groups. The measure used for the analysis was the gain from the pre-test to the post-test. The variable of interest was the treatment to the subjects—annotations, standard player,

and control. The pre-test score was used as a covariate to adjust for the knowledge that each subject possessed at the start of the study. ANCOVA helps adjust for the pre-existing conditions of the three groups, since randomization falls short in this study. The descriptive statistics of the results for the gain in listening comprehension test scores are given below in Table 4. The analysis revealed that there was no statistically significant difference between the three groups, ( $F(1,33) = 9.51, p > .05$ ) and ( $F(2, 33) = 1.91, p > .05$ ).

Table 4: Gain in Listening Comprehension Transcription Test Scores

Effect	Num DF	Den DF	F Value	Pr > F
fill_pre	1	33	9.51	0.004
treat	2	33	1.91	0.165

A further analysis looking at within groups variance, however, reveals that the annotations and standard groups had significant gains ( $t(33)=2.17, p=0.038$ ) and ( $t(33)=3.17, p=0.003$ ) while the control group showed no significant gain ( $t(33)=0.34, p=0.734$ ). This indicated that watching a film did improve the participants test scores, although there was no difference between the two groups that watched the film in this experiment. When comparing the estimated gain of the two groups, the annotation group (Estimate = 2.71) was lower than the standard group (Estimate = 3.06). See Table 5.

Table 5: Least Squares Means of Listening Comprehension Transcription Test

treatment	Estimate	Standard Error	DF	t Value	Pr >  t
annotations	2.712	1.253	33	2.17	0.038
standard	3.059	1.056	33	3.17	0.003
control	0.362	0.966	33	0.34	0.734



Finally, comparing the differences of the means using a Tukey-Kramer correlation test it was shown where the variance was greatest between groups. In this study, as was just mentioned, the standard group outperformed the annotation group, and both treatment groups outperformed the control group. See Table 6.

Table 6: Tukey-Kramer Correlation of Listening Comprehension Test Scores

Effect	treat	treat	Adjustment	Adj P
treat	annotations	control	Tukey-Kramer	0.345
treat	annotations	standard	Tukey-Kramer	0.973
treat	control	standard	Tukey-Kramer	0.164

#### *Results from the Questionnaire*

The questionnaire was attached to the participants' pre-test, and they filled it out on the first day of the research study. The questionnaire shown in Appendix D contained eleven questions focusing on basic demographic information, as well as material specifically relating to the research question. The majority of the participants spoke Spanish as their L1, but there were also native speakers of Chinese, Cantonese, Japanese, and Korean (see Table 7). In addition, participants were asked whether or not they had seen the film *The Sandlot* at any time prior to this research study, and the majority had not, 73% in fact (see Table 8). The age of participants ranged from twelve to seventeen, with participants in each grade from seventh to twelfth (see Table 9). These three variables seemed to have the greatest effect based upon prior research, but because the results of the analysis of covariance of the results of the test revealed little in terms of significant data, it was determined that testing these variables to see if they had an effect on the results would yield the same results. Again, this was mainly due to sample size,

and had more participants been included in the analysis, some of these additional factors could have been tested in connection with the results.

Table 7: L1 of Participants in All Three Groups

L1	Total ( $n = 37$ )
Cantonese	1
Chinese	1
Korean	5
Japanese	3
Spanish	27

Table 8: Total Number of Participants Who Had Seen the Film

Annotation Group		Standard Group	
Seen film	Not seen film	Seen film	Not seen film
3	6	7	8

Table 9: Age of Participants

Age Group	Total
12	10
13	8
14	6
15	3
16	6
17	4

It was important, however, to include some of the data in the form of inferential statistics to aid the researcher's interpretation of the results. For instance, it was seen

from the questionnaire that the annotation group had studied English longer than the other two groups—4.7 years on average, compared to 4.3 years in the standard and 3.4 years in the control group. Not only that, but the participants in the annotation group began learning English earlier—at around age six—than those in the standard group, who started around age twelve, and those in the control group, who started around age ten. However, despite this fact, the annotation group heard English at home less than the other two groups. On average, the annotation group heard English spoken at home only 21% of the time, while the standard group heard English at home 31% of the time, and the control group heard English 37% of the time. There was little variation, however, in the amount of time the participants spent speaking English outside of class (around 57% of the time). Had the sample size been larger, it would have been possible to see if any of these variables had an effect.

#### *Results of the Video Data*

The video data was useful in providing qualitative information for the researcher. In total, fifteen hours of video were recorded from the annotations and standard player groups. Four video cameras were set up in various locations throughout the classroom. The cameras were focused mainly on the screens of the participants in order to see the students' perspective. This allowed the researcher to see when annotations were used, how long the students used them, whether the film was watched continuously or if they ever paused it, and then whether or not the participants were using subtitles. No video was taken of the control groups since they did not watch the film.

Note also that there were few technical problems with the program. The program was installed prior to the start of the study, and it was tested at that time to be certain it

worked. On each day of the study, the researcher instructed the students on how to start the program, view the film, and then use the annotations. This only took a few minutes. During the viewing process the software froze temporarily twice causing the annotations to stop working. The researcher resolved the problems quickly; however, without some knowledge of the software and computers, this could have caused significant setbacks.

Among the similarities between the annotation group and the standard group was the opportunity to view the film, but it was anticipated that the annotation group would use the film differently than the standard group. The researcher expected that the students would pause the film more and take the time to read the annotations and learn the words. This was not the case. The annotation group watched the film in nearly the same manner as the standard group did, without pauses, from beginning to end.

