The Tomatis Method English Class :

Lessons Learned and Possible Applications

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Background to the use of the Tomatis Method at Kyoto Bunkyo University

When making application for university status with the Ministry of Education, Kyoto Bunkyo University requested that the Tomatis Method be incorporated into the foreign language curriculum. This was not the first time the Tomatis Method has been used in Japan in a university setting, as the Tomatis Method was used by some students studying French at Nagoya University. In recent years, the Tomatis Method has been incorporated into language programs in several European universities. In this report, I shall give an overview of the Tomatis Method class at Kyoto Bunkyo University. Based on the knowledge gained from researching the Tomatis Method and acquired from participating in the Educator and Counselor courses of the Tomatis Method, I shall try to describe some simple methods and techniques that can be used outside of the Tomatis Class to enhance foreign language learning of the students participating in the regular English curriculum at Kyoto Bunkyo University. As there is still much to be learned from both the short-term and long-term results of the Tomatis Class, this is only an interim report with the findings basically empirical in nature.

What is the Tomatis Method?

The Tomatis Method, based on studies conducted by Dr. Alfred A. Tomatis, a French ear, nose, and throat physician, is an audio-psycho-phonology (APP) program which began in 1947. Dr. Tomatis stated, "APP is based on the premise that the voice can only emit what the ear can hear, so that if you change your ear's ability to listen, you will also change your voice and how you interact with yourself, others, and the rest of the universe." (Tomatis, *Ear and Language,* vii) Somewhat of a revolutionary, Dr. Tomatis was one of the first scientists to establish a relationship between the voice, speech, language, social-emotional functioning and behavior through listening.

Language integration based on the relationship between audition, or hearing and phonation, or the act of producing sounds or speech, is the main goal of the Tomatis Method. Through his research, Dr. Tomatis came up with three major laws on which the Tomatis Method is based. The First Law of Tomatis states: The voice contains only what the ear can hear. (Gerritsen, "How

the Tomatis Method Accelerates Learning Foreign Languages", Internet) For students of a foreign language, this means that they cannot reproduce a sound that they cannot hear. Dr. Tomatis has spent much time studying the frequency variations of many different languages. For example, he found that the French language is basically concentrated in the 800 to 1800 hertz level, while the British English language extends from 2,000 to 12,000 hertz. (Tomatis, Ear and Language, p. 100-107) Such a difference can cause native speakers of one language to experience difficulties in attempting to pronounce words in the second language. Thus "s" and "th" sounds, or in the case of many Japanese students, "r" and "l" sounds may not be heard; therefore, they cannot be reproduced correctly.

The Second Law of Tomatis states that if a defective ear is given the capability of correctly hearing the lost or impaired frequencies, these are instantly and unconsciously restored to the vocal emission. (Campbell, "Miracles of Voice and Ear", p. 116) Students of a foreign language do not necessarily have defective ears, but rather their ears are not always attuned or accustomed to the various frequencies of the target language. If the ears are trained for the target language, students will acquire the ability to reproduce the sounds more accurately. With the ability to hear the differences, students will be able to self-correct their own pronunciation mistakes and speak in a way more similar to native speakers of the target language.

The Third Law of Tomatis states that if auditory stimulation is maintained for a determined period, the student will be able to retain the sounds and phonation will become modified. (Campbell, p. 116) A physical change will occur where the integrated and complex bone and muscle system of the middle ear is modified. The speech production system, the muscles that operate the larynx, the cheeks and mouth cavity, the tongue and the lips, also undergo a change. The hearing and phonation systems are modified. The rhythm of the target language becomes integrated in such a way that the student is able to speak in a more relaxed, natural way. Memory of the new mode is gradually built up by cerebral and neuronal memorization of this new activity and the new muscular activity is also retained. (Campbell, p. 116)

