2/2010

Listening Education

Editor: Margarete Imhof

International Listening Association

Listening Education

Editor

Margarete Imhof

Johannes Gutenberg University, Mainz / Germany

Editorial Policy

Listening Education aims to enhance the practice in listening education by providing a wide range of research and practical information through the publication of papers concerned with the description of methods for teaching listening in primary, secondary, and post secondary education and with the analysis of the pertaining research. This online journal will recognize that many disciplines – education, communication science, psychology, sociology, anthropology, - have important contributions to make to the achievement of its goals, and the Editors welcome contributions from them. The online-journal invites papers which offer descriptions of classroom practice, empirical research, and reviews of high quality.

The papers are searchable in three categories:

a. Teaching listening: Methods for the classroom
b. Research on teaching listening
c. Reviews of material and textbooks suggested for teaching listening

Papers should be concerned primarily with listening education whatever grade, level, or purpose.

Guide for Authors

Authors are requested to submit their papers electronically by using the links provided on this Listening Education Author website.

Submission of Manuscripts

Carefully consider the category in which you wish to submit your paper. Each category follows a special format which you can inspect if you follow these links:

Teaching listening: This is how to teach listening in the classroom
Research article on teaching listening
Review of teaching material

Submission of an article implies that you own the copyright for the work and that it your own creative work. Please follow the instructions as you prepare your manuscript. Compliance with the instructions will ensure full searchability of your paper.

Contents

Occupational and Physical Therapy Students' Conceptualizations of Listening and Learning

to Detect Non-Verbal Emotional States

Janis Davis, PhD, OTR, Teryn Ebert, OTS, Erin Meredith OTS, Rachael Rama, OTS, Georgeanna White, OTS

Rockhurst University, Occupational Therapy Education Program

Correspondence should be addressed to:

Janis Davis, PhD, OTR
Dominican University of California
50 Acacia Avenue
San Rafael, California, 94901
415-458-3788
Fax: 415-458-3744
janis.davis@dominican.edu

Summary: This study examined occupational and physical therapy students' conceptualizations of listening using the Imhof-Janusik Listening Concepts Inventory and efficacy of training for detection of non-verbal emotional states using the Micro-Expressions Training Tool (METT). A treatment and control group design with pre and post testing was used with 52 first year students in occupational and physical therapy education programs. In terms of conceptualizations of listening between the two professional groups of students, occupational therapy students had slightly higher means than physical therapy student on three out of the four conceptualizations of listening categories. Students trained to detect non-verbal emotional states demonstrated a significant difference in performance at post testing than did non-trained students.

Key Words: Conceptualizations of Listening, Occupational Therapy, Listening Education

Introduction

Effective communication between medical professionals and their clients is a critical aspect of successful healthcare. Research shows, however, that healthcare recipients are often dissatisfied with their healthcare provider's communication skills (Darragh, Sample, & Krieger, 2001; Fassaert, van Dulmen, Schellevis, & Bensing, 2007; Iezzoni, 2006). The

concept of listening in healthcare has been raised to a significant level of importance by the U.S. government (U.S. Department of Health and Human Services 2010), healthcare researchers, and listening associations (International Listening Association; International Listening Leadership Institute). Healthy People 2010 included better listening on the part of healthcare professionals as an objective to be met by the current year. The objective seeks to increase the number of persons who report that their healthcare providers have satisfactory communication skills and specifically that healthcare professionals listen carefully to their patients. This objective has been retained for Healthy People 2020 (U.S. Department of Health and Human Services 2020).

In light of the findings on healthcare professionals' communication skills and the U.S. government objectives around listening, it is critical that educators in all healthcare professions attend to the listening knowledge, beliefs, and skills for their students and train accordingly. Imhof and Janusik (2006) define listening as a cognitive process where one evaluates and responds to spoken messages. Going a step further, therapeutic listening is a concept often discussed in healthcare literature and is referred to in occupational therapy as fundamental to "the initiation, maintenance, and preservation of the client-therapist relationship" (Taylor, 2008, p. 162). Therapeutic listening aims to provide the client with support and validation for their perspective. Rogers emphasized the importance of focusing attention and awareness on the client and listening to him or her with interest and without interruption (Rogers, 1951). Current research in healthcare confirms the importance of Rogers' theory and suggests that active, therapeutic listening is a prerequisite for successful healthcare outcomes (Fassaert et al., 2007).

Many healthcare professionals receive insufficient training in the development of listening skills and especially in the area of identifying nonverbal emotional states (Bailey & Cohn, 2001; Rautalinko, Lisper, & Ekehammar, 2007; Ustun, 2006). There is also limited research on healthcare professionals' beliefs or conceptualizations of listening in a healthcare context. In the fields of occupational and physical therapy, there was no research found on student and practitioner beliefs about listening and there is little research in the occupational and physical therapy literature on students' abilities to detect non-verbal emotional states. It is important for educators in professional healthcare programs to know how students conceptualize concepts essential to their profession. Blumer explains the importance of this process as human beings act toward concepts (such as listening) based on the meanings that the concepts have for them (1969). Therefore it is important to identify students' beliefs about listening if educators are to facilitate improvement in listening behaviors. In addition, it is important to verify if students can be taught to listen and interpret non-verbal behavior in clients.