Another similarity was the attitudes of the students. In each class there were one or two students who were distracted by their neighbors and did not put the effort into the film. They were observed talking or getting on web sites instead of remaining engaged in the activity. These students had to be assigned to a new seat and were more carefully monitored. In the end, the scores of these distracted students were probably not as high as they could have been. However, it should not be assumed that they were the only distractions to the experiment. In total the students watched the film start to finish twice, and then began to watch it a third time. It must be mentioned that the majority of the students were off-task for a few moments when they finished the film for the first time and towards the end of each class period. Around these times, the students were apparently restless and asked to use the restroom or get a drink of water. It made it

difficult to continue the experiment, but the participants were allowed to leave one at a time to take a quick break. When they came back, they resumed watching the film.

Despite these minor setbacks, some of the time the students in the annotation group seemed engaged watching the film even though they rarely used the annotations available to them. The members of the standard group were likewise attentive during most of the class time. The video footage from the experiment revealed, however, that the use of the annotations was not sufficient. For students in the annotation group, as each new segment of film was shown, a list of words is displayed on the screen. In order for the students to see a new list of words with the annotations, they had to click on a button that would refresh the list. The students would do this as soon as it came up, which showed that they were aware of the annotations and understood they had to look at them. Yet only a few seconds was spent by the annotation group actually clicking on the words or looking at the photos. A couple of seconds is not enough time for learning to take place. From these observations it is clear that it was not effective or motivating enough to the participants for the teacher or researcher to just walk around reminding them to use the annotations, more needed to be done. Beyond the video observation, there was no written data suggesting the users' thoughts and feelings about the system, which could have explained this difficulty further.

As far as differences between the standard and annotation groups were concerned, only one was noticeable, and that was regarding the standard group's use of subtitles. Although both classes were instructed on using subtitles and were given the option of using them, only the standard group took advantage of this option. Within the standard group, nine of the students used subtitles (seven in English and two in Spanish), whereas

only one of the participants in the annotation group used them (in Spanish). There is the possibility that the subtitles helped the standard group as much or more than the annotations helped the annotations group, especially if the standard group paid more attention to the subtitles than the annotations group paid to the annotations. Either by eliminating the use of subtitles altogether or by asking the students how they felt the subtitles assisted them on the test, the researcher could have better understood this variable and how it affected the results of the study.

### Chapter Summary

The data has shown that there was no statistically significant difference between the results of the gains in listening comprehension test scores of participants in the three groups on the transcription portion of the test. It was seen that multiple factors had a bearing on these results, such as the motivation of the learners, the small *n* size, the lack of the use of annotations, etc. Conversely, there was a larger gain in terms of the within groups gains in listening comprehension, by both the annotation and standard group over the control group. This would support prior research regarding the use of film in the classroom, which showed that film can aid in gains in listening comprehension. Beyond what was observable, the results of this study could have been linked to some other factor such as age, L2 proficiency, or the participants' L1; but these factors were not tested. Also, it was shown through the videotaping of participants that the annotations were not used sufficiently to create a measurable effect. Finally, the use or non-use of subtitles may also have created a blocking variable in the study. In the next chapter, a discussion of these factors, along with the implications of these results and recommendations for future research, will be presented.

## CHAPTER 5

### Conclusions and Recommendations

This study sought to better understand how the use of annotations could affect the listening comprehension of intermediate ESL students. Contrary to expectations, the results of the study revealed that there was no statistical difference between the three groups: annotation, standard player, and the control. This chapter will discuss the implications of these results on future research and explain some of the limitations of this study.

### Important Questions

Three questions about this methodology may have arisen for the reader thus far that require answering: (1) Why is listening comprehension being tested and not reading comprehension? (2) Why should the reader believe the researcher is measuring listening comprehension related to the film itself, as opposed to just general listening? and (3) Why should the reader believe the instrument is measuring comprehension as opposed to memorization?

To answer the first question, it is doubtful that the reader will object to the claim that listening comprehension is vital to language teaching and language learning. What is questionable is whether a film is better analyzed from a reading or listening emphasis. To begin with, the reader must first consider the richness of the audio/visual elements inherent in film. Film is efficient, effective, and engaging. A source with the same benefits as film would require one-on-one interaction, which can be very expensive and not as readily available. The only aspect of the film-viewing experience that in any way requires reading is subtitles, something the participants in this study were not required to

use. Also, few studies have focused on listening comprehension because tests of listening comprehension do not always measure listening. This study used a novel approach to testing listening comprehension, one that employed both a multiple-choice and a transcription test. In looking at listening comprehension as opposed to reading comprehension the rich audiovisual material present in film could be explored.

In answer to the second question, the researcher believed the instrument would be testing the vocabulary specific to the film: words which the participants would be unlikely to find in their world environment over this short period of time. Any of the words they already knew would be revealed from the pre-test. The lexical items themselves came directly from the film and were chosen from the most challenging words in the frequency analysis of the film. The researcher, however, did not verify that the words chosen by frequency as probably most challenging were not verified to be the most challenging. Likewise, there was a mismatch between the glossaries in the annotations - which were based on lexical items identified by the materials developer as likely most challenging - and the low frequency words that were used in the test. This is an important concern that should be addressed in future research studies.

