

DOCUMENT RESUME

ED 388 247

IR 017 396

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 TITLE Silent Movies: A Digitized Video Approach to the Russian Verb.
 PUB DATE 94
 NOTE 7p.; In: Educational Multimedia and Hypermedia, 1994. Proceedings of ED-MEDIA 94--World Conference on Educational Multimedia and Hypermedia (Vancouver, British Columbia, Canada, June 25-30, 1994); see IR 017 359.
 PUB TYPE Reports - Descriptive (141) -- Speeches/Conference Papers (150)
 EDRS PRICE MF01/PC01 Plus Postage.
 DESCRIPTORS Computer Assisted Instruction; Feedback; *Russian; *Second Language Learning; *Verbs; *Videotape Recordings; Visual Aids
 IDENTIFIERS Digitizing

ABSTRACT

A HyperCard stack using digitized video to provide students of Russian with meaningful exercise in the use of verbal aspect and verbs of motion and position is described. Several problems presented by the Russian verb are defined. Examples of traditional textbook exercises are presented--translations, fill-ins, and picture-based approaches, and are shown to provide inadequate practice in the use of these verbs. A new alternative is suggested: video without an audio track gives students pedagogically sound practice by allowing them to independently generate full sentences to describe what is happening in a scene, while making only minimal reference to their native language. Parsing options, or codes which provide some information to the program about the correct answer, include: identifying the category (noun, verb, adjective, etc.) of each word in the sentence; indication of the cases (nominative, accusative, dative, etc.) of individual nouns and the tenses and aspects of the verbs; and dividing each word into stem and ending. The variety and flexibility of feedback available to students, both error-correction and grammatical, and the scoring capability of "Silent Movies" are also discussed. (Author/MAS)

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Silent Movies: A Digitized Video Approach to the Russian Verb

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Abstract: A HyperCard stack using digitized video to provide students of Russian with meaningful exercise in the use of verbal aspect and verbs of motion and position is described. Examples of traditional textbook exercises are presented and shown to provide inadequate practice in the use of these verbs. A new alternative is suggested: video without an audio track gives students pedagogically sound practice by allowing them to independently generate full sentences to describe what is happening in a scene, while making only minimal reference to their native language. Special aspects of the program, such as the variety and flexibility of feedback available to students, are also discussed.

"Silent Movies" is a context-based program which gives students of Russian practice using verbal aspect and verbs of motion and position. The student's task is to write full, grammatically accurate sentences in the target language to describe the images she sees. This sort of program fulfills the requirements for meaning-enhancing drills set forth by Chun and Brandl (1992). The video-without-audio approach was implemented because traditional textbook approaches to the Russian verb fall short: they often provide inadequate context for students to make a good judgement about which verb to use, encourage students to rely on problem-solving techniques which are of little use in real conversations, or indirectly cause confusion about the nature of the verbs. By contrast, "Silent Movies" encourages the student to use the target language without constant reference to the native language or to clues from the target language. A simple parsing mechanism analyses student input and pinpoints grammatical and conceptual errors therein. The student is provided with hints which will aid her in correcting her answer. In addition, the student is in control of this feedback, choosing the type and amount of it she sees.

In the past, video has been viewed almost exclusively as a tool to exercise or test listening comprehension. Students usually use such exercises by choosing answers from a multiple-choice list or filling in blanks. But images, without audio, are a valuable form of communication which can be used to prompt students into independently generating full sentences. It is this potential of video that "Silent Movies" exploits. In addition, the program demands very little in terms of computer resources: it requires only a Macintosh IICI (or better) computer with a hard drive, HyperCard and QuickTime.

Problems Presented by the Russian Verb

In order to understand how "Silent Movies" can benefit students in a way that traditional textbook and classroom exercises cannot, we must first understand the complexities of the Russian verb system. Below, I briefly describe the three types of verb oppositions which "Silent Movies" exercises: aspectual (imperfective/perfective), directionality (unidirectional/multidirectional), and movement (active/static).

Verbal aspect in Russian distinguishes between actions in process (imperfective) and completed actions (perfective) in the past and future tenses. The majority of Russian verbs are paired for aspect. Some examples of aspectual pairs: imperfective *chitat'* 'perform the action of reading' and perfective *prochitat'* 'read completely'; imperfective *pit'* 'perform the action of drinking' and perfective *vypit'* 'drink up, drink it all'.

