Can Strategy Instruction Improve Listening Comprehension?

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ABSTRACT This paper is a report of a classroom-based, longitudinal study of the effect of learner strategy instruction on listening comprehension. The subjects were students enrolled in a required third-year Russian language course at a university. The listening materials consisted of video segments from simulated authentic materials developed for learners of Russian, segments from Russian television, and movies. The hypothesis that systematic instruction in the use of strategies will result in the improvement of listening comprehension was confirmed.

Introduction

Listening comprehension has emerged as an important and distinct second/foreign language skill (Byrnes 1984; Dunkel 1991; Joiner 1991; Krashen 1981) leading teachers to look for ways to facilitate improvement of learner performance in this skill.

A recent review of second language listening comprehension research (Rubin 1994) identified five major factors that affect listening comprehension: text characteristics, interlocutor characteristics, task characteristics, listener characteristics, and process characteristics. This paper reports on a classroom-based longitudinal experiment that considered process characteristics, namely, the effect of strategy instruction on improvement in second language listening performance.

All recent studies describe listening as an active process in which listeners select and interpret information that comes from auditory and visual clues in order to define what is going on and what the speakers are trying to express (Clark and Clark 1977; Mendelsohn 1995; Richards 1983). The challenge for second/foreign language teachers is to facilitate this process of attending and interpreting by helping learners use their knowledge of the world and language, in processing information through listening. David Mendelsohn (1995, 133) argues that the task of language teachers is to teach students how to listen by using strategies that will lead to better comprehension, rather than merely give students an opportunity to listen. The purpose of this study is to add to our understanding of the process whereby teachers can facilitate the second/foreign language (hereafter L2/FL) listening process.

Research on Listening Strategies

Studies of the listening strategies of successful language learners have identified a number of cognitive and metacognitive strategies that L2/FL listeners use (DeFillipis 1980; Laviosa 1991a and 1991b; Murphy 1985; O'Malley, Chamot, and Küpper 1989; Rost and Ross 1991; Vandergrift 1992). Cognitive strategies are behaviors, techniques, or actions used by learners to facilitate acquisition of knowledge or a skill (Derry and Murphy 1986; Rubin 1987). These strategies arise as responses to specific processing problems that learners encounter. Metacognitive strategies are management techniques by which learners control their learning process via planning, monitoring, evaluating, and modifying their learning approaches (Rubin 1990).
The list of cognitive strategies used in listening identified by the above studies includes elaborating, inferencing, predicting, listening to the known (cognates, transfer, grammar), and visualization (when input is auditory only). Metacognitive operations used by successful language learners include open and flexible use of strategies (Murphy 1985) and self-monitoring (O'Malley, Chamot, and Küpper 1989).

Second language researchers have also noted that the difference between expert and novice learners is not just in the array of strategies used, but rather in the manner in which learners use self-management (metacognitive strategies) to define tasks and select and evaluate the effectiveness of their strategies (Abraham and Vann 1987; Vann and Abraham 1990; Chamot and O'Malley, 1994; Laviosa 1991a). Laviosa notes: "The efficiency or inefficiency of any particular strategy employed appears to depend not only on the subjects' L2 knowledge, but mainly on individual differences in perceiving the problems and on their ability to employ strategies and orchestrate the use of a variety of strategies" (109).

Research in L2/FL listening has also revealed that effective use of strategies depends on many factors, among them proficiency level, task definition, and background knowledge (Rubin 1994). Illustrative of the complex interplay among these variables are the findings of Laviosa, who identified five different learner profiles for successful advanced learners of Italian. For example, one learner listened repeatedly until the sounds separated themselves into meaningful connections. Another looked for key words. Choice of strategy appeared dependent on many variables: ability to perceive and decode words, identification of important meanings, and flexibility in establishing the relationship between word meaning and main idea.