The answer to the final question is not difficult to determine. In designing the instrument, particularly the transcription portion, it was decided that if the participants were only required to transcribe word-for-word passages from the film itself, it would be possible for them to memorize those passages. To avoid this, only the key lexical items were identified in the film and used in the instrument. These items were rearranged into completely new passages, purely unrelated in any way to the film. In this manner, a participant—even if they did memorize major portions of the film—would in no way



have an advantage on the test. Participants could succeed only by learning the definitions of a particular word within a limited word-sense. Word sense disambiguation (WSD) is a common linguistic practice, which is a process of identifying which sense of a word is used in a sentence. In this case, the participant was required to disambiguate between the possible word senses based on the lexical item they heard in the listening passage.

#### Limitations of the Study

The research design included a pre-test and a post-test to measure the student's gain scores over the two weeks of the study, but the researcher could only account for what happened in the classroom. There is no way of knowing how the participants spent their time when they left the classroom. Some could have looked up definitions of words. They could have rented the movie and watched it again at home. There are many activities the students could have done that may have influenced the results. Although there was a control group that helped to limit the bias between groups there are other options that could be explored.

In this study, members of each of the four classes were not randomly assigned to one of the three treatment groups, illustrating the classic limitation of the assignment of intact groups to particular treatments. A better design would involve random placement of learners from each classroom into the three treatment groups so that there would be participants viewing the film with a standard player, with annotations, and others serving as a control within each classroom. To make this successful, all the classrooms would need to be equipped with the necessary materials for viewing the film. Beyond that, the class sizes would also need to be large enough to make randomization possible. Neither randomization nor a large sample size was plausible for this study; but in future studies,

these concerns could be anticipated, and the study's limitations would be decreased. The likelihood of finding positive results would also increase; or, at the very least, the results would be more reliable.

Another possible limitation was the amount of time the participants were given to view the film. Earlier, it was mentioned that attention span could be a factor (Lin, 2002; Rubin, 1994; Vogely, 1995). Many of the students complained about having to watch the film a second or third time, which is related to the student's lack of motivation and their low attention span. Implementing daily tests that focus on specific film segments would perhaps resolve the issues of motivation and attention span. Such a new design would offer the students an opportunity for a break, during which they could stop what they are doing and stretch or get a drink.

Further, participants did not possess the necessary understanding of why using annotations could improve their language proficiency and, as a result, enable them to turn a recreational film into an educational film. The annotation and standard groups were only concerned with global comprehension of the film and did not attend to word-specific detail, which would have helped them be successful on the test. Essentially the participants needed more training to become accustomed to being responsible for their own learning. In this study, the only intervention to keep learners engaged was the verbal prompts, and the number of verbal prompts required to encourage the annotation group's continual use of the annotations available to them was astounding. In fact, the classroom teacher and researcher were reminding every individual each time they passed by their workstations to use the annotations. It would have been a much better use of time and

resources to incorporate a half day of training before the study begins on the purpose of annotations and how the learners would be expected to use the software.

Now although these recommendations can target the limitations that were mentioned, it may be that an even deeper issue is at play—the subjects themselves. The adolescent mind is a challenge to understand and it may be that this age group will not show significant gains in learning outcome even given a perfect research design. A teenager's belief about themselves, positive or negative, can affect their ability to comprehend, which would limit their overall gains in comprehension (Hadley, 2001). To better understand this age-group, their thought processing, and how to best meet their needs, a more thorough questionnaire, think-aloud protocols or journal entries could be introduced. According to Rubin (2004), writing down feelings, asking questions related to the topic, writing in a journal, or keeping track of the words the participants are hearing are all excellent ways of focusing student learning. In this way, they have a specific task to accomplish—a task that is clear to them, and which will ultimately aid the learner in comprehending what is being said. Given these challenges, it might be useful to conduct the study with subjects from a different age group.

Another limitation connected to the subjects was their proficiency level in English. Since the designation “intermediate language learner” was very loose in this study, the gap in proficiency levels across learners was too large to be able to make an accurate comparison. If a stronger research design is implemented with a true intermediate group, this comparison would be more valid. In future studies a test of listening proficiency should be given to ensure all the students really are on the same

level. Feyton (1991) has made the assertion that listening skills and ability may be the greatest contributor to achievement in overall language proficiency.

In addition to the problems that arose due to the research design and the subjects that were available, the instrument used to measure listening comprehension was also a source of concern. As discussed in Chapter 4, the multiple-choice portion of the test was not reliable and would need to be improved. In addition, the transcription test could be improved as well, probably by increasing the number of words to produce or by adding fill-in the blanks items. This change could strengthen the test by making it more difficult for the participants to provide the correct words for the blanks provided. The increased difficulty would result from the fact that processing many words at one time is a challenge unless the words are truly understood by the learner. To improve the entire test, the test item analysis and the item discriminating power needs to be closer to 0.50 or 50% in terms of the item difficulty. To make these changes would require finding the new words to add to the list, testing a group of learners of the same age and proficiency level, and conducting an item analysis. After that, any test items that scored poorly could be removed and replaced with new test items, creating a final test that would be a more valid and reliable instrument than the one used for this study.

A further concern with the instrument was the way the lexical items were chosen. The use of a frequency analysis to determine what the learner knew was not a strong enough method of accounting for actual knowledge. There are too many inadequacies with relying on a generic set of word counts to predict how all learners in all situations will react. To create a more valid instrument the researcher must first considered what the learner already knows, which could be accomplished by having the learners watch the

film and be tested on their knowledge as a preliminary step to the experiment. With that question being answered, a second preliminary step would be to find out what the learners can then figure out by watching the film from context and what they can not figure out yet. The answer to these questions will allow the researcher to select the test items. The final step will then be to decide what must be done to ensure the learners will close the gap and understand what they did not first understand from context. This will lead to an update of the types of annotations and other interventions that will occur.