When using verbs of motion, one must determine whether a unidirectional verb (indicating motion in one direction or motion occurring at the moment of speech) or a multidirectional verb (expressing motion with no particular goal, or a complete or round trip) is appropriate in a given situation. Examples of such unidirectional and multidirectional pairs are *idti* and *xodit'* 'go by foot', *exat'* and *ezdit'* 'go by vehicle', *nesti* and *nosit'* 'carry', *vezti* and *vozit'* 'convey by vehicle'.

Verbs of position show both imperfective/perfective pairing as well as active/static oppositions. For example, the active aspectual pair *lozhits' allech* 'lie down' contrasts with the static aspectual pair *lezhat' ipolezhat* 'be in a lying position', just as the active aspectual pair *vstavat' vstat* 'stand up' is parallel to the static aspectual pair *stojat' ipostojat* 'be in a standing position'.

Traditional Approaches to the Russian Verb

Verbs are easily taught and exercised in the classroom, where a teacher can add appropriate context with body and object movement to facilitate student comprehension. Written homework, usually in the form of translation or fill-in exercises, however, cannot provide such easily understood context. Instead, it must provide context in the target language. Let us examine these textbook approaches in greater detail.

Translation

The translation approach is one of the most familiar and most criticized of exercise tools. The native language sentences are often stilted to hint at the proper translations into the target language. Examples (1) and (2) below come from Russian elementary and intermediate textbooks:

- (1) "Olga went to the store, there bought a skirt, blouse and shoes and after that went to a movie."
(Clark, 1983)
- (2) "Today we studied physics and chemistry. We worked on problems all day, but we did not solve all the problems." (Davis and Oprendeck, 1973)

Fill-ins

In the fill-in exercise, students see sentences from which verbs are missing. Their task is to fill in the proper verb based on their understanding of one or two sentences of surrounding context. Cues are provided to help students fill in the correct word. Such cues are of two types: (1) a native language gloss of the desired word or (2) a choice of words in the target language. Target language cues may be in a dictionary form (in the case of verbs, the infinitive) or may already be properly inflected. Examples (3) through (6) illustrate this sort of exercise.

Native language cues:

- (3) Ja obychno (go to bed) spat' rano, no vchera ja (went to bed) ochen' pozdno.
(Davis & Oprendeck, 1973)
- (3') 'I usually go to bed early, but yesterday I went to bed very late.'
- (4) Volodja (took off) shapku i sel za stol. (Clark, 1983)
- (4') 'Volodya took off his fur cap and sat down at the table.'

Target language cues:

- (5) Kuda èto rabochije (nesti/tashchit') rojal'? (Muravyova, 1986)
- (5') 'Where are those workmen (carry, infinitive/lug, infinitive) that piano?'
- (6) On segodnja (zabyval/zabyt) svoi knigi. (Davis & Oprendeck, 1973)
- (6') 'He (forgot, imperfective/forgot, perfective) his books today.'

Other fill-in exercises provide context in the form of an entire paragraph in the target language and may also use cues of the types described above. In example (7), the student is instructed to insert appropriately prefixed forms of the verb *idti* 'go, walk' into the blanks so that the entire paragraph will make sense.

- (7) Vchera my reshili _____ v kino. My _____ iz doma i _____ po ulice. Kogda my _____ po ulice, nachalsja dozhd'. My reshili _____ v magazin i nemnogo podozhdat'. Dozhd' skoro konchilsja, my _____ iz magazina i _____ dal'she. Cherez neskol'ko minut my _____ v kinoteatr. My kupili bilety i _____ v zal. (Davis & Oprendeck, 1973)
- (7') 'Yesterday we decided to go to the movies. We exited the house and set off along the street. While we were walking along the street, it began to rain. We decided to enter a store and wait a little while. Soon the rain stopped, we exited the store and set off further. After a few minutes we arrived at the theater. We bought tickets and entered the auditorium.'

Picture-based Approaches

An approach where students describe the action depicted in static pictures can be used quite successfully in the classroom. Unfortunately, students working on them at home without guidance may not learn very much, since they will not see or understand their mistakes until they speak directly with an instructor. An example of such a picture-based exercise is found in Figure 1, below.