Dr. Tomatis has devised a machine to be used by the student of a foreign language. This machine, called the "Electronic Ear", consists of a headset connected to tape machine that filters and shifts sounds according to specific programming. Headsets that students wear look very similar to headphones used in most language laboratories. In the headband there is a place where sounds are transmitted in the form of vibrations that stimulate the bones. Thus not only the ears but also the bones in the skull are stimulated. The reason for this is that humans hear not only through the ear but also through bones resonating in response to the sounds around us. Both the ears and bones are trained and stimulated so that the new sounds and frequencies can be received and perceived by the foreign language

student. With the use of the electronic ear, students listen to tones and frequencies that they cannot hear or are not accustomed to hearing in their everyday, native-tongue environment. Cassette tapes, 30 minutes in length of Gregorian chant, music of Mozart, or the target language are used, and the programmed machine switches the new tones on and off so that the muscles of the middle ear are caused to stretch and relax. Music tapes are used for both stimulation and relaxation. (Maduale, *When Listening Comes Alive,* p. 63−64)

Generally speaking, the Tomatis Method is used by individuals when learning a foreign language or other training programs. For foreign language integration, this method includes listening to approximately 30 to 60 hours of tapes. Of course, the amount of time spent using the electronic ear machine depends on the learner and his or her particular language goals and expectations. A standard program includes a period of intense intervention and sound stimulation where the listener listens to tapes for approximately two hours a day for 15 consecutive days. Tapes at this time include sounds of the target language, music of Mozart, and Gregorian Chant. Sounds initially heard are those programmed for the native language of the student. These sounds are gradually filtered up to a level of 8000 hertz. Filtering the sounds means that the lower ranges of sounds are gradually filtered out so that the muscles in the middle ear are forced to open to the high ranges. During this passive stage, the sounds heard by the students are reduced to scratches and squeaks. High ranges of sound that are filtered through the machine are also used to mimic the conditions in the womb, where listening begins. (Regush, "The Listening Cure", p. 74) As the filtering process is gradually reduced, the listener is introduced to the frequencies of the target language via programming of the electronic ear. A "sonic re-birth" occurs, and in most cases the student is able to experience new acuity in listening to the sounds of the target language as well as to the everyday sounds in his or her environment. This "sonic re-birth" signals the beginning of the second phase, or active phase. Sounds are not filtered but presented to the student in the frequency range of the target language. Adjustments to the headset ensure that the leading ear for listening and communication becomes the right ear. During this phase students listen to language tapes of the target language. Microphones are used during text repetition so that the students can hear themselves reproduce the sounds. The sounds that they make are fed into the electronic ear machine and played into the student's ears at the frequency of the target language. After this period of about two to three weeks, the student takes a break for approximately one month and then returns for more active training. This break gives the ears a chance to rest.

Throughout the entire process, periodic listening tests are conducted on the participant to note changes in the listening ability. These tests include testing the ability to hear sounds through the ear canal as well as through the bones. Minor changes and adjustments to the

program can be made as the needs of the individual are constantly being assessed and evaluated.

The Tomatis Method English Class at Kyoto Bunkyo University

Students who participate in the Tomatis Method English class are those enrolled in English 2, in place of the regular communicative English class. Participation is voluntary. Since adjustments are made weekly via the electronic ear, students must be present at each and every class. Students are selected on the basis of an initial screening. The Tomatis Listening Test is used as the main basis for this screening. A group of students who have similar listening curves are chosen from those hoping to join. In the first year, 22 students participated in the initial screening; in the second year, 36 students participated; and in the third year, 40 students participated. Each year the group is slightly different because of the nature of the listening curves of those students interested in the course. Similarly, the content of the course is also slightly different.

The program at Kyoto Bunkyo University is a modified version of the Tomatis program used at Tomatis Centers throughout Japan. This has been done to fit the program within the confines of the university's curriculum. Only one 90-minute class period is set aside each week for English. Thus, because of class scheduling constraints, it is impossible to have the students come for an intensive class of two hours per day for three weeks followed by a break and then more training. Thus the time over the course of one complete year means that the time spent with the electronic ear machine is reduced from the average 30 to 60 hours to fewer than 39 hours.

The filtering process has also been modified for the Kyoto Bunkyo program. Whereas most standard programs include a filtering of sounds up to 8000 hertz, the sounds Kyoto Bunkyo students listen to are filtered up to only 4000 hertz. As the filtering occurs through each electronic ear machine, the filtering and adjustments are made on all the members using one machine at the same time. We determined that the 4000-hertz level is a safe and effective level to which students can listen in a group setting. It is also a level appropriate for North American English, which is the target language used for the Tomatis Method class. In some cases, the 8000-hertz level needs more individual attention, which is impossible in a group or class setting of this type. During the first two years of the Tomatis Method class, we have found that the students have shown enough improvement to warrant the continuation of this level of filtering.