A final concern with the instrument occurred with how the listening passages were then created. This concern deals with the register of the listening prompts. Since the listening passages were selected from the British National Corpus (BNC), they contained British speech samples, not American. This made not only the accents difficult to understand, but the context of the passages was unrelated to the context of the American made film. This undoubtedly made understanding very challenging for the learners. In future studies it would be more helpful to create the phrases based on the researchers intuition and understanding of the language of the film, the context, accent, and other speech elements that are recognizable to the target audience.

In summary, for the proposed experimental treatment groups to make substantial gains over the standard and control groups, it is essential that a new thought process take place in the minds of the students, regardless of age or proficiency level. The feedback and observations of the researcher revealed that students do not really associate learning with watching a film. Their mindset is to enjoy what they are watching, not to focus on the specific vocabulary items they are exposed to. Due to this tendency, the students were unable to make input become intake, an element of the acquisition process that is critical

to the success of the experimental treatment implemented in this study (Van Patten, 1990). An understanding at the surface level of knowledge by the participants, that incorporates only top-down processing, will not show positive results (Wagner, 2001). Instead direct-focused learning by participants should be one of the main learning outcomes. The most effective way to ensure direct-focused learning would be to improve the research design, by testing subjects on shorter more manageable film segments every day, and by incorporating additional tasks, such as writing down words or recording thoughts in a journal. Finally, positive results can more likely occur by creating a more valid and reliable instrument for assessing gains in listening comprehension.

#### Suggestions for Future Research

Given that the value of making improvements in the research design to assess learning outcomes daily has already been discussed, it is now possible to describe a clearer picture of how a class session would be conducted. Given a similar set of circumstances, with classes lasting 80 minutes, the initial instruction and pre-testing would come first and last for 10 to 15 minutes, after which the participants would take a two-minute break. Then the students would go to their workstations and watch the selected film segment for 50 minutes, with another break in the middle of viewing to stand and stretch. The film segment they watch each day would be between 5-7 minutes, which would help ensure that the learners have plenty of time to use the annotations and review the segment multiple times. Finally, learners would be given the post-test, which would last for another 10 minutes and this test would apply only to the segment of film seen that day. This process would continue each day until gains in listening comprehension occurred.

One addition to this design would include a dual-focus for viewing the film, once for entertainment, and then for learning. This could be easily accomplished by providing the opportunity for the entire class to watch the film from the beginning to the end. This first viewing could be the entertainment portion of the experiment, allowing students the chance to enjoy the storyline, get a feeling for the characters, and see the film from a global standpoint. After that the study could proceed with the specific testing and viewing of film segments.

Also mentioned was to consider conducting the experiment with a different group of learners. The maturity of the current participants, their motivation, and the lack of training they received probably had a significant impact on the results. Essentially, what the results reveal is that the annotation group was not using the annotations. If the same study were to be done again with this age group, then at the very least the participants would need to be trained sufficiently in how to use the software. Another factor in creating motivated learners is the difficulty of the test and the film choice. The learners that are chosen for future studies need to feel that they need the help as a means of helping them deduce the meaning from just the context available in the film. Motivated learners would take greater advantage of the annotations and other tools available to them without the need for the large number of verbal prompts that were provided during the administration of the treatment in this study. Motivated learners would also be easier to train on the use of the software and the reason for direct-focused learning that can lead to improved listening comprehension. Motivated learners would perhaps be less distracted, would attend class more often, and would contribute to a more consistent and effective study. An ideal group for such a study could come from a center dedicated to the study of

foreign language at the university level, such as the English Language Center (ELC) at Brigham Young University or another similar center.

Another study that could be conducted might delve into the use of the software itself in order to find which types of annotations were used and deemed most helpful. This study dealt only with one type of annotation, definitions with pictures, but there are many other possible annotations that one could use in improving the listening comprehension of the students. Furthermore, additional research should not just be limited to vocabulary glosses, but could investigate the use of annotations that present culture. It is also not entirely clear whether or not the type of annotations used in this study had an effect because of the factors that have been presented. As a result the selection of the learners to serve as subjects as well as the experimental design must also be taken into consideration. In future studies it will be essential to investigate which type of annotations helps language learners more than others, taking into account the work that has already been done.

In addition, additional films should be included in the research that is conducted in the future, since films vary so drastically, and the actual film that is used may prove to be crucial to determining the outcome of the research. In this case, the researcher chose the film *The Sandlot* because of the nature of the secondary school audience. The film was produced for just such an audience, and so it was a good choice. However, in other areas of the world with other groups of learners, other films might be more appropriate.

One factor that this study did not explore was how watching a film with subtitles improves listening comprehension, since it would seem that the use of subtitles would be a very important part of any increase, especially within the control group. The use of



subtitles is something that many language instructors and curriculum developers do not accept, that subtitles in the native language can help improve listening comprehension. The use of a foreign language film, with all the nuances of that language, will provide an excellent model, but unless the learner comprehends the film, no language learning can occur. A future study might consider how the use of subtitles might influence the gains in listening comprehension that occur, even if those subtitles are in the native language.

With respect to the type of film used, the language in which the film is shown is also an important variable to investigate. In terms of comparing the ESL to the EFL setting, second language learners of French, Spanish, or German might find using annotations to be more helpful than those studying English as a foreign language. Fortunately, films authored with the Electronic Film Review process are being created in some of those languages and when these feature films become available for use, it will be possible to compare results across languages and according to the goals and objectives of the various language programs where they might be used.