Cognitive theory research for subject matter other than language has shown that when learners combine cognitive and metacognitive strategies, they not only learn more but can also transfer strategies from task to task, and continue to use the strategies over time (Brown and Palincsar 1982).

Ample evidence links strategy instruction to improved performance (for subjects other than language, see review by Derry and Murphy 1986). In foreign and second language learning, strategy instruction has been linked to improved vocabulary acquisition (Cohen and Aphek 1988), speaking (O'Malley 1987), and reading (Hosenfeld, Arnold, Kirchofer, Laciura, and Wilson 1981).

Only two L2/FL studies have attempted to instruct students in the use of listening strategies. The first experiment, reported by O'Malley (1987), taught one group of intermediate-level high school ESL students both a metacognitive and a cognitive strategy, and the other group only a cognitive strategy. A control group was not taught any strategies at all. Instruction was very short and took place over a two-week period for a total of approximately 1 hour and 45 minutes. The results indicated that while the two strategy groups performed significantly better on some of the daily tests, their posttest scores approached but failed to reach significance. The reasons suggested for these results were that the amount of instruction was insufficient for the strategies to become automatic, and the posttest video was probably too difficult and not particularly interesting for students who had little background knowledge about the topics presented. Further, O'Malley suggested that learners might have done better if they had been given more opportunity to manage the learning process by being allowed to select the strategy they would use.

A second experiment (Rubin, Quinn, and Enos 1988) considered the most appropriate type of listening strategy instruction while using video. Three types of strategy instruction, following the work of Brown and Palincsar (1982), were provided to English-speaking high school students in second-year Spanish. There were three experimental groups that were exposed to three different teaching strategies. In the first (blind) condition, learners were not given the names of the strategies or told about their usefulness. In the second (informed) condition, learners were given the
name of the strategies and told about their usefulness. In the third (self-control) condition, learners were given the names of the strategies, told about their usefulness, and also given an opportunity to compare the usefulness of strategies with different kinds of texts and tasks. In addition, there were two control groups. The first control group saw all the videos but received no strategy instruction. The second control group did not see any of the videos nor receive any strategy instruction. Students were taught three cognitive strategies: prediction/verification, cognates, and storyline. Each strategy was taught four times on four separate days. Performance was measured by daily quizzes and by pre- and posttests. Although this experiment demonstrated no difference due to type of instruction, some of the strategy training was nonetheless effective. All three experimental groups representing the three conditions described above outperformed the control group on one of the four days. The experimenters attributed this to the fact that on that day, students viewed the hardest video, which required use of strategies. On the other three days, the videos were not difficult enough to require use of strategies.

The Rubin, Quinn, and Enos study points to the critical role that teacher orientation and development of expertise in learner strategies plays in facilitating student ability to use learner strategies. Rubin, Quinn, and Enos also note the importance of teacher commitment to a strategic approach to teaching. These conclusions are corroborated by the work of Chamot and her associates (see, for example, Chamot et al. 1993). Researchers also note that for strategy instruction to be effective, it must be implemented gradually over an extended period of time (O'Malley 1987; Chamot et al. 1993).

A major conclusion of this experiment was that use of video significantly enhanced listening for the experimental and one of the control groups. Subjects exposed to video during the entire experiment had a 50 percent improvement in listening comprehension as compared to 32 percent improvement for subjects who were exposed to the video only during the pre- and posttests. Another finding of this research was that extensive teacher training in strategy instruction is critical in any learner strategy instruction and in experiments assessing the effect of such instruction.

The review of research on listening strategies presents strong evidence for the effective use of cognitive and metacognitive strategies by expert listeners. In addition, it shows that the use of video in listening comprehension facilitates information processing. Finally, it presents evidence that teacher familiarity with strategies and ability to impart strategy instruction is an important variable. What is missing, however, is a strong demonstration of a positive relationship between strategy instruction and learner performance on listening tasks.

