

# **Listening Training and Literacy: A Pilot Program at Alpha-Toronto**

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## ***Introduction***

*Alpha Toronto is a French speaking literacy program (alphabétisation populaire) sponsored by the Province of Ontario that operates in Toronto. In 1992, The Listening Centre and Alpha-Toronto decided to collaborate to offer a listening training program to Alpha Toronto learners and practitioners. This collaboration lasted three years. To the best of my knowledge, this was the first time that such an experience was attempted.*

*The following is a description of this collaborative work and the results obtained in 1992, the 1<sup>st</sup> year of this 3-year pilot program. This report was published in French in the “Cahier de Formation #1, L’alphabétisation Populaire” co-authored by Micheline St-Cyr, Paul Madaule and Andree Thouin, in 1994.*

*Since that time, the technology and audio equipment to implement listening training programs has improved. Programs are usually shorter, more user-friendly and easier to implement (see [www.listeningfitness.com](http://www.listeningfitness.com)). However, since the Alpha Toronto project, no more listening training programs applied to literacy have been developed. We hope that the results presented below will generate a renewed interest for the use of listening training in the field of literacy.*

## ***I/ Listening : a background***

### **• The development of listening**

The ear is the first sensory modality to develop. At five month in-utero, the fetus is already completely formed and the auditory nerve is ready to transmit sound information to the brain. This primacy of the auditory system makes it the basic mechanism involved in communication, starting with speech and then with written language, the graphic translation of the sounds of language.

Listening is the ability to attune to the sounds we want to hear and leave aside the others. Listening, for example, makes it possible to carry out a conversation in a noisy room, such as a restaurant. Hearing and listening are two very distinct functions. Not being able to listen is hearing too much: it is hearing everything around us and not being able to focus on what we want to hear. Many hear, few know how to listen.

Listening begins to develop pre-natally. The unborn child starts to “shape” his hearing to

the sounds of his mother's voice. This sets the stage for the integration of certain aspects of language, its rhythm, specific musicality and intonation. In other words, the unborn child learns to listen to the music of his mother tongue.

During the early childhood the ear continues to adapt to the sounds specific to the language of the child's surroundings. It is during this time that children keep attuning their auditory system. In other words, they shape their listening to the sounds of the language used around them.

The speed with which the child learns to speak has always fascinated parents and specialists. To understand this phenomenon, it is necessary to understand that the ear and the nervous system of the child are already trained to integrate the sounds, rhythms and inflections of the language long before she is able to emit the first words. Children use babbling, repetition and doubling of the sounds and words as a way of shaping their listening and their voice to the language that surrounds them.

During this period, several factors can affect, or even interrupt, the process of integration of language, starting with a history of ear infections (otitis media). More than 60% of children who present language-related learning difficulties suffered from chronic ear infections during their childhood.

The level of noise in the house and the family atmosphere can also affect the listening function. The television that is constantly turned on, parental disputes – any situation seen by the young child as unpleasant or upsetting - forces him to protect himself, that is to say, to disconnect his listening. It will be then quite difficult, perhaps even impossible, for him to re-connect when he is later asked to pay attention at school.

- **Listening and Bilingualism**

A bilingual environment may also affect the child's development of listening.

Because each language has its own acoustic characteristics, the child needs to be able to establish a separate listening "channel" for each language: the English one and the French one, for instance. If, during the period of integration of language, parents, teachers and others speak the languages with difficulty, or with an accent – the listening channels may be confused. The child will be, like a foreigner, "ill at ease" in each one of these languages. In other words, it is preferable that each of the parents speaks in his/her own language even if this means that the child may not be totally fluent in the language spoken at school at the time she enters kindergarten. The brain of the child can deal with several languages as long as they are perceived with clarity. If they are perceived with distortion, or in other words, if the channels are mixed, the brain gets confused and learning becomes a challenge.

- **Listening and Learning Difficulties**

While the problems due to the mixing of the listening channels may be surmounted in regards to verbal expression, its graphic translation – reading and writing – is more likely to raise difficulties. If this difficulties are not detected in early grades, the school and the family may conclude that “he doesn’t have the aptitude for learning” or “she doesn’t have the brain for it..” leading to a possible early drop out of school. If schooling is not interrupted, reading and writing are not likely to ever be properly integrated and the school years will leave an aftertaste of failure for the learner. Systematic early detection of learning disabilities in the school system is a relatively recent phenomenon. Many adults struggled through school, or gave up learning to read and write earlier on and have never been detected. Many still believe today that written language is not accessible to them - they still experience this after-taste of failure.

