

*Dr. Charlotte Wells explains the operation of the audiometer to children in her neighborhood, Chris, Sally, and Maggy Cheavens.*



**now Johnny can hear and speak!**

BY VIVIAN HANSBROUGH

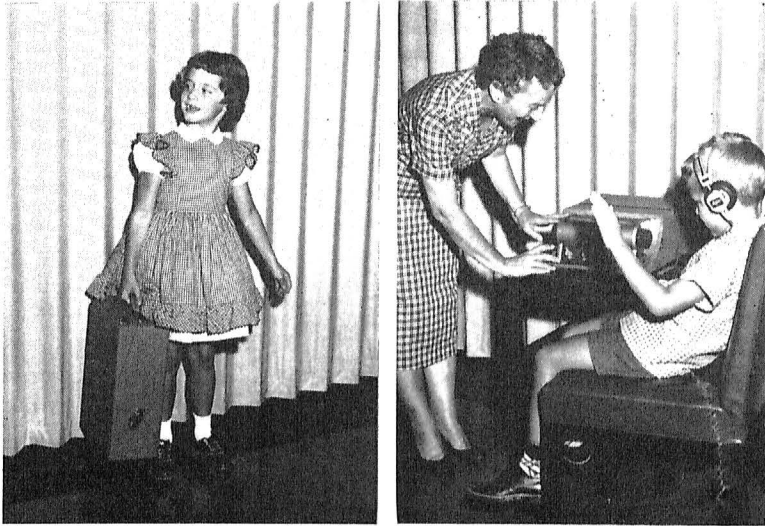
Ste. Genevieve, Missouri, is a long way from Columbia—almost 200 miles—but in spite of the distance, it is still part of the “classroom” of the University of Missouri. When the public health nurse in that area asked that the student and professional staff of the University Speech and Hearing Clinic come to Ste. Genevieve to hold an off-campus speech clinic for children in that area, Dr. Charlotte G. Wells and 12 assistants gladly accepted the invitation.

Preparations included carrying equipment downstairs to the three cars that would be used for the seventy-second out-of-town clinic. Audiometers—machines used to test hearing—were the bulkiest pieces of equipment. Two older ones, each weighing 25 pounds, claimed more than their share of space. The third audiometer, which was purchased with a grant from the Alumni Achievement Fund, is the most up-to-date of its type, weighs only 14 pounds, and is much smaller than its predecessors.

Next, the clinicians descended stairs with a new tape recorder, also purchased from the \$500 Alumni grant. This modern recorder is an excellent motivating device for children who love to record their voices, and is just as valuable as an evaluating device for adults who can listen again and again to their own voices in individual speech practice sessions. A suitcase filled with tuning forks, tongue blades, and printed information for parents and teachers completed the equipment necessary for an off-campus clinic.

At four o'clock Saturday morning, while other students and faculty members were sound asleep, the 13 clinicians were on their way to Ste. Genevieve. When they arrived at the historic site of the first settlement in Missouri, they began unloading equipment and making preparations to interview the 21 children who came with their parents and teachers.

Prior to an off-campus trip, explanatory literature



*Left: The new audiometer, purchased by a grant from the Alumni Achievement Fund, is so lightweight that six-year-old Sally can carry it easily.*  
*Right: Chris responds to the sound from the audiometer by raising his hand.*

informs parents and teachers of each step in the testing program. Preliminary information sheets are completed before the clinic starts.

First, the child listens to tones from the audiometer. The clinician can tell by the child's report as he listens whether or not his hearing is "within normal limits." People learn to speak and to check their speech by means of hearing themselves and others, so this first step is an important part of the testing program.

Next comes the speech evaluation. The child reads sentences or words, repeats words that are said to him, and tells what he sees in pictures. Unconsciously, he is revealing his general speech ability, as well as his specific mistakes.

In the diagnostic conference which follows, the clinician asks many questions about the child's speech habits and looks to see how well the child can move the various parts he uses for speaking. A speech therapist observes this conference, taking notes and making plans for advising parents and teachers about methods of correcting the speech problem. The therapist then has an extended conference with the child and his parents and teacher. He may show the child how to make a new speech sound. He explains printed or mimeographed material given to the parents to take home. He may suggest a source for medical or dental aid. After the clinic, a report is mailed to the parents, summarizing the diagnosis and outlining recommendations.