Purpose of this Experiment

To test the hypothesis that systematic instruction in the use of a range of cognitive and metacognitive strategies will result in improvement of listening comprehension, we designed and carried out a classroom-based longitudinal study. The study focused on the effect of both cognitive and metacognitive strategy instruction on listening comprehension performance in Russian, bearing in mind the critical importance of teacher familiarity with learner strategies and the importance of video in listening comprehension.

Research Design

Subjects

Our subjects were students enrolled in a required third-year Russian language course at The George Washington University whose speaking ability was in the ACTFL Novice High-Intermediate Low range at the beginning of the year. These students were exposed to spoken Russian mostly through teacher talk and through taped dialogues associated with their textbook and had no prior experience with authentic Russian in one-way listening situations. Because we recognized that Russian enrollments tend to be relatively small, we decided
to use students from two academic years as cohort. Two intact sections of third-year Russian participated in the study during the fall of 1991 and spring of 1992. Unfortunately, in the fall of 1992 there were not enough third-year students to form two sections. After conferring with our statistician, we decided to use the 1992-93 cohort as another experimental group. To control for the amount of exposure to spoken Russian, we excluded students who failed to complete both semesters of video instruction, who had spent a semester or more in Russia, and who spoke Russian or other Slavic languages at home. Our two cohorts are described in Table 1 (see page 339).

**Treatment**

There were two sections: an experimental group (strategy instruction) and a control group (no strategy instruction). Students who signed up for third-year Russian in 1991-92 were randomly assigned to one of the two groups. They were told that we were looking for ways to improve their listening comprehension in Russian, but they were not told that the two groups were receiving different kinds of listening instruction. Both groups met three times a week in 50-minute classes, used the same course materials, and followed the same syllabus. During the entire two years, the experimental group was taught by one of the experimenters who has extensive experience in strategy-based instruction, while during the first year the control group was taught by another instructor who had no familiarity with strategy-based instruction. The experimental and control groups viewed the same videos in the same sequence and spent approximately the same amount of time (20 minutes on the average) on each of the 45 video segments. Thus, both groups received approximately 15 hours of video instruction in an academic year. However, different lesson plans were prepared for the two sections. The lesson plans for the experimental section focused on developing listening strategies, while the plans for the control group concentrated on using the content of the videos as a basis for speaking and writing activities. Table 2 (see page 340) shows how strategies were taught in the experimental group and how the video materials were presented to the control group.

**Measures of Listening Comprehension**

Prior to the beginning of video instruction in the fall semester, students were given two pretests of listening comprehension (a video comprehension test and an audio comprehension test). The same two tests were used at the end of the following spring semester.

The video comprehension test was developed especially for this study since no standardized listening tests based on video exist. The test contained 29 open-ended and guided-recall questions about segments representing the genres that were used in strategy instruction. The test consisted of four parts: 1. A simple news segment; 2. An interview; 3. A drama; 4. A more difficult news segment. These segments reflected the three kinds of texts included in the subsequent listening strategy instruction. The maximum score was 36 points. Gain scores, i.e., the difference between pretest and posttest scores, served as one of the measures of improvement in listening comprehension.

As an additional measure, we also used the listening portion of the Comprehensive Russian Proficiency Test (Educational Testing Service 1990), a standardized test designed for ACTFL Novice and Intermediate level listeners, consisting of 22 multiple-choice questions based on simulated-authentic and authentic audio segments. The maximum score was 22 points. Gain scores, i.e., the difference between pretest and posttest scores, served as another measure of improvement.

**Video Segments Used in Strategy Instruction**

We used video rather than audio as input for promoting the use of listening strategies because TV-generation students often find video more interesting, challenging, and motivating than audio recordings and because video allows for the use of a wider range of strategies than audio. During the first year of
the study (1991-92), we selected several hundred segments from simulated authentic materials developed for learners of Russian, as well as segments from authentic materials recorded from SCOLA broadcasts, Russian television, and movies. We decided to use the simulated-authentic materials as a bridge between the simplified materials that the students were exposed to during their first two years of Russian, and authentic television and movie materials. In this way, we wanted to take some pressure off the participants and allow them to experience some success in a skill area that was new to them.