Another possible scenario would involve a research study that incorporates schema theory, which was discussed in detail in chapter 2. A study of this nature would investigate how participants' concept of a word like "baseball" might affect their perception of the film and their understanding of the input. A study of this kind would attempt to identify what types of schema the teachers are activating and when, as well as to what extent these schemas can be changed through teacher/student interaction in order to activate them by the use of advance organizers.

Another addition to the study, which would improve the experimental design of the study and allow for the administration of a more effective experimental treatment

would be changing the way the students are prompted to use the annotations. The researcher chose to use verbal prompts, which were somewhat effective but probably not the best possible solution to the problem of creating direct-focusing learning. The EFR software has the possibility of creating computerized prompts, a technique that the designer could use to prompt the student to answer a question, write a message, or do any number of other short tasks. This would be one way of solving some of issues found in the research design of this study such as the student's lack of motivation, how often they used the annotations, and being able to specifically track the student's understanding of the film context. The software also has the capacity to prompt learners to pause the film at certain points and then to ask them if they want to replay a clip or continue. Halting the listening process in this way would force the learner to stop what they are doing, reflect, learn the words, assess their knowledge, and then move on to another clip and repeat this process.

One final suggestion for future research would be to devise a study that connects annotations and what has been done with listening comprehension to the interactionist perspective on second language acquisition introduced by Susan Gass in (Kaplan, Grabe, Swain, & Tucker, 2002). This theory considers how "learners use their environment to build their knowledge of the second language" (Kaplan et al., p.171). Another way to consider this is to recognize that input opens up the possibility of apperception, which then leads to comprehension, which in turn facilitates the transition of input to intake. Although the interactionist model deals mainly with an environment that incorporates communication with an interlocutor, the model does relate to a type of internal negotiation of meaning, one which leads the learner through a process in their mind that

is akin to the process that takes place during communication between a learner and his or her interlocutor. The exploration of this theory could reveal important insights into how learners interact with a computer as compared to a real person, which is a more effective way of learning a foreign language but which is not always available to students in the classroom.

### Conclusions

There are several conclusions that can be drawn from and build on what has been discovered in this research. Despite its lack of statistically significant results, the study provides a framework for other studies that can address the challenges that have been raised. It is important to start somewhere, find out what there is to be learned, make important changes that strengthen the research design, and then pursue further research. It is clear that language learners enjoy watching films in the way described in this study and that watching films in the classroom can be an effective instructional tool. It is also clear that the functionality associated with the annotations made available by the EFR software has merit and requires further testing. With this study, as with all experiments, it is the process and not necessarily the end result that provides maximum understanding and insight to the field.

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## Appendix A: Research Consent Forms

### **Research Consent form - Parent**

#### **Introduction**

This research study is being conducted by Dr. Alan Melby and Ryan Rocque, a professor and graduate student in the Linguistics Department at Brigham Young University. The purpose is to evaluate the effectiveness of using technology (DVDs and computers) in the language learning process. Your son/daughter is being invited to participate because he/she is currently taking an intermediate ESL class.

#### **Procedures**

For the study, your son/daughter will view the film "*The Sandlot*" (rated PG) multiple times using either a normal DVD-ROM drive or an Electronic Film Review software program in his/her ESL class. Your son/daughter will take a multiple-choice listening pre- and post-test. This study will take four hours and twenty minutes to complete. Five class periods will be devoted to this research study, for about 85 minutes per class. During part of the study those students who elect to participate will be video-taped to see how they use the various parts of the software. Your son/daughter can participate in the study, but choose not to be video-taped. They will simply need to make the researcher aware of this fact by not checking the box on their permission form.

#### **Risks/Discomforts**

There are minimal risks in this study. During the study some of the students will be filmed to assess the students' use of the various educational tools available to them. Any video footage that is taken is only used for clarifying the research. After three years this material will be destroyed.

#### **Benefits**

We hope your child's language learning will be enhanced by this video activity.

#### **Confidentiality**

The only people with access to your child's tests are Dr. Melby, Ryan Rocque, and your child's teacher. The results of these tests may be used by the researchers in a presentation or publication. Names of participants will not be used in the study, or in any presentation or publication regarding it.

#### **Participation**

Participation in this study is voluntary. If you do decide to allow your son/daughter to participate in this research, you will be asked to sign this consent form and return it to your son's/daughter's teacher. Your child has the right to withdraw at anytime or refuse to participate entirely without that decision affecting your son's/daughter's grade. If your son/daughter withdraws from the study, they can still watch the film and participate with the class. However, their information will not be used for the research study, and their data will not be included in the analysis.

**Questions about the Research**

If you have questions regarding this study or concerns about any aspect of your participation in this study, you may contact Dr. Alan Melby, at 422-2144, email [akmtt@byu.edu](mailto:akmtt@byu.edu), or visit his office at 4051 JFSB Provo, Utah.

**Questions about your Rights as Research Participants**

If you have any questions regarding your rights as a participant in a research project that you do not feel comfortable asking the researcher, you may contact Christopher Dromey, PhD, IRB Chair, 422-6461, 133 TLRB, Brigham Young University, Provo, UT 84602, [christopher\\_dromey@byu.edu](mailto:christopher_dromey@byu.edu).