The actual program at Kyoto Bunkyo University consists of two phases that are divided over the two semesters. The first semester is, generally speaking, the passive phase where students' ears are re-trained better to hear North American English sounds. The students listen to approximately 17 hours of filtered and non-filtered sounds, much less than the standard program of up to 30 hours of tapes. Tapes used include the English version of Antoine de

Saint-Exupery's *The Little Prince.* This is the text used for filtering the sounds up to the level of 4000 hertz. In between the filtered tapes, students listen to various tapes of Mozart's music. After the first four weeks of filtering, students read a child's story in Japanese. During the reading, music of Mozart is played softly in the background and students are able to work on their posture and voice. In the second year of the program, a children's story in English, Shel Silverstein's *The Giving Tree,* was also used. Non-filtered tapes of American and Canadian male and female voices are used for text repetition.

Listening tests were administered at the end of the first term to determine the effectiveness of the training. In both years, there was a noted difference and improvement shown in the test results of the students. In the second year, the students' listening results showed that of those who had experienced a selectivity problem, a problem where the listener has difficulty determining the difference between two sounds, all had totally eliminated that problem. When a selectivity problem is eliminated, sounds in all ranges can be heard clearly.

The second term is a more active period for the students. In the first year, students listened to only 90 minutes of filtered English. This time was increased somewhat in the second year to accommodate the needs of the students enrolled. Text repetition and music tapes were used both years. Mozart was the only music used in the first year, but Gregorian Chant along with children's songs with lively tempos were used in the second year. In the first year's program, students were exposed to conversation practice for twelve hours. During that time, music of Mozart was played in the background. For the second year, students experienced fewer than six hours of conversation practice. At the end of each year, all students have participated in the ten minute paired oral interview required of all Kyoto Bunkyo University students. All students were able successfully to complete this interview.

Findings within the Tomatis Classroom

Objective Findings

Listening examinations were administered to all students enrolled in the Tomatis program. The listening test that was chosen as a measurement tool was the Second Level English Proficiency Examination approved by the Ministry of Education. This examination was chosen because it is considered to be at an intermediate level and is a good marker for preparation for university entrance examinations. Also, the examination is rather short in duration, so it does not interfere too much with classroom time. The listening exam used is divided into four parts, with five questions in each part for a total of twenty possible points. In the first section, the students must listen to a description and choose the picture that best fits it. The second section is a dialogue between two people, and the students must choose the best response to complete the dialogue. Usually the dialogues are only four or five lines. The third section is a short passage of fewer than fifty words. At the end of the pas-

sage, students are asked a question pertaining to the passage. The final section is similar to the third section, with the exception that the passages are longer. For each of the sections, the problems are read only once. These exams were administered several times throughout the course of the academic year : during the first week of each term and during the final week of classes. It must be pointed out that no specific study or preparation for the examinations was given in any of the classes, and the examinations themselves were unannounced events. In the first year, the students averaged 9.375 on the first test. There was a slight improvement in the second test with the average score being 9.563. The third exam showed an increased improvement with the average of the participants being 13.19. In the second year, the results of the examinations were similar. The average of the first exam was 9.562. A definite increase was noted in the second examination with the average being 11.866, and another increase was noted for the third examination with the average being 12. 562. At present these figures are being analyzed and compared with the control group. It was noticed that in the first year, the level of improvement as noted by the average of the scores of the Tomatis group surpassed the control group, which consisted of all English 2 students. It remains to be seen if the same will be true for the second year of the program, but all indications seem to show that there is some difference.

The significant increase in the average of the scores at the beginning of the second term for the students who participated in the second year of the program corresponds to the results of the Tomatis Listening Tests administered at the end of the first term and beginning of the second term. It was noted at that time that no student was categorized as having selectivity problems. A student's suffering from problems of selectivity can be interpreted as a curtain being drawn across the sounds of communication. Students who experience this have difficulty distinguishing differences in sounds and pronunciation variations in not only the target language but also their native language. With the selectivity curtain opened, the students' overall listening ability showed improvement.