Many adults who need to go back to studying, or who have to read and write on their jobs, are faced again with the old, familiar challenges of their school age. These problems may have been forgotten for a while but they have never disappeared. Things become increasingly difficult as one’s listening skills tend to “harden” or to get more “rigid” with age, making it more and more difficult to pay attention, to concentrate and to memorize. All this is reinforced with the lack of self-confidence and negative attitude towards “mental” or “intellectual” activities – this old failure after-taste once again.

A listening training program is then necessary to stimulate and exercise the weakened listening function in order to shape or re-shape listening and establish or re-establish the proper language channels. Such an intervention is the most effective way to prepare candidates for a literacy program.

## *II/ Listening Training*

The listening training program that we designed for the Alpha-Toronto project and describe below is based on the techniques developed by Dr. Alfred Tomatis, a French physician, ear, nose and throat specialist and a pioneer in the field of listening and sound stimulation.

The training consisted of 3 levels of intervention: the sound stimulation program, group workshops and progress evaluation.

- **The Sound Stimulation Program**

The program consisted of 50-60 hours set over ten weeks starting with 2 hours per day during three weeks (intensive session) and followed by 2 hours per day few times per week over seven and a half weeks (non-intensive session).

During these sessions participants received through headphones the sound information modified by corrective audio-device called an Electronic Ear which includes a microphone, amplifiers and filters. The purpose of the Electronic Ear is to modify the sound information to produce an

exercising of the listening function: the listening training. There are two types of training sessions:

### **- Passive Listening Training Sessions**

The participants hear classical music filtered at various frequency levels or chants. Filtered music gives a regain of energy to those who feel tired, those who tire easily or those who have difficulty maintaining their attention for extended periods of time (for instance, for a duration of the classes). The chant helps to relax those who feel stressed, nervous, irritable, those who have a hard time slowing down. During these sessions it is not necessary to concentrate on the sound source. While listening to the music, students don't have to actively pay attention to it. They can be engaged in individual creative activities such as drawing, painting, playing social games (cards) or talking to each other. Sleeping during this part of the program is also a possibility.

The purpose of this "passive" phase is to "open" the ear to the reception of the complex sounds of language with no distortions at all. It helps to improve auditory processing, attention span and concentration. Because the sound messages are perceived with more clarity, it is easier to interpret them and to retain them. Thus, both comprehension and memory are improved as well.

### **- Active or Audio-Vocal Training Sessions**

These sessions consist of a repetition of singing exercises (humming/chanting with closed mouth and then with open mouth) and repetition of words and short sentences. During these exercises the voice is received by the ear after having been modified by the Electronic Ear. Towards the end of the program, reading-out-loud sessions are introduced.

The primary goal of audio-vocal exercises is improved voice quality and enriched timbre (humming/chanting sessions). As the voice becomes enriched, repetition of pre-recorded words and phrases is introduced to work on the phonemes and the rhythm specific of the language of the participants (French for Alpha Toronto). With an improved quality of voice and a well controlled rhythm reading improves as well.

- **Group Workshops**

*Each group workshop consists of 5 short sessions (15 minutes in duration) during which the instructor leads the participants through some listening and voice exercises. These sessions are done in small groups (5-8 participants).*

#### **- Workshop #1: Work on Breathing**

Breathing is one of the basic elements of the listening posture and audio-vocal posture. The breathing exercises are done during certain passive sessions and can be continued at home.

#### **- Workshop #2: Work on the Listening Posture**

We do not listen only with our ears but with our whole body. The purpose of the workshop is to learn the body posture that maximizes one's listening ability.

### **- Workshop #3: Work on the Voice**

The listening posture and the audio-vocal posture share many similarities because talking is listening to oneself talking. During this workshop, the participant learns to produce bone conducted humming sounds and vocalization.

### **- Workshop #4: Work on the Speech**

This workshop is to elaborate on how to articulate well while maintaining good quality audio-vocal control.

### **- Workshop #5: The Reading-Out-Loud Exercise**

This workshop is a recapitulation of previous exercises and presentation of the reading-out-loud exercise which will have to be done daily following the program. For this exercise, the participant has to place his right hand at approximately three centimeters in front of the mouth, like a microphone. This is to send more volume to the right ear which is linked to the left side of the brain, the part of the brain most involved in the processing of language. The reading-out-loud exercise is to replace the corrective effect of the Electronic Ear and makes it possible to continue the listening training at home.