I have read and understood the information about this research study and have had the opportunity to ask questions. I understand that my participation in this study is voluntary and I feel free to withdraw at any time, without giving a reason. I allow the results of my son's/daughters pre- and post-test scores to be used in publication or presentation by the researcher. I have received a copy of the above consent and desire of my own free will and volition to allow my son/daughter to participate in this study.

Parent Name: \_\_\_\_\_

Parent Signature: \_\_\_\_\_ Date: \_\_\_\_\_



### Research Consent form – Student

My name is Ryan Rocque. I am a teacher and student at Brigham Young University. I am studying for my master's degree in foreign language education. I want to see how teachers can better use film in the classroom.

As part of your regular ESL class you are going to watch the film, *The Sandlot*. This will happen for five different class periods. Some other schools will not watch the film; you will just take a test. This test will show if the way the film is shown has any difference on the final test score. You will also be video-taped if you check the box on this form. The video will help to see if you are using the tools on the computer to improve your English.

Your participation is voluntary. You don't have to participate. Your ESL grade will not be affected either way.

And, if you are in the group that did not watch the film, you will have a chance to do that later, after the tests are over.

If you want to participate, just sign this form.

Thank you,

Ryan Rocque

Student's Name: \_\_\_\_\_ Date: \_\_\_\_\_

Student's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

By checking I agree to be video-taped during this research study.

## Appendix B: Listening Comprehension Test Phrases

1. He says that he was suffering some shock as a result of the road **accident** and er he didn't appreciate what the officer was saying to him at the time.
2. There is **lots** of books that I've got, either the father or the brother cleaning, and it's not just the mother and the daughter.
3. Right, so, it wasn't your **fault** that they were away was it? So did you do the survey?
4. Matt was really off on Friday because he'd been up so late. Yeah, and I think that rather **ruined** the whole afternoon. He was just so tired.
5. Just remember play safe, someone you don't know is a **stranger** yeah? Now I've frightened you all, have a nice holiday.
6. When I came to Harlow I was stuck by what a lovely **neat** town it was then but there were absolutely no posters anywhere in Harlow.
7. For one thing there is a law that says it's illegal to sell **tobacco** to children under sixteen.
8. The important thing was that it go forward only with the element of **surprise**. Unfortunately this was lost and the operation still went forward.
9. Whether the knuckles were **hurt** or it was just a minor cut in the palm of the hand there, that would do and you can use the same type of bandage on the foot alright.
10. Oh look Mr. my sole of my shoe's come loose. Oh take it off and he would **stick** a couple of nails in.
11. Don't be sad if you and her don't get along quite yet. It takes time to **warm up to** her way of doing things.
12. Socially and psychologically women are brought up to care for relationships, to care for people, they want to do it well, where it goes wrong they tend to **blame** themselves.
13. I mean if you want to play you play it! If you don't, fair enough you can have all the **sports** you want! Are there good opportunities for women to play football if they want to? Of course.
14. Right, yeah. I'm always **worried** that his enthusiasm is stretched to the limit

15. She made a point of getting down on her **knees** and talking to the patient personally!
16. I think that as **professional** drivers we would all look at that and laugh.
17. Yeah. But, you know about the stories you hear. Yeah. I've never actually seen one. No. They're **ugly** looking fish aren't they? Bloody horrible fish!
18. Oh yes, there were no nonsense, I mean you wouldn't **dare** answer the teacher back like they did now and call them by their first names.
19. You stay there in case make sure they're **safe**, there's nothing there that can hurt them, then they'll probably get up at the end
20. If you got in **trouble** at school, you got in trouble at home. No if and buts..
21. When Ned lifted all that out it was black with **rotten** mould! Apparently, the man hadn't grouted the tiles in properly and it was ghastly.
22. I was expecting a **slow** start and we've had a fairly slow start, but you know I'm not worried by that at all.
23. You got it right and you stuck to your guns and because I put a little doubt in your mind you changed. If you don't know don't **guess**, if you're certain, say it.
24. They will know if they need to take it or not, get them with the fresh **air** and let them take up their own position which is usually leaning forward so that it expands their lungs.
25. What did he have on his head? Yes? He had a helmet called a hard **hat**. Does anybody know why? Yes? Cos something might fall on his head.
26. At the moment we have old and **dirty** trains which are expensive to use, with many rural towns without a railway at all through years and years of under funding.
27. Were they paid just for **tying** the boats up or for bringing them up the estuary as well? No, just for tying the boats up.
28. You get your lump of metal and you stretch it you sort of pull it through a die, through a tiny **hole** and you just stretch it.
29. And they are they are very **grateful** for the service that we provide, which comes about because of our use of quality systems
30. About Thursday. Yeah, there's London. Eight **o'clock** in the morning.

31. Not, they weren't members of ours and they weren't skilled in the trade, but **hey** were just people who were prepared to work any way and scrambled through as best they could.
32. Those parental forces which were indeed watching over us and guarding us while we were young, still do so in **adult** life.
33. If you pick up the **phone** and ring to get seats here you will very often find that you can't get through.
34. You could be fooled into thinking that there's nothing wrong with the baby, then there'll also be swelling of the hands, feet and the eyelids might **swell** up.