Importance of Effective Listening

There are more than 50 years of research supporting the benefits of good communication between healthcare providers and clients (Iezzoni, 2006). Mounting evidence show healthcare providers with good communication skills can enhance clinical outcomes as well as increase clients' satisfaction with treatment and healthcare experiences (Bennett, Switzer, Aguirre, Evans, & Barg, 2006; Kaplan, Greenfield, & Ware, 1989; McKinnon, 2000; Stewart et al., 2007; Stewart et al., 2000). Yet Fassaert et al. (2007) suggest general practitioners miss opportunities for effective communication and therefore miss opportunities to identify emotions.

The literature also reflects clients' frustration and dissatisfaction in communicating with healthcare providers (Darragh et al., 2001; Fassaert et al., 2007; Iezzoni, 2006). Iezzoni (2006) described how people with disabilities reported a higher dissatisfaction in communication with healthcare providers than did people without a disability. Participants with chronic pain reported feelings of frustration when providers did not listen to them and understand their condition (Fisher, Emerson, Firpo, Ptak, & Wonn et al., 2007). These studies emphasize the importance of listening to the client and the need for effective communication listening training for healthcare professionals.

Healthy People 2010 Objectives 11-5 and 11-6 specifically highlight the benefit such training would provide in patients' satisfaction with their healthcare providers communication skills. A midcourse review of the Healthy People 2010 objectives disappointingly indicates the proportion of patients who rated satisfaction with provider's communication skills has decreased one to two percent between 2000 and 2001.

Beliefs about Listening

Beliefs about listening have not been adequately addressed in the healthcare literature. Scholars in the field of communication studies have identified beliefs, conceptualizations, or modes of listening that can be applied to research in healthcare contexts (Imhof & Janusik, 2006). Imhof and Janusik have identified four modes of listening. These include listening as organizing information, listening for relationship building, listening as learning and integrating information, and critical listening (2006). These researchers described listening for organizing information as a cognitive process which focuses on information processing. Listening for relationship building encompasses behaviors which focus on interpersonal situations and caring. Listening as learning and integrating information refers to the process of application and analysis of information. Critical listening is used for relevant mutual persuasion and is utilized in personal communication situations.

Non-Verbal Emotional States

An important part of communication and listening is the ability to determine the emotions of others. In healthcare professions emotions will often surface during the practitioner-patient encounter. Ekman suggests that a practitioner's ability to recognize and detect facial expressions, and especially the harder to detect micro-expressions, is informative and may lead to more effective treatment (2004). The Occupational Therapy Practice Framework (American Occupational Therapy Association [AOTA], 2002) emphasizes the importance of nonverbal communication in carrying out the steps in the client centered practice process. It is within the scope of occupational therapy to help identify the client's priorities both expressed and non-expressed. Physical therapists are also charged by the American Physical Therapy Association (APTA) with communicating effectively with clients and using unconditional positive regard as it relates to patient and client care (American Physical Therapy Association [APTA], 2010).

Listening Training

Multiple studies support the effectiveness of listening training in medicine yet little research exists on the effectiveness of listening training in allied health fields such as occupational therapy (Fassaert et al., 2007; Gard, 2004; Ustun, 2006). Occupational therapy students' abilities to clinically reason and become more culturally sensitive after receiving training in clinical reasoning was explored and it was found that identifying emotions is part of clinical reasoning (Bailey & Cohn, 2001). As Bailey and Cohn state, "Only if practitioners listen to their clients' perceptions will they be able to join their clients in a collaborative partnership to design a successful intervention" (Bailey & Cohn, 2001, p. 37). Although this was identified as an important element, the instruction did not include specific objectives related to teaching students how to become better at identifying emotions not verbalized by patients.

<div align="center">

Research Questions and Hypotheses

</div>

The purpose of this study was twofold: a) determine if training is effective in building occupational therapy student skills in the recognition of nonverbal emotional states; and b) examine occupational and physical therapy students' conceptualizations of listening. This research is foundational to improving listening behaviors in students. Using a pretest-posttest approach, the project posed two research questions:

Research Question 1: Will there be a difference between the scores of trained and non-trained students on detection of nonverbal emotional states?

Research Question 2: Will participants who accurately detect nonverbal emotional states conceptualize listening as relationship building? It was hypothesized that occupational and

physical therapy students would have differences in beliefs about listening due to the differences in their curricula and in particular, the fact that occupational therapy students are required to take more psychology courses than physical therapy students. It was also hypothesized that if students are trained using a valid methodology, they can learn how to detect non-verbal emotional states. These research questions build on previous research on listening and outcomes of listening in other disciplines such as medicine and nursing (Bensing, Schreurs, De Rijk, 1996; Kaplan, Greenfield, & Ware, 1989; Nishizawa, Saito, Ogura, Kudo, Saito, & Hanaya 2006).

Method

A quasi-experimental, pretest-posttest design was used and quantitative data was gathered to address the research questions of this study. Data was collected for two groups, and the results were compared between groups and between the pretest and both posttests for each group.

Participants

Participants for this study were recruited from a Midwestern university using purposeful sampling from graduate programs in physical therapy and occupational therapy. All students in the first year of their occupational and physical therapy programs were invited to participate because these groups would not have received listening training in their healthcare curriculums. A static-group comparison was used to select the groups because they exhibited characteristics relative to the phenomenon under investigation (Campbell & Stanley, 1963; Wiersma, 1995). An IRB proposal was approved and permission given by course instructors to solicit participants for the control group from a course in physical therapy and for the treatment group from a course in occupational therapy. Both male and female students