At present we are conducting a longitudinal study to see if the students who have participated in the Tomatis class will continue to improve their listening ability, retain their listening ability, or regress after the Tomatis experience. A longitudinal study conducted on Canadian children with learning disabilities found that students who participated in Tomatis training were able to improve their verbal skills while undergoing the listening training, where the control group did not experience any significant improvement. However, once the Tomatis group was integrated with their peers and the training stopped, their level regressed to one much lower than the control group. (Kershner, et al, "Two-Year Evaluation of the Tomatis Listening Training Program With Learning Disabled Children") We determine to ascertain if there is a similar finding among the students at our university.

Subjective Findings

Subjective findings are very difficult to assess from an academic perspective. However, they are very important in assessing individual progress in the Tomatis program. It is important for participants to understand the changes that are taking place, and if the participants desire to continue to progress or maintain the results that they have attained, they must assume responsibility for their development after use of the electronic ear machine is discontinued. Students are asked questions after the program to see if they truly can tell a difference in their listening ability and pronunciation. On an empirical level, many are reticent to state that they have noted a change; however, on a more quantitative level, there has been a change—whether they realize it or not. This was quite apparent in the second year of the program when none of the students exhibited selectivity problems. The same cannot be said for the first year program in that two students still had selectivity problems at the end of the program.

Furthermore, several students noticed that their voices were more resonant. Many also noted a change in their pronunciation. One student was even told when visiting a foreign country that she could not possibly be Japanese because her English pronunciation sounded like that of a North American native speaker. Almost all students noted that they found the class relaxing and enjoyable. Stress often found when attempting to communicate in a foreign language seemed to be reduced. A few students even said that although they had disliked English classes before, they had grown to like both it and speaking in English. Communication in English became easier because they were able to hear words and sounds that they had previously not been able to hear. A few students also stated that they felt they had become better communicators in Japanese because they felt they not only listened to others better but also spoke in a more resonant voice to which others enjoyed listening.

Of course, these remarks are only subjective, but quite important in evaluating the Tomatis Method Course. Many students also commented that they wished they could continue the Tomatis Method class in the third year. Many stated they wished their peers could also participate in such a course. Unfortunately, because of time limitations, this is not possible. So the question becomes one of how other students can also benefit from what has been learned from the Tomatis Method English class.

Beyond the Tomatis Classroom

As stated previously, at this time only sixteen students are able to participate in the Tomatis Method English class each year. In order to obtain optimum results from the electronic ear machine, only eight headsets are connected to one machine. Kyoto Bunkyo University has two electronic ear machines, and both are used simultaneously, allowing for sixteen participants. Both machines can be set at different settings

to accommodate for slight variations within the group of sixteen students, provided a trend can be noted among both groups of eight participants. In general, class settings and adjustments are made based upon the class trend in the listening curves. Thus, students with individual needs are not considered good candidates for the Tomatis Method English class. Such students might include those with severe hearing impairment, those with epilepsy, and those who have chronic ear problems such as middle ear infections or ringing in the ears. So how can the students who do not or cannot directly participate in the Tomatis Method Class benefit directly or indirectly from that which is learned from the Tomatis Method? Some ideas will be considered in this section.

Listening Ear

As stated above, almost all the students participating in the Tomatis Method notice an improvement in their listening ability. Via the use of the electronic ear, the strengthening of the language ear, or the right ear, is possible. Research has suggested that the best ear to use when one wants to retain logical information is the right ear (Campbell, *100 Ways to Improve Teaching Using Your Voice and Music,* p. 19), and this is why the electronic ear is used to strengthen the right ear. Participants in the class are able to use their language ear to its fullest. This is not so for students who do not participate in the class. Most students do not know that the right ear is considered to be the language ear, and they do not know if that ear itself is the dominant one when they listen to others speak. In order to learn which ear is dominant, students participating in the regular English class are placed in groups of three. These groups are scattered throughout the classroom, and each group is given two different fables or stories to read that are fairly short and simple in content. Two students are readers, and one student is the listener. The listener sits about one meter away from, and in between, the two students who are reading the different stories. The readers are requested to read the stories in a normal voice and at a normal speed. The readers read their stories simultaneously for approximately three minutes. Thus the listener is being supplied different information in each ear. At the end of the three minutes, the listener is asked to repeat as much of the stories back to the readers as he or she can. The story that the listener is able most accurately to reproduce is the side that is the "listening ear" for that student. This information is quite valuable not only for students of a foreign language but also for communicators in their mother tongue. By ascertaining which ear is the dominant ear, students can become better communicators themselves. For example, they can make certain that they are using their listening ear when using the telephone, or they can choose an appropriate seat in a lecture hall so that their listening ear is closest to the speaker. In interview situations, they can help reduce communication problems by making certain their listening ear is turned toward those with whom they are commu-