We piloted various types of segments in a third-year Russian class in AY 1990-91 to determine the optimum length, the appropriate level of difficulty, and the types of activities that would be suitable for teaching listening comprehension strategies. From this initial bank of segments, we selected 45 clips for use in our study. Our general criteria for selecting video segments were the following:

**Length.** Pilots of videos of varying lengths showed that segments longer than 2.5 minutes were too long for students at this level of Russian. Students commented that they could not maintain full concentration when viewing such long segments, particularly those that involved "talking heads." The optimal length appeared to be in the range of 30 seconds to two minutes, depending to some extent on the segment. For instance, students could follow longer dramatic segments than news reports.

**Difficulty.** While it was not always possible to predict the difficulty level of the segments, pilots led us to consider background knowledge, such as prior familiarity with topic and/or situation, presence of relevant visual and other clues, presence of auditorily recognizable cognates and familiar words and phrases, clarity and speed of speech, familiarity of dialect, and background noise.

**Genre.** Joiner (1990) proposed a number of criteria for selecting videos, among them differences in genre. For purposes of our study, we wanted to consider how three common video genres affect strategy choice. These three genres represented a continuum from written language delivered orally, at one extreme, to conversational language, at the other extreme (Chafe 1985; Tannen 1982, 1985). The three genres were news reports, interviews, and dramas.

Pilots showed that segments containing interactional encounters and conversational language, such as movie scenes, were easier than passages with little or no interaction, such as news reports. Based on these criteria, we selected four different types of video materials. Their main features are presented in Table 3 (see page 341).

### Strategies Taught

Our selection of strategies took into account research findings on the need for instruction in both cognitive and metacognitive strategies, the specific strategies that successful learners reported using, and the relation between strategy use and text type. The range of strategies taught included the following:

#### Metacognitive Strategies

a. **Planning.** e.g., deciding how many times to view a particular segment, whether to view it with the sound on or off, determining how to break up the segment into manageable portions.

b. **Defining goals.** e.g., deciding what exactly to listen for, determining how much needs to be understood.

c. **Monitoring.** e.g., assessing one's comprehension, identifying sources of difficulty, isolating problematic portions.

d. **Evaluating.** e.g., assessing the effectiveness of strategies used.

#### Cognitive Strategies

a. **Predicting content** based on visual clues, background knowledge, genre of the segment, information from the clip itself, logic of the story line, actions, and relationships.

b. **Listening to the known.** e.g., cognates, familiar or partially familiar words and phrases.

c. **Listening for redundancies.** e.g., repeated words and phrases.

d. **Listening to tone of voice and intonation.**

e. **Resourcing.** e.g., jotting down words and
phrases to find out what they mean, or searching for background information.

In addition, we taught special cognitive strategies for each genre:

1. **Drama**—focus on the story line.
2. **Interview**—attention to the question-and-answer sequence.
3. **News**—consideration of **who**, **what**, **where**, **when**, and **how**.

### Results

The hypothesis that systematic instruction in the use of cognitive and metacognitive strategies will result in the improvement of listening comprehension was confirmed. Students who received strategy instruction improved significantly (chi-square 5.5, *p* < 0.05) over those who did not receive such instruction on the video test. Table 4 (see page 342) shows that at least twice as many students in the experimental group showed at least a ten-percent improvement on the video comprehension posttest as those in the control group.

Table 5 (see page 342) shows that on the audio test the difference between the two groups in terms of percentage of students in the two groups who showed improvement failed to reach significance (chi-square 3.35, *p* = 0.067).

Given the small size of the sample, the threat of making a Type II error (failing to reject the null hypothesis when it is actually false) was great. Therefore, we used a *t* test to determine the effect size of group differences. Results showed that the difference between pretest and posttest video comprehension scores was 0.44. According to Cohen (1988), this is a medium-size effect.

