

# SPEECH/PRONUNCIATION THERAPY FOR HEARING-IMPAIRED ADOLESCENTS

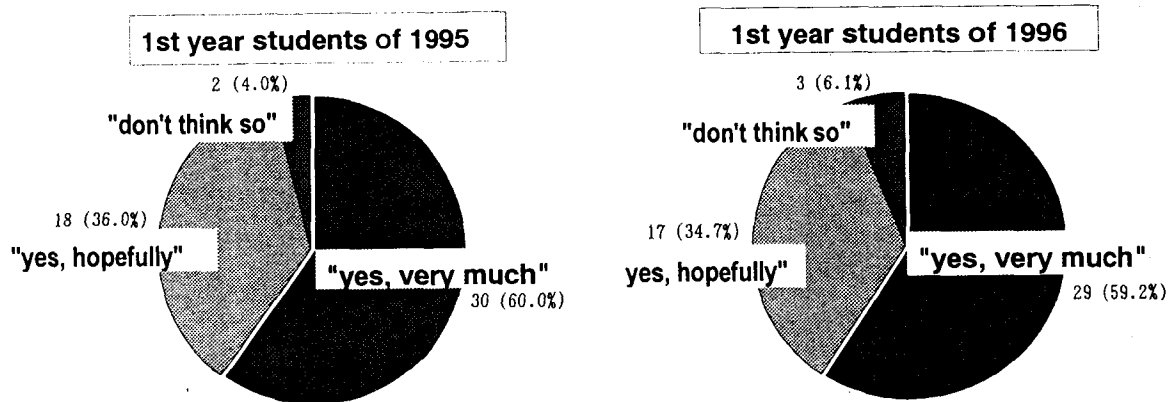
Yasushi Ishihara ,

Research Center on Educational Media for the Hearing-Impaired

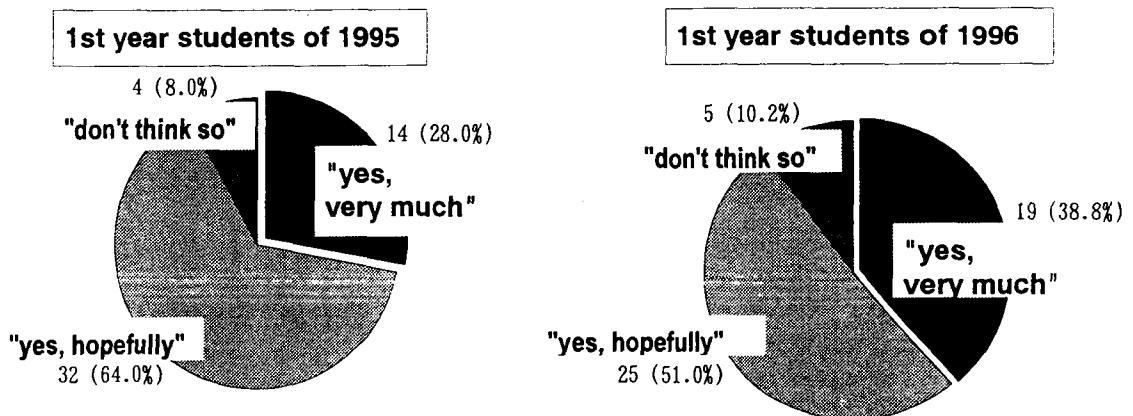
Tsukuba College of Technology (TCT) is a three-year national college in Japan to promote higher education for the youth with visual or hearing disability. I have been working in the research center for hearing impaired students and have been in supporting service for their communication. We have given them two types of directions for communication in TCT. The one is communication theories which are given to the students in class, and the other one is the service for speech skills, sign language, and auditory oral skill development. Those are given to the students who want to improve their skills.

Figure 1 shows the student's awareness for speech production. This was obtained through a questionnaire for communication. To the question, "Do you want to improve your speech production skills?", about 60% students chose the answer "Yes, very much".

Figure 2 shows the result of the question, "Do you want to have the therapy for speech production?". From 30 to 40% students answered that they wanted to receive the therapy.