nicating.

Understanding which ear is important for listening is important not only for the listener but also for the speaker. When giving instructions, or when speaking with students in the classroom, it is optimal for the speaker to consider the listening ears of the students. I personally have found that when I am not standing in the middle of the classroom at the lectern, I have to repeat myself less if I am standing towards the students' right ears. This is very helpful in saving time and energy in giving instructions and reducing the stress of the listeners of the second language.

Communication Environment

Students participating in the Tomatis Method class state that they find communicating in English enjoyable and easier after attending the class. Of course, there are several reasons for this subjective evaluation on the part of the students. The class is limited to only sixteen members, and all of the students are there because they want to improve their English or listening ability. The motivational factor is quite strong on the part of all the students, and this is apparent in the lively communicative atmosphere of the class. When the students are communicating and discussing the various topics provided for them, they are wearing their headsets and speaking into a wide microphone that picks up the voices of the other students. Also, while they are speaking with each other in English, unfiltered Mozart music is played and can be heard at a low level through the headsets. The music is used for several reasons. One reason is to help improve the rhythmic quality of the spoken language. It does seem that when music is played softly, students seemed more relaxed and are willing to vocalize their opinions. It is as if the music provides support for the speaker. In the regular classroom, I have also begun to introduce various types of music during the conversation time. Depending on the music used, students can become very excited and animated. They appear to be caught up in the lively rhythm of the music. When the music is not so lively, the students seem to slow down, and their conversations become somewhat stilted. The music is able to provide support for them. Though played softly, the music covers up the conversations of other groups, and the students can discuss their topics among themselves more confidently.

Music usage in the classroom is suggested not only by proponents of the Tomatis Method but also by those who follow Georgi Lozanov's Suggestology and Suggestopedy method. Lozanov's method of suggestopedic learning techniques was first used in foreign language teaching. Lozanov created a method that can be used to increase the ease and joy in learning, and this method focuses on both the conscious and unconscious perceptions that direct learning. His techniques are based on the idea that learning is accelerated when it occurs through personal experience and multisensory integration, and the use of music integrated into the foreign language classroom is just one aspect of the Lozanov method. (Campbell, *Rhythms of Learning,* p. 228)

Considerations for Future Study

As more qualitative evaluations of the students have yet to be taken from those participating in the regular English curriculum classes, questionnaires will need to be used to ascertain if the students can sense a difference when using various techniques. Also, a complete analysis of the longitudinal study is not complete at this time, but this may also shed light on the differences between those participating in the Tomatis program and those participating in the regular English curriculum at Kyoto Bunkyo University. Billie Thompson sums up the Tomatis Method simply by stating the following:

> The Tomatis Method accomplishes specific tasks with remarkable effectiveness: it evaluates the ability to listen, stimulates the auditory system, provides motivation to listen, develops right audio-vocal control, develops a supportive listening environment, develops a supportive listening environment, and develops the ear-voice relationship essential to receive and self-monitor speech. (Thompson, "The Tomatis Method and Empowering Learners", p.290)

Ms. Thompson further states that students can be empowered by becoming connected to their natural rhythms of learning. I would like to go one step further and state that educators can help in this empowerment by learning about the importance of both the individual rhythms of each student and the learning environment that they create in the foreign language classroom. Through a continued study of the Tomatis Method and its potential in the university foreign language curriculum, it is my hope to continue in this quest to define better what is the best environment and methodology for all students to learn communication skills in a foreign language.

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