Periodic written comments from the students regarding strategies they used while they were working on listening tasks, showed that they learned to manage their approach to listening through the use of metacognitive strategies.

For instance, they were able to give the reasons why they had decided to watch a particular video with the sound off. In some cases, students indicated that they elected to first watch a segment with the sound off in order to get a general idea of what it was about from the visual clues alone. In other cases, students reported that turning the picture off was helpful when listening to some of the news for the second time because the visuals were distracting.

Among other metacognitive strategies reported by the students was the ability to determine whether they wanted to listen to a passage again, and to state what precisely they were looking for in a replay.

Finally, there is evidence that, with improved self-efficacy, students' confidence in their ability to listen to authentic Russian was greatly enhanced. The clearest indication was the fact that four of the students felt bold enough to start watching Russian movies on their own.

### Discussion

The medium-size effect derived from the *t*-test provides confirmation that strategy instruction resulted in improved performance on the video test. However, some consideration should be given to the reasons why the results of strategy instruction were significant in the case of video but not significant in the case of audio. For the purposes of this experiment, the ETS audio test had several major limitations. First of all, it should be recognized that the audio test did not parallel the type of instruction given. Throughout the strategy training period, learners were instructed to use the visual information contained in the videos to facilitate their listening comprehension; however, this processing support was missing in the audio test. Secondly, many of the items in the ETS audio test were not directly related to the genres that we taught. Finally, over 10 percent of students scored at least 80 percent correct on the pretest, leaving little room for improvement.

Finally, some consideration should be given to the reasons why the gain scores on the video comprehension test were relatively modest. It is important to note that students showed little improvement on two of the test.
segments (the interview and the more complex news segment) because they were too many levels above their level of listening comprehension. Fifteen hours of exposure to authentic video and learner strategy instruction were not sufficient to ensure such a large improvement. It may well be that learners may need an initially higher threshold of listening comprehension in order to benefit from listening strategy instruction dealing with certain kinds of texts, such as interviews and news that are not visually reinforced (Shohamy and Inbar 1991).

Conclusions
This study used one experimental and one control teacher in real classrooms with authentic video material to consider whether teaching cognitive and metacognitive strategies would improve listening comprehension. Despite the size of the sample, the difficulty of the Russian language, and the relatively short length of training, one dependent measure (video test) showed a significant advantage of the experimental over the control group. A second dependent measure (audio test) did not reach significance. The experiment is the first longitudinal, classroom-based strategy instruction for listening that demonstrates the positive effect of such training. Even though improvement in listening comprehension is a slow process, results on the video test lead us to believe that learners can benefit from instruction that facilitates appropriate use of strategies in listening.

More research is needed to validate these results. It should consider other languages, include larger samples, more time, and teachers who are well-equipped to conduct instruction in noninteractive listening strategy. Furthermore, video tests should be based on a better match between the students' current level of listening comprehension and the level of oral texts and tasks they are required to perform with these texts. For intermediate learners, this means more segments with an episodic structure and segments in which there is a good amount of visual support as well as a reasonable assumption that they possess the appropriate background knowledge. Finally, strategy instruction should take place over longer periods of instruction. In addition, more time should be dedicated to listening both in and outside of language classrooms, with emphasis on the process of listening rather than on merely providing opportunities to listen or on testing of listening comprehension.

NOTES
1 Elaborating strategy means using prior cultural and/or world knowledge to process information; inferring strategy refers to detecting relationships among units of information that are not presented explicitly in the text; predicting strategy refers to making assumptions about what is likely to come next; listening to the known means attending to familiar vocabulary and grammar to process a text; visualization strategy refers to forming a visual representation of what is being said; and self-monitoring strategy means noticing the extent of one's comprehension while listening.

2 Each student was given a number taken from the table of random numbers. The numbers were written on slips of paper that were folded and placed in a box. A person not involved in the project reached into the box and pulled out one slip at a time. He was instructed to place the slips into two piles. These piles determined the composition of the two groups.

