

CONTROLLING THE VELOCITY: A *Sine Qua Non* in Teaching Listening

by T. Edward Harvey

There are several levels of listening expertise which are commonly found in normal native conversants. These levels usually occur simultaneously in the course of normal life situations. In the home, for example, siblings will understand what Fishman (1978) calls the "manifest content"—that which the parent is saying—but also will comprehend the "latent content"—what is really meant by the message. The latent content of the slang expressions uttered at a beach party by a jealous boyfriend is only too clear to the newcomer who is caught flirting with a seemingly unattached young lady. Listeners differ in intelligence, but when they listen in their own language, most are able to predict with a high degree of accuracy the total meaning of what they hear even if the message is coming at them at a rapid rate.

In contrast, neophyte second language (L2) learners may catch about one quarter of the manifest content and, according to the amount of their exposure to the target culture, may understand very little of the latent content of the message. As listeners gain knowledge of the L2 linguistic system and familiarity with the L2 culture, they more easily distinguish between the essential and the redundant and can anticipate the total message content. At least this is the terminal behavior that will be achieved by most students.

Some L2 students are inefficient listeners in their native tongue. When they are confronted with a rapid string of speech sounds they panic. M.D. Steer (1945) found that some people tend to pay too much attention to rate rather than content. They concentrate on how fast things are coming at them and, when they miss a string of words, they become so overly tense and preoccupied with the part missed that they become hopelessly lost and miscomprehend the message. Apparently those who can listen efficiently for meaning are skilled

listeners because they are also field independent. Field independency is a theoretical construct based on the ability to keep things apart in a perceptual field, to see patterns, and to respond without stress in novel situations. Field dependent people are unable to disregard the more superficial aspects in order to detect order in the unfamiliar (H.A. Wilkins, et.al., 1962). Applying this same construct to listening, Carver, Johnson and Friedman tested listeners who tended to concentrate more on the rate and less on the content. They used speeded speech in conjunction with measures of field dependency and found that the ability to comprehend highly speeded speech probably involves being field independent. (1971-72). The results of other research by Friedman and Johnson point to rate as a dimension of speech which seems to be at the root of individual variations in listening proficiencies (1968).

Assuming that some of our L2 students are field dependent, if we continue to do nothing about controlling listening, they are doomed to inadequacy and frustration. In attending to learner needs, we can "control the teacher," as was recently suggested by I.S.P. Nation (*TESL Reporter*, Spring 1979). However, unless we control the message velocity, we still miss the mark as we try to provide the learning environment that leads to the greatest proficiency in listening.

We must remember that human speech is characterized by a certain amount of redundancy: processing time is provided for the listener by such means as hesitation and repetition, which reduce the amount of latent content available in a given message. Laudably, Nations's method—items II and III—suggests that the teacher be flexible and provide processing pauses or repeat portions of the message in question. The fact remains, however, that after class the same student who benefited from in-class flexibility will often have to resort to the

inflexible tape recorder for the much-needed additional listening practice.

Speech contrived and recorded for listening practice omits the pauses and the repetitions and moves relentlessly on from start to finish. Thus the student listeners are confronted with both the manifest and the latent content nearly simultaneously. As a consequence, they are forced to accomplish a task that even native speakers of English are not required to do. They must cope with a speech stream made up almost entirely of items totally essential to message comprehension. Rivers (1977) suggests that we obtain recordings of contextualized spontaneous speech to be fair to our students. However, authentic materials of the type she specifies are difficult for the classroom teacher to obtain. How can second language educators compensate for the inadequacies of listening programs already in their possession?

Rate-Altered Speech

The most promising way to enhance student listening performance with recorded materials is to mechanically retard the speed of the tape and electronically correct the accompanying shift in pitch. The device a student or teacher may use to modify the original recording is called a speech compressor/expander. The machine consists of a regular variable-speed cassette player which is equipped with electronic circuitry that, as the tape speed is changed, either deletes small, periodic samples of the taped message and electronically splices them together, or inserts speech into the message stream to slow it down. Several United States companies now market reasonably priced cassette players that contain either "shift register" or "Random Access Memory" (RAM) circuitry. Two representative companies are: Lexicon, Inc., 60 Turner Street, Waltham Massachusetts, 02154, U.S.A., which produces the VARISPEECH-II Compressor/Expander. This machine incorporates RAM circuitry. The Variable Speech Control Company, 185 Berry Street, Suite 3850, San Francisco, California, 94107, U.S.A., produces the model A-7 Speech Controller that incorporates shift register circuitry to slow down the speech.

Expanded speech is produced by periodically repeating a small segment of a recorded message. This produces a mes-

sage which is perceived as being slower than the usual native-speed at which speech is normally recorded. While the materials the students will use still lack the pauses and repetitions of authentic speech, the electronic alteration provided by the speech expander effectively reinserts the juncture pauses which are essential to comprehension and effectively negates the cognitive overloading that results from the mere velocity of the message (Sticht, 1970).

Application of rate control falls logically into two areas. Expanded speech may be employed to minimize task overload and assure greater success to the beginner and the slower learner. Compressed speech may be used to sustain the challenge for the more advanced students. David Siegrist (1977) has prepared a training program designed to allow ESL students to proceed from use of expanded to normal to compressed speech. Such a procedure constitutes an optimum curriculum design for language laboratory listening experiences. Exercises and materials will convey meaning from the beginning of instruction, even at lower levels. Students are taken from comprehensibly slower presentations through successively faster

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presentations to native-speed materials and beyond. A similar project is underway at Miami University (Ohio) where expansion and then compression are applied to an L2 reading program. Phillips (1978) describes a procedure where a passage is first recorded, then expanded. Then the selection is re-recorded six times. Each time speech compression is applied to increase the rate of aural presentation. Thus as a student listens to a tape he will hear the same passage at rates from 120 words per minute to 240 words per minute. The objective of the application of rate control is to force the student to associate sound, meaning, and the printed word more rapidly and thus avoid

the cumbersome but very common practice of conscious translation.

Besides applying expansion and then compression to instructional situations, expansion has been successfully used in L2 research and testing. Action research by Harvey (1978) has shown that high school students studying a second language preferred expanded speech when reviewing tape programs in preparation for listening comprehension examinations. Flaherty (1975) and Littell (1976) have shown that expansion of the L2 speech signal effectively negates cognitive overloading, especially during testing situations, thus significantly enhancing student listening performance.

Rate-controlled recordings have also been used as aural pacers. Mary Neville and A.K. Pugh (1975) had university ESL reading students listen to a recording of a passage while reading it silently. Again the experimental procedure included both expansion and compression. During the pilot study, it was found that speech expanded to 115 and 120 percent of the original recording time allowed more time and facilitated the reading of new and more difficult material. Speech compressed to 80 percent of the original speaking rate gave variation in difficulty without increasing the complexity of the printed text. All subjects in this research effort made statistically significant improvement in reading comprehension.

Summary

We can do much to free our students from the difficulty involved in listening to commercial tape programs in a language laboratory. We can take them out of the lab and have them control the teacher or we can place proper instruments in the lab and have students control the rate of program materials. With portable instruments commercially available at costs within the reach of educational institutions and individual teachers, the utility of the speech compressor/expander is no longer limited to those able to purchase and maintain expensive, bulky equipment and to those working in laboratories. Research has suggested the feasibility of instructing and evaluating listening and reading comprehension in second language education by applying rate control to recorded speech. Thus rate control is offered as one means of helping our students

achieve the goal of listening fluency--the ability to comprehend the manifest and the latent content of native speech. It is also offered as a vehicle for facilitating acquisition of other language skills.

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