Among the children interviewed at Ste. Genevieve was a 12-year-old boy who had been born with a cleft lip and palate. Although his parents were not even in comfortable financial circumstances, they had

paid for surgical repair for the lip and the palate. The boy's speech was moderately good, but the condition of his teeth indicated need for extensive care by an orthodontist—a doctor who straightens and realigns teeth.

The clinic director informed the mother that the State Crippled Children's Service might provide the orthodontic care which the parents were unable to undertake. After referral was made to the proper agency, one of the field nurses of the Crippled Children's Service called on the parents and made arrangements for the boy to get the dental care to assure improved speech, as well as improved appearance. Thus one more handicapped youngster had received his chance to become an adjusted member of society.

By five o'clock in the afternoon, the last conference was concluded. The clinicians reloaded their equipment and made the trip back to Columbia, returning too late to take the equipment to the third floor of Switzer Hall. That task had to be performed on Sunday, because Monday morning would usher in another busy round of interviews on campus.

The off-campus clinic program was started in 1947, when a public health nurse at Mexico asked Dr. Wells if something could be done for several seriously handicapped children. Dr. Wells replied in the affirmative, and promptly arranged for a diagnostic clinic.

Since the first clinic on January 11, 1947, a total of 2,003 children in 38 different communities in 33 Missouri counties have received special services in 72 off-campus clinics. University clinicians have found that more than half of the cases tested showed prob-



*Maggy reads into microphone of new tape recorder added to Speech and Hearing Clinic equipment by an Alumni grant.*

lems in articulation. Stuttering ranked second, and defective hearing ranked third.

The Adult Education and Extension Service of the University has made reimbursement for \$1,748.86 toward the cost of clinics since January, 1947. Other costs were met by the communities visited.

During the past summer session, the Division of Correction of the State Department of Education asked Dr. Wells and her staff to provide some testing for boys at the Boonville Training School for Boys. Students from the course in audiology went to Boonville and tested the hearing of 170 boys at the training school. From the 170, there were 20 who had hearing problems. Ten of these were in need of immediate medical attention to the hearing problem. This particular program met two of the basic aims of the Speech and Hearing Clinic: It provided service for a group that otherwise would not have had it, and it provided training for the University students who participated.

The elementary supervisor of the Ashland schools wrote last spring, asking for diagnostic help with several children who seemed to have speech problems. Dr. Wells remembered Ashland as a pleasant, small community on the road to Jefferson City. Thinking that the school system might have 100 pupils, she suggested that the Speech and Hearing Clinic come to Ashland and do a survey testing program, evaluating speech and hearing for all the children.

To her amazement, she discovered that the Ashland school is consolidated, serves all of southern Boone County, and has an enrollment of approximately 450 in elementary school and high school. Nevertheless, she and her students made several trips to Ashland, providing her students the experience of evaluating speech and hearing for 302 children in the elementary

school. The audiometer purchased from the Alumni grant ran steadily during all of this testing program. Nineteen per cent of the 302 children need further investigation of hearing beyond the initial screening test.

While this testing was in progress, a fourth grader stopped, after her interview, and said, "My little brother doesn't talk plain. Mother wants to know if you would see him while you are here." The clinic director agreed, and the mother brought in a little boy just ready for first grade. His speech was somewhat difficult to understand, and he seemed in need of some special help. So, all during the summer program, he came to Columbia every day. Now he is far better prepared to enter the first grade than he was before.

In addition to off-campus services, last year the Speech and Hearing Clinic provided testing or training for 183 in-patients and 78 out-patients. Also, 150 University students received remedial speech training through course work by enrolling in Speech 1, Oral Communication.

A few years ago a Missouri teacher, who was living in the dormitory while attending summer session, found that dorm life was noisier than her customary home life. She took advantage of the fact that she had defective hearing in one ear. When the dormitory was noisy, she simply went to bed, tucked her good ear in the pillow, and shut out the noise.

To meet an assignment, a student in audiology asked to test this teacher's hearing. Findings from the audiometer testing showed that the teacher indeed had one adequate ear and one in which the hearing was impaired. Additional testing suggested that the hearing loss was of a kind that often can be remedied by medical treatment. Since she was a student at the University, she was referred to the otologist on the staff of the Student Health Service.