## **• Progress Evaluation**

The evaluation of progress of the Alpha Toronto participants was done using progress questionnaires followed by interviews and recordings of their voice at the beginning and at the end of the program.

### **- Initial Assessment**

For the initial assessment, the program director used the Tomatis Listening Test and a questionnaire filled out by the candidate to determine if the program can be beneficial and what are the benefits one can expect. He also evaluated the motivation of the candidate and explained the program.

### **- Control Interviews**

The control interviews were planned in the middle of the program (after 60 sessions, that is to say, at the end of the three intensive weeks) and at the end of the program (after 120 sessions, the eleventh week). They consisted of a review of the participant's experience and changes throughout the program; how these changes affect his life, work and his participation in Alpha-Toronto courses.

### **- Recording of the Voice**

It consisted of the recording of a short sample of the participant's spoken voice and reading of an extract from 'The Little Prince' which was carried out at the beginning and at the end of the program. The comparison of the two recordings emphasizes the changes occurring in the program: confidence of the participant, the volume and quality of the voice and its rhythm and intonation during reading.

## **- Program Evaluation Questionnaires**

Evaluation Questionnaires were completed by the participant at the end of the program and four months later.

## ***III/ Results***

In 1992, first year of implementation of this program at Alpha-Toronto, seven adult learners, three tutors and two coordinators participated in the complete program. Out of twelve people, two did not finish the program – one for professional and one for personal reasons.

### **• Results – General**

The listening training program was experienced by most as a very personal and often profound experience which effected their attitude towards life, and their physical, emotional and intellectual potential.

At the beginning of the program, some commented on a disturbance in their habits and behaviors, or a resurfacing of old ‘hang-ups’ followed by a newly felt sensation of “inner balance”. In addition to these, they noticed that auditory acuity and clarity, visual tracking, sleep and creativity, were also modified.

### **• Results - Case-by-Case**

Here is a list of the benefits (a) reported by the participants themselves on the evaluation questionnaire filled for Alpha-Toronto or (b) observed by people other than Alpha-Toronto. Such a list obviously cannot give a full account of the dynamics of the evolution of the participants or of the importance of these benefits for the life of each participant.

1 (a) Improved posture, development of the voice, more sustained attention span when listening, more organized way of looking at things, capacity to do many more things in one day and of more reading, better concentration, better ability to breathe during reading-out-loud exercise, better comprehension of written language;

2 (a) Increased self-comprehension, better comprehension of text, better comprehension of French, easier to learn;

(b) better voice (from a particularly weak voice and nasal production to a voice with a good strength and improved resonance), better pronunciation, better concentration, better posture (from arched to straight posture), improved ability to interact;

3. (a) Improved posture, clearer and richer voice, marked increase of energy level, able to fall asleep without total silence, improved auditory acuity, development of a musical sense, better rhythm of reading, sensitization to the importance of listening;.

4. (a) better concentration, better memory, better comprehension of text, better comprehension of French, better reading, better eyesight;  
(b) increased confidence;
5. (a) better comprehension of English, better concentration, better writing;  
(b) more resonant and warmer voice;
6. (a) restored ability to sing that has been lost as a result of a traumatizing event, improved concentration, better ability to synthesize thoughts and ideas in writing, sensitization to the importance of listening;
7. (a) improved long-term memory;  
(b) softer volume of voice (from a particularly strong voice);
8. (a) improved writing skills, better comprehension of text, better comprehension of languages (French as well as English);  
(b) softer volume of voice (from a particularly strong voice);
9. (a) softer volume of voice (from a voice that is a little too strong to a 'normal' voice), greater auditory sensitivity, improved self-listening, improved comprehension of the link between listening and reading;
10. (a) improved reading, improved language comprehension;
11. (a) improved breathing, better posture, better reading-out-loud, better concentration, better comprehension of text, better comprehension of French;  
(b) increased self-confidence;
12. no improvement to report.

#### Bibliography:

Madaule, Paul: When Listening Comes Alive: A Guide to Effective Learning and Communication. Norval: Moulin Publishing, 1993.

Tomatis, Alfred A.: The Ear and Language. Norval, Moulin Publishing, 1996.

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