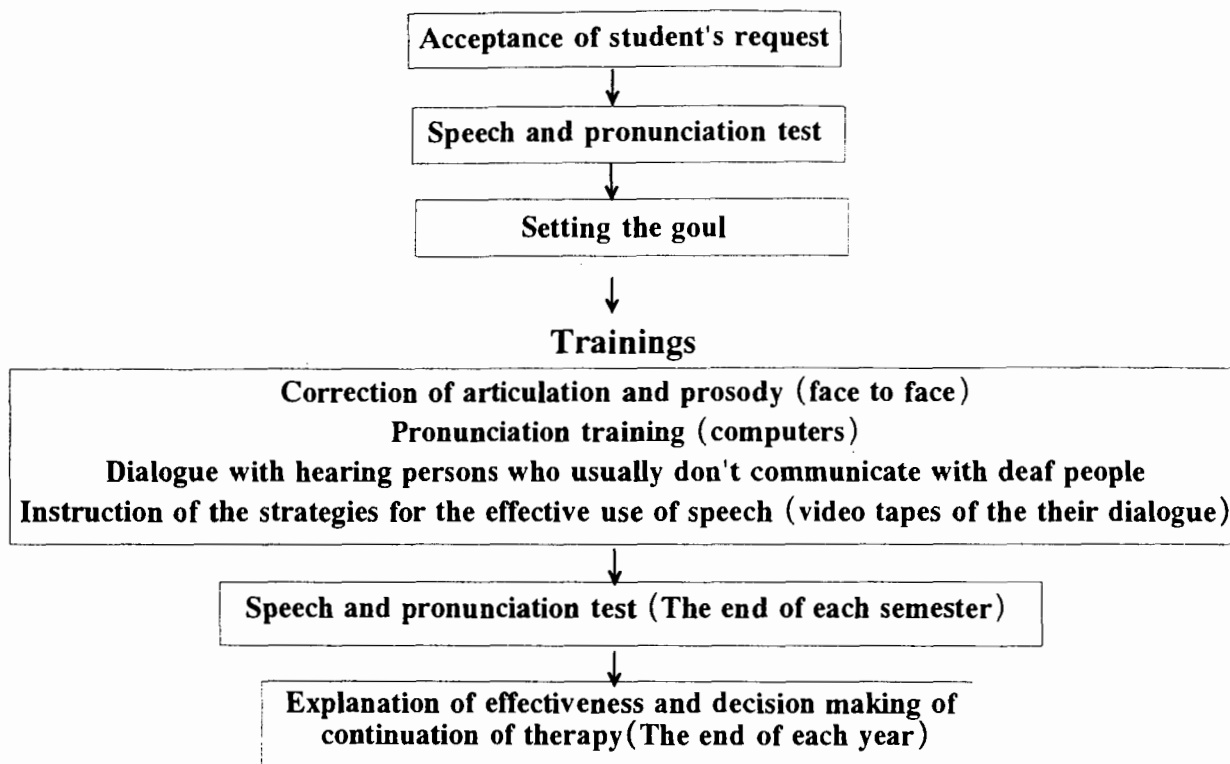


**Figure 1. "Do you want to improve your speech production skills?"**



**Figure 2 "Do you want to have speech therapy?"**

**Table 1 The outline of therapy**



Students' motivation for the therapy is various. Some students have specific purposes of the training such as the rehearsal for the job interview. But most of the students who come to the therapy don't have specific objectives and don't understand their own problems to be solved.

The procedure of therapy is like Table 1. The therapy is carried out once a week. The contents and the methods of therapy are the correction of articulation, pronunciation training using computers, and the dialogue with hearing persons who usually don't communicate with deaf people. The dialogue is recorded on video tapes, the strategies for their effective use of speech is instructed to each student. In this instruction, I give the advice them to use appropriate words or sentences and I advise them to choose the other communication mode such as writing when their speech are not understood by the hearing person. On the contrary, if a student have relatively clear speech, the hearing people will not care for the student's difficulty and talk fast. In such a case, I will advise them to use the techniques to arise hearing people's attention to their hearing difficulty.