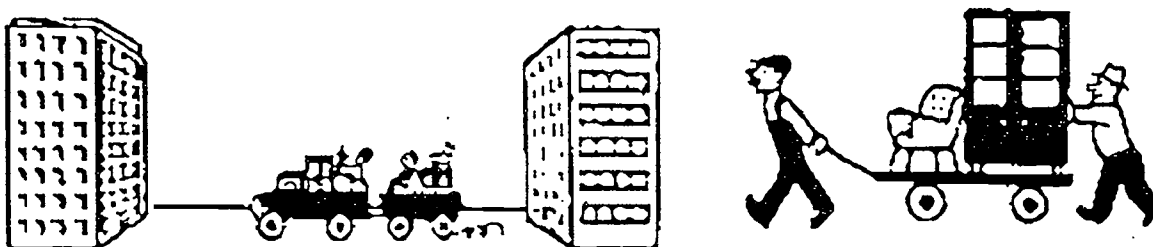


Figure 1. An example of a picture-based exercise. (Muravyova, 1983.)

Improving on the Traditional Approaches Using the Computer

We must find a better way for the student to get sufficient practice in the use of these verbs outside the classroom. I suggest that students need visual context and guided error correction to fully understand and use these forms properly. The computer coupled with digitized video is ideal for providing this opportunity.

Picture-based approaches are an improvement over translation and fill-in exercises for several reasons. First, they do not encourage students to translate from the native language into the target language. This is valuable, since successful language learners learn to think in the target language without going through the intermediary of the native language. Second, they avoid the artificiality of target-language clues which force the student to continually refer to a dictionary form as the basis for choosing a correct inflected form.

The approaches outlined above are still the best a paper textbook can provide for independent practice. But even when textbook exercises provide good and copious context, individual students may still perceive situations described in written narratives in a manner which the individual checking the homework did not expect. As a result, an answer is marked wrong because it does not agree with the instructor's interpretation of the context, although it may be correct for the student's interpretation of it. While such misunderstandings can be resolved immediately during in-class drills, written homework entails a time-lag; by the time students receive corrected homework back, they may not recall the rationales for the answers they gave, and thus gain very little from the corrections. And while it is obvious to instructors which verb form the context is aiming for (since they have so much experience with such exercises) it is often not at all obvious to the first- or second-year student. In other words, the student is forced to learn to read the contexts in an expected way instead of learning to use the verbs correctly. Furthermore, since this context is written in the target language, the student who is already struggling with the language will become further frustrated.

Fill-in and translation exercises generally give a clue about the form the learner needs to use. Students learn to look for key words to determine which forms to use in various contexts and come to rely on these clues. For example, students learn that if they see a word relating to the frequency of an action (such as *obychno* 'usually', *chasto* 'often', *redko* 'rarely' or *nikogda* 'never') that they need to use the imperfective aspect of the verb to indicate a repeated or habitual action.

- (8) Misha *chasto* (missed) lekciija, no Masha *nikogda* ne (missed) (Clark, 1983 (italics mine))
- (8') 'Misha *often* missed classes, but Masha *never* did (miss classes).'
- (9) On *vsegda* (sprashivat'/sprosit') menja. (Davis & Oprendeck, 1973 (italics mine))
- (9') 'He *always* asks me.'

Another method students commonly use to guide them to the correct form is reference to a verb before or after the fill-in. For example, students learn that if actions are sequenced in time that they both take perfective verbs. Therefore, if the student understands the sentence well enough to see that the actions are sequenced, and that one verb in the sentence is in the perfective, she knows to use the perfective for the fill-in verb as well.

- (10) My *soshli* s tramvaja i (transferred) na avtobus. (Clark, 1986 (italics mine))
- (10') 'We *got off* (perfective) the tram and transferred onto a bus.'
- (11) Reb'onok (vkljuchal/vkljuchil) televizor, i *nachal* smotret'. (Davis & Oprendeck, 1973 (italics mine))

(11) 'The child (turned on, imperfective/turned on, perfective) the television and *began* (perfective) to watch.

While these sorts of devices help students to *achieve* well on exams, there is no guarantee that it aids their *proficiency* in the language.

How "Silent Movies" Works

What the Student Sees and Does

In this section I will briefly describe how "Silent Movies" works. Figure 2 shows the approximate appearance of the exercise screen to the student.