## Appendix C: Listening Comprehension Pre-Test

Num. \_\_\_\_\_

Pre Test

## Part I: Transcription

*You will hear ten phrases spoken aloud. After hearing the phrases spoken aloud, fill in the blanks for the corresponding words on your answer sheet. You will hear each phrase twice.*

2. He says that he was suffering some \_\_\_\_\_ as a result of the road \_\_\_\_\_ and he didn't appreciate what the \_\_\_\_\_ was saying to him at the \_\_\_\_\_.
3. There is \_\_\_\_\_ of books that I've got, either the \_\_\_\_\_ or the brother \_\_\_\_\_, and it's not just the \_\_\_\_\_ and the daughter.
4. Right, so, it wasn't your \_\_\_\_\_ that they were \_\_\_\_\_ was it? \_\_\_\_\_ do you do the \_\_\_\_\_?
5. Matt was really off on \_\_\_\_\_ because he'd been up so \_\_\_\_\_. Yeah, I really think that \_\_\_\_\_ the whole afternoon. He was just so \_\_\_\_\_.
6. \_\_\_\_\_ remember play safe, someone you don't \_\_\_\_\_ is a \_\_\_\_\_, yeah? Now I've frightened you all. Have a nice \_\_\_\_\_.
7. When I \_\_\_\_\_ to Harlow I was stuck by what a lovely \_\_\_\_\_ town it was then, but there \_\_\_\_\_ absolutely no \_\_\_\_\_ anywhere in Harlow.
8. For one \_\_\_\_\_, there is a law that says it's \_\_\_\_\_ to sell \_\_\_\_\_ to children under \_\_\_\_\_.

9. The \_\_\_\_\_ thing was that it go forward \_\_\_\_\_ with the element of \_\_\_\_\_ . Unfortunately, this was lost and the \_\_\_\_\_ still went forward.
10. Whether the knuckles were \_\_\_\_\_ or it was just a minor \_\_\_\_\_ in the palm of the hand there, that would do and you can use the same \_\_\_\_\_ of bandage on the \_\_\_\_\_ alright.
11. Oh look mister, the sole of my \_\_\_\_\_ came loose. Oh, take it \_\_\_\_\_ and \_\_\_\_\_ a couple of \_\_\_\_\_ in it.

Part II: Multiple Choice.

*You will hear twenty-four phrases spoken aloud. After hearing the phrases spoken aloud, choose the best response on your answer sheet. You will hear each phrase twice. If you do not know the meaning of a word, mark **E**, don't know.*

12. What is the best meaning of the word **warm up to** in this sentence?
- to get warm
  - to get to know
  - to loosen up
  - to tune-up
  - I don't know
13. What is the best meaning of the word **blame** in this sentence?
- to find fault with
  - to boast
  - to be kind
  - to be mean
  - I don't know
14. What is the best meaning of the word **sports** in this sentence?
- teams
  - loyalty
  - word play
  - athletics
  - I don't know

15. What is the best meaning of the word **worried** in this sentence?
- disturb your peace
  - to rub constantly
  - to really care about
  - to be overjoyed
  - I don't know
16. What is the best meaning of the word **knees** in this sentence?
- part of pants
  - joint of human leg
  - humble
  - religious
  - I don't know
17. What is the best meaning of the word **professional** in this sentence?
- good dresser
  - an athlete who plays for money
  - an authority figure
  - a person doing their job
  - I don't know
18. What is the best meaning of the word **ugly** in this sentence?
- unattractive
  - unworthy
  - evil
  - angry
  - I don't know
19. What is the best meaning of the word **dare** in this sentence?
- make fun of
  - choose
  - have the courage
  - bet
  - I don't know
20. What is the best meaning of the word **safe** in this sentence?
- protected
  - dangerous
  - friendly
  - smart
  - I don't know
21. What is the best meaning of the word **trouble** in this sentence?
- a good choice
  - a difficulty
  - a line
  - a habit
  - I don't know

22. What is the best meaning of the word **rotten** in this sentence?
- destroyed
  - disappearing
  - dirty
  - decaying
  - I don't know
23. What is the best meaning of the word **slow** in this sentence?
- not smart
  - tired
  - not fast
  - keep time
  - I don't know
24. What is the best meaning of the word **guess** in this sentence?
- to think
  - to be unsure
  - to decide
  - to hypothesize
  - I don't know
25. What is the best meaning of the word **air** in this sentence?
- something you breathe
  - a bad attitude
  - something needed for flying
  - music
  - I don't know
26. What is the best meaning of the word **hat** in this sentence?
- a piece of cloth
  - something fashionable
  - something for protection
  - personality
  - I don't know
27. What is the best meaning of the word **dirty** in this sentence?
- immoral
  - broken
  - not clean
  - dark
  - I don't know
28. What is the best meaning of the word **tying** in this sentence?
- to bind
  - to limit
  - to unlink
  - to expose
  - I don't know



29. What is the best meaning of the word **hole** in this sentence?
- a tear
  - a fault
  - an opening
  - a dot
  - I don't know
30. What is the best meaning of the word **grateful** in this sentence?
- being nice
  - giving
  - comfortable
  - thankful
  - I don't know
31. What is the best meaning of the word **o'clock** in this sentence?
- a watch
  - time
  - morning
  - minutes
  - I don't know
32. What is the best meaning of the word **hey** in this sentence?
- another word for hi
  - welcome
  - how are you
  - goodbye
  - I don't know
33. What is the best meaning of the word **adult** in this sentence?
- tall
  - mature
  - grown up
  - parent
  - I don't know
34. What is the best meaning of the word **phone** in this sentence?
- linguistic unit
  - to call
  - telephone
  - sound
  - I don't know
35. What is the best meaning of the word **swell** in this sentence?
- arrogant
  - increase in size
  - grow up
  - smash
  - I don't know

THANK YOU FOR YOUR TIME.