Figure 3 shows the changes in articulation test scores of the students. They came to the therapy constantly once a week for about 8 month. The horizontal axis means the number of instructions, and the vertical axis means articulation scores. There were individual differences, and their increasing score ranged from 10 to 35 percent.

Figure 4 shows the better changes of vowels and consonants articulations of those students, better results of consonants articulation is more apparent.

These data indicate that even hearing-impaired adolescents can improve their articulation as syllables.

In many cases, these improvements are due to better articulation of consonants. However, their speech sometimes become unnatural, especially for rhythm or tempo, when they tried to utter corrected speech. The reason of this problem is they concentrated on syllable articulation. And they could not aware of rhythm or tempo at speech level. I believe this is a kind of limit of articulatory training in adolescence.

I believe that instructing practical communication skills are more important for adolescents than articulatory training. They have to understand whether communication settings are good enough or not to make their speech understood by hearing people. For example, face to face conversation is easier than group talks. Noisy places like streets are more difficult than quiet places like in small rooms.

When the communication settings are not good, some of them may use writing. Fortunately my students could improve these effective communication skills through the therapy. We need to develop such skills for adolescents and we need to develop the tests for evaluation of these skills.

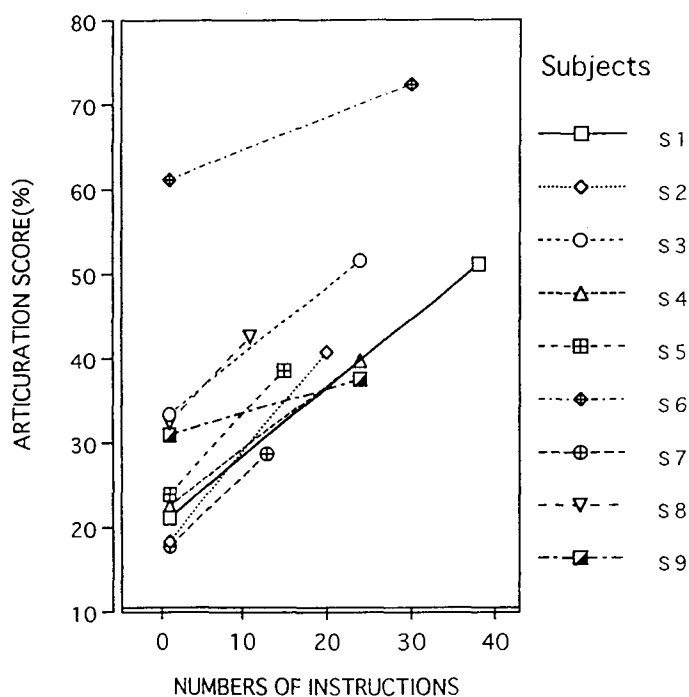


Figure 3. The changes in articulation test score of the subjects

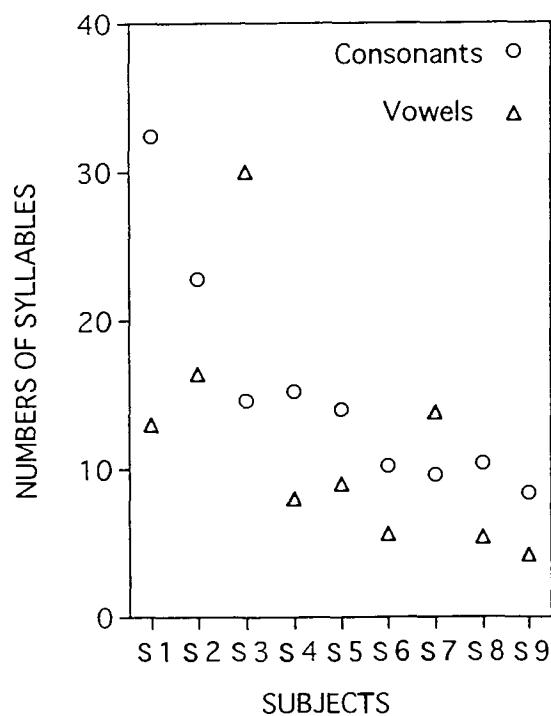


Figure 4. Subjects and numbers of syllables identified as better articulation