Before the end of the summer session, this teacher's hearing in the defective ear was brought back within normal limits. Her gratitude was tempered somewhat by her discovery that now there was no way to shut out the noises of the dorm, but she decided that normal hearing was worth the temporary disturbance.

Another on-campus experience concerned a small boy from a nearby community who was brought to the Speech and Hearing Clinic by his parents, because not only was he having difficulties at school in reading, but he could not call things by their names. When asked what his belt was called, he would say, "It goes around my waist, and it holds up my pants, but I don't know its name." He had a special kind of language problem, called anomia. Although he had a good deal of language, he often had to talk about things by description, rather than by name.

During summer session he came regularly to the Speech and Hearing Clinic to work with a student therapist, who was also a capable and experienced elementary teacher. He learned many new words during the summer, and returned to school in the fall with much more usable language.

A few years ago a graduate student from Japan came to the University with a double handicap. His use of American-English speech was limited, because it was a new language for him. In addition, he was one of the most severe stutterers ever to enter the Clinic. He attended clinic sessions with devotion for two years, and now has left the campus with his doctorate and returned to his native Japan, where he teaches in a high school.

In response to a request from the medical school of the University of Tokyo, this young man is to assist there in studies concerned with the problem of stuttering in Japan. He understands the approaches that are made to the problem of stuttering in the United States, and will serve as an excellent link between the two countries, sharing his general education received here, as well as his specialized training in overcoming stuttering.

A 9-year-old boy was brought to the Speech and Hearing Clinic as a place of last resort, prior to assigning him to a state school for feeble-minded. He was awkward and slow in all he did, he did not seem to understand what was said to him, and he did not talk much nor well.

When the clinician used a hearing aid to amplify sounds, the boy seemed to come alive, and his responses were much more definite. He could not take standard intelligence tests, because he could not hear, and he could not do performance tests rapidly enough to come within scoring limits. However, the psychometrist said, "In my judgment, the child is at least within normal intelligence limits for his age and may be above, because every time I was putting away one set of testing materials, he was getting out the next set and getting it ready. Although he could not perform within the time limits, he showed understanding and foresight. In my opinion, he is not a mentally retarded child." As a result, the little boy was sent to a school for children with hearing problems to learn to become a useful citizen.

A 6-year-old girl was brought to the Speech and Hearing Clinic by parents who were worried because she did not pronounce words correctly. The little girl was charming, friendly, socially quite mature, apparently highly intelligent, and very conversational. She was alert and responsive in all of the testing. The only deviations in speech revealed in the testing were consistent errors in "r" and "l" sounds, which made her speech seem slightly different from that of an adult. The clinic supervisor explained to the parents

that many children do not master the skills for these difficult sounds until they are seven or almost eight years of age. This was news to the parents, who left the interview feeling much relieved and resolved to give their child a good example and time to learn.

A University student came to see Dr. Wells and asked in a high squeaky voice if he might come into the Speech and Hearing Clinic. She noticed that he was a nice-looking young man of normal size. When she asked why he wanted to come into the Clinic, he replied, "I have got to do something about my voice, because I am just sick and tired of having people say 'Yes, Ma'am' to me on the telephone."

The first step was to send him to a laryngologist for a report on the condition of his larynx structure and also for medical clearance. Using ear training, the clinician found the student's best vocal pitch, and helped him use his ears to check it. Gradually his



*Sally and Maggy enjoy hearing Dr. Wells play back the sound of Maggy's voice.*

voice was brought lower and lower until he reached the point at which he was comfortable and sounded right. Then he was given practice and experience in using that low pitch, with the aid of a tape recorder. At the end of the semester, he had a perfectly normal, quite pleasant male voice, and could not return to the feminine voice even when he tried.

The University plans to provide new quarters for the Speech and Hearing Clinic on the first floor of Parker Hall. The accessibility of these quarters will make possible admitting many people for clinical and diagnostic service who could not get up to the third floor of Switzler. The service function can expand within the limitations of the training function, and the training of student therapists can be better, because the clinicians can see a wider variety of cases. Thus, whether in campus classrooms or in communities off-campus, the University Speech and Hearing Clinic can enlarge its scope of service to the state of Missouri.