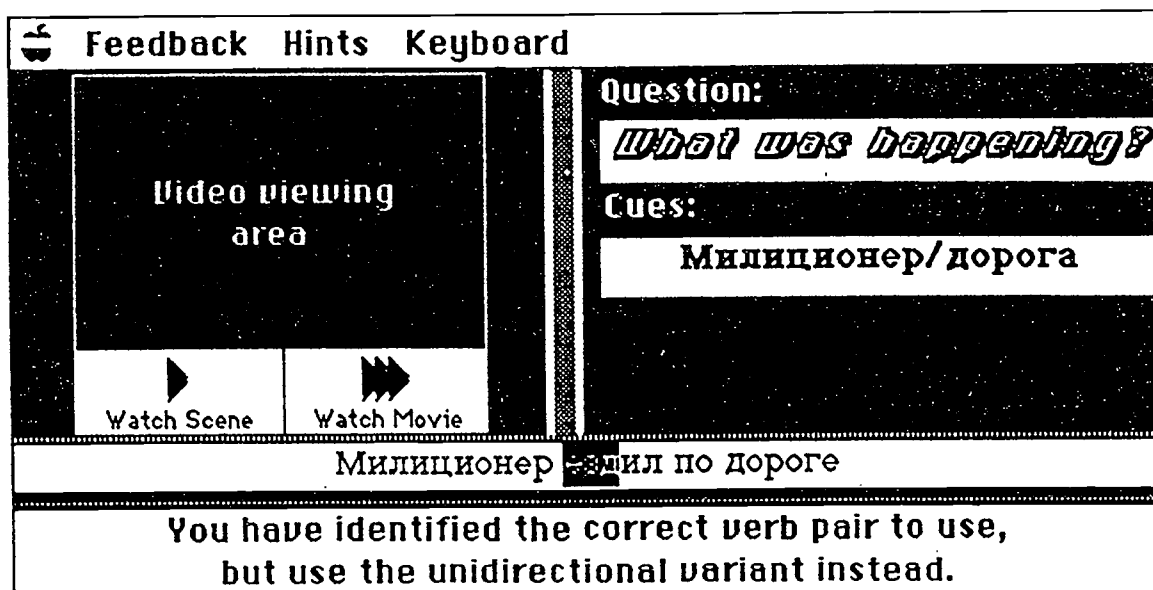


Figure 2. The "Silent Movies" exercise screen (reduced and modified due to space considerations).

The student watches a mini-movie which lasts no longer than one minute. This gives her a sense of the story she will tell in her descriptive sentences. She may watch the entire movie whenever she likes throughout the exercise, but after she has watched it once, she is invited to watch the first of several scenes from the mini-movie. Similarly, the student may watch individual scenes as many times as she desires, but after the first showing, her attention is drawn towards a question of the type "What was happening?" or "What happened?" The question indicates the tense the student will use in her sentence; it is given in English so that it is not obvious which verbal aspect is necessary. In addition, the student sees the nouns and adjectives she will use in her sentence. This narrows the number of possible answers. In the mini-movie "Lost Dog", for example, the first scene shows a policeman in a car driving down the road. Possible descriptions of this scene might be "The policeman was in the car" or "The policeman was driving along the road" or "Officer Ivanov was driving down the road in his car." Since the cues given are 'Милиционер/дорога' (policeman/road) and the question is "What was happening?", the student is directed towards the answer "The policeman was driving along the road."

When typing in her answer, the student has several tasks to fulfill. The first and most important is selecting a verb to describe the action being performed, based on the context provided by the video. Of secondary importance is using the correct tense, person, gender and number in its conjugation and providing necessary prepositions and correct endings for adjectives or nouns. Thus, grammatical accuracy is required only after the communicative task of selecting the correct verb has been successfully completed.

The "Parser"

In order to allow the student to focus on meaning first and grammatical accuracy second, a certain amount of parsing is necessary. Each problem in the database contains several "codes" which provide information to the program about the correct answer. One code allows the program to identify the category (noun, verb, adjective,

preposition, etc.) of each word in the sentence, a second one indicates the cases (nominative, accusative, dative, etc.) of individual nouns and the tenses and aspects of the verbs, while a third code divides each word into stem and ending. The program can then use this information to isolate whether the student's error lies in the stem or ending and give hints to aid the student in correcting the problem.

Feedback

Research has shown that students appear to learn best when they have some control over the feedback they receive (Robinson, 1989). In "Silent Movies," the student controls when she gets feedback and how detailed that feedback is. Two sorts of feedback are found in "Silent Movies": error-correction and grammatical aid feedback.