NOTE: This study was supported by the U.S. Department of Education, International Research and Studies Program, Washington, DC, under grant number P01A00032. We wish to thank Sarah Banfield and Vanessa Bittner, who spent countless hours in search of suitable video segments; Michael Wilson, who patiently entered the data; Dr. John Dick, who enthusiastically taught the control group; and last, but not least, Dr. Carol Reisen, who performed the statistical analyses upon which this report is based. Finally, we would like to thank the Center for International Studies of the U.S. Department of Education, whose support made this study possible.
REFERENCES


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**TABLE 1**  
**Distribution of Subjects**

<table>
<thead>
<tr>
<th></th>
<th>Experimental</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
<td>Women</td>
</tr>
<tr>
<td>AY 1991-92</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>AY 1992-93</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>17</td>
</tr>
</tbody>
</table>

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**Sample Lesson Plans for Experimental and Control Groups**

<table>
<thead>
<tr>
<th>EXPERIMENTAL LESSON PLAN</th>
<th>CONTROL LESSON PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Watch the video with the sound off to get a general idea of its content (prediction based on visual cues).</td>
<td>Watch the segment twice with the sound on. Then playact one of the three role-play situations similar to the action in the video presented.</td>
</tr>
<tr>
<td>2. Working in pairs, predict what the characters might be saying to each other. Jot your predictions down (prediction based on knowledge of the language).</td>
<td></td>
</tr>
<tr>
<td>3. Watch the video again to verify your predictions (verification).</td>
<td></td>
</tr>
<tr>
<td>4. Working with a partner, jot down as many familiar words and phrases that you actually heard, as you can recall (familiar elements).</td>
<td></td>
</tr>
<tr>
<td>5. Decide whether you need to watch the video again (planning) and what specific elements you will listen for (goal definition).</td>
<td></td>
</tr>
<tr>
<td>Simulated-authentic</td>
<td>Movie segments</td>
</tr>
<tr>
<td>-------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>simple, scripted</td>
<td>scripted</td>
</tr>
<tr>
<td>conversational language</td>
<td>conversational language</td>
</tr>
<tr>
<td>short utterances</td>
<td>short utterances</td>
</tr>
<tr>
<td>simple syntax</td>
<td>mostly simple syntax</td>
</tr>
<tr>
<td>many pauses</td>
<td>many pauses</td>
</tr>
<tr>
<td>frequent vocabulary</td>
<td>mostly frequent vocabulary</td>
</tr>
<tr>
<td>extensive visual support</td>
<td>extensive visual support</td>
</tr>
<tr>
<td>dialog or polylog</td>
<td>dialog or polylog</td>
</tr>
<tr>
<td>mostly informal</td>
<td>mostly informal</td>
</tr>
<tr>
<td>register</td>
<td>register</td>
</tr>
<tr>
<td>episodic structure</td>
<td>episodic structure</td>
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FOREIGN LANGUAGE ANNALS—FALL 1996

TABLE 4
Percent of Students Who Improved on the Video Posttest

<table>
<thead>
<tr>
<th>Groups</th>
<th>At least 10 percent improvement</th>
<th>Less than 10 percent improvement</th>
</tr>
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<tbody>
<tr>
<td>Experimental</td>
<td>70.8%</td>
<td>29.2%</td>
</tr>
<tr>
<td>Control</td>
<td>30.8%</td>
<td>69.2%</td>
</tr>
</tbody>
</table>

TABLE 5
Percent of Students Who Improved on the Audio Posttest

<table>
<thead>
<tr>
<th>Groups</th>
<th>Percent of students who improved</th>
<th>Percent of students who did not improve</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>87.5%</td>
<td>12.5%</td>
</tr>
<tr>
<td>Control</td>
<td>61.5%</td>
<td>38.5%</td>
</tr>
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</table>