## Appendix D: Research Questionnaire

Num. \_\_\_\_\_

**Research Questionnaire**

- |  |           |
|--|-----------|
| 1. Have you EVER previously seen the film <i>The Sandlot</i> ?     | Yes or No |
| 2. What year did you arrive in the United States?                  | _____.    |
| 3. What is the native language spoken at home?                     | _____.    |
| 4. What is your race?  | _____.    |
| 5. What grade level are you in at school?                          | _____.    |
| 6. What is your age?   | _____.    |
| 7. How many years have you studied English in school?              | _____.    |
| 8. At what age did you first start speaking English?               | _____.    |
| 9. What percentage of time is English spoken at home?              | _____.    |
| 10. What percentage of time do you speak English outside of class? | _____.    |
| 11. Besides English, what other language(s) do you speak?          | _____.    |

THANK YOU FOR YOUR TIME.

## Appendix E: Complete Summary of Subjects from the Questionnaire

Group	Student			Previously	L1	Years of	Years
	Number	Age	sex	Seen Film		English	in U.S.
Annotation	1	12	male	yes	Spanish	7	5
Annotation	2	13	male	no	Korean	1.4	1.4
Annotation	3	12	female	no	Spanish	7	10
Annotation	4	12	male	no	Spanish	7	7
Annotation	5	13	male	no	Chinese	3	4
Annotation	6	12	female	yes	Spanish	7	7
Annotation	7	12	female	no	Spanish	2	2
Annotation	8	12	male	no	Spanish	5	5
Annotation	9	12	male	no	Spanish	4	4
Control	10	13	female	no	Spanish	2	2.5
Control	11	12	male	no	Spanish	5	5
Control	12	13	male	no	Spanish	3	3
Control	13	13	female	no	Spanish	2	2
Control	14	15	female	no	Portuguese	0.4	0.4
Control	15	14	female	no	Spanish	3	1
Control	16	14	female	no	Spanish	1	1
Control	17	13	male	no	Spanish	3	3
Control	18	14	male	no	Spanish	1.5	1.1
Control	19	12	male	no	Spanish	1	4
Control	20	13	male	no	Japanese	3	1

Control	21	13	male	no	Spanish	9	13
Control	22	12	female	no	Spanish	2	2
Standard	23	15	female	no	Japanese	4	2
Standard	24	17	female	no	Spanish	1	0.2
Standard	25	14	male	no	Cantonese	5	0.2
Standard	26	16	female	yes	Spanish	3	3
Standard	27	17	male	yes	Korean	8	0.5
Standard	28	17	female	no	Spanish	5	0.4
Standard	29	14	male	no	Spanish	3	3
Standard	30	14	male	yes	Spanish	1	3
Standard	31	16	male	no	Korean	4	0.2
Standard	32	15	male	no	Korean	3	0.6
Standard	33	16	male	no	Spanish	1	1
Standard	34	17	male	no	Japanese	5	1.5
Standard	35	16	female	yes	Korean	11	0.5
Standard	36	16	male	no	Spanish	0.5	0.5
Standard	37	16	male	yes	Spanish	6	7

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## Appendix F: Item Analysis for Listening Comprehension Test

Item Number	Word	Item Difficulty	Discriminating Power
Q1	shock	63%	0.25
Q2	accident	81%	0.375
Q3	officer	88%	0.0
Q4	time	88%	0.25
Q5	lots	75%	0.25
Q6	father	81%	0.375
Q7	cleaning	69%	0.125
Q8	mother	81%	0.375
Q9	fault	69%	0.625
Q10	away	63%	0.5
Q11	so	75%	0.5
Q12	survey	81%	0.375
Q13	Friday	100%	0.0
Q14	late	88%	0.25
Q15	ruined	50%	0.5
Q16	tired	88%	0.25
Q17	just	94%	0.125
Q18	know	69%	0.625
Q19	stranger	69%	0.625
Q20	holiday	100%	0.0
Q21	came	81%	0.125

Q22	neat	44%	0.625
Q23	were	63%	0.0
Q24	posters	81%	0.375
Q25	thing	100%	0.0
Q26	illegal	50%	0.5
Q27	tobacco	88%	0.25
Q28	sixteen	100%	0.0
Q29	important	81%	0.375
Q30	only	75%	0.5
Q31	surprise	69%	0.625
Q32	operation	81%	0.375
Q33	hurt	69%	0.625
Q34	cut	88%	0.25
Q35	type	69%	0.625
Q36	foot	69%	0.625
Q37	shoe	63%	0.5
Q38	off	94%	0.125
Q39	stick	75%	0.25
Q40	nails	50%	0.5
Q41	warm up to	69%	0.375
Q42	blame	63%	0.75
Q43	sports	69%	0.375
Q44	worried	81%	0.375

Q45	knees	63%	0.25
Q46	professional	69%	0.375
Q47	ugly	81%	0.125
Q48	dare	56%	0.625
Q49	safe	75%	0.5
Q50	trouble	69%	-0.13
Q51	rotten	6%	0.125
Q52	slow	44%	0.375
Q53	guess	56%	0.125
Q54	air	56%	0.125
Q55	hat	69%	0.375
Q56	dirty	56%	0.125
Q57	tying	56%	0.125
Q58	hole	63%	0.25
Q59	grateful	56%	0.625
Q60	o'clock	88%	0
Q61	hey	75%	0.25
Q62	adult	56%	0.375
Q63	phone	44%	0.125
Q64	swell	56%	0.125

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