Error-correction Feedback

"Silent Movies" provides three types of error-correction. The first type is a simple right/wrong response; this is the default, provided automatically when the student presses <return> after typing in an answer. The second level of error-correction highlights the first error found, whether it is an entire word or just a stem or an ending. The last type highlights the error and gives a hint about how to correct it. All three types of feedback are available to the student on demand after she has given one incorrect answer.

Grammatical Aid Feedback

As the student enters additional uniquely incorrect guesses, more explicit feedback becomes available to her. This feedback consists primarily of grammatical and lexical help.

The first type of grammatical aid feedback is a clarification in English of what is happening in the picture. It becomes available to the student after the first incorrect answer has been entered. There are two reasons why students might need this sort of help. First, since "Silent Movies" is not geared for use with any particular textbook, students may be unfamiliar with some of the vocabulary used in the cues. The English translation provides a contextualized gloss for these words. Second, sometimes the action in the video can be interpreted in more than one way. For example, in the "Lost Dog" mini-movie from "Silent Movies", we see a dog in the foreground, while a police car pulls up and stops on the road behind the animal. This may present the student with a quandary: should she describe the position of the dog, or the motion of the car, or the motion of the car in relation to the position of the dog? The English translation can immediately clear up such ambiguities.

After two incorrect answers have been given, the student may choose to see which verb pair (imperfective/perfective, unidirectional/multidirectional, active/static) she must choose from. For example, if the video clip shows the policeman in the act of crossing a street, she must choose between the imperfective verb *perexodit'* or the perfective verb *perejti* to describe the motion.

Also available after two incorrect answers is feedback which tells the student which verb tense is required. In theory, the student should not need this help, if she has read the question carefully, but experience shows that students often forget what tense they are dealing with when they are concentrating on aspect and directionality.

After three incorrect answers, the student is given access to aspect or directionality help; that is, she can choose to be told whether to use a perfective or imperfective, unidirectional or multidirectional, active or static verb. So in the example given above, where the policeman is crossing the street, the student would be told that the imperfective choice (*perexodit'*) was appropriate.

After four incorrect answers, the student can find out which prepositions the sentence requires, as well as what case forms the nouns and adjectives take.

Finally, after the student has made five attempts to discover the correct answer, she has the option of giving up, seeing the correct answer and going on to the next problem. It should be emphasized that students are not obliged to use any help at all--but if they want it, it is under their control.

Miscellaneous Features of "Silent Movies"

All student responses are collected and stored and the student is given the opportunity to review her incorrect answers at the end of the exercise. These responses may be reviewed by instructors as well, thereby enabling them to address common problems in class. In this way, the instructor does less homework correction, but still gets insight into how well students are learning and understanding.

The scoring used in "Silent Movies" is forgiving; if the student finally comes up with the right answer, she gets full credit no matter how many times she answered it incorrectly. These scores are easily collected, divided

into course sections and distributed to instructors.

The Future of "Silent Movies"

Initial informal testing of "Silent Movies" with second-year Russian students was encouraging. Strong students said they felt challenged, and weaker students were allowed to learn at their own pace and did not become discouraged or give up as soon as allowed. Formal tests will continue in the future and will include control groups working with traditional textbook approaches.

Not yet implemented, but arguably a good addition to "Silent Movies", would be a grammar reference. Such an addition would be a good project for a graduate or advanced graduate student of Russian who has minimal computer experience as a good introduction to the use of HyperCard.

"Silent Movies" could be improved in one important way. The video it currently uses was taken from satellite television news broadcasts; as a result, only a limited selection of video clips was available to me as I developed the program. Ideally, scripted filming on location in Russia with actors would be done in order to concentrate on the most common problems students experience with Russian verbs. For instance, one would like to see negated actions (which take the imperfective) illustrated by scenes such as the following: a man enters a room, opens a window, takes a look out, and closes the window again (*On otkryval okno*). Such scenes would be contrasted with non-negated ones (taking the perfective) such this one: a man enters the room, opens the window, and leaves again without closing it (*On otkryl okno*). Scripted filming would also allow us to eliminate action occurring in the background which can distract the student from concentrating on the material relevant to the exercise.

The next stage of "Silent Movies" will involve designing a simple interface allowing instructors of Russian to use their own video clips and design exercises around them. It is hoped that funding will become available for this project in the near future.

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Acknowledgements

I would like to thank the Language Learning Center at the University of Washington for its financial and moral support of this project, and Paul Aoki and Klaus Brandl, as well as two anonymous reviewers, for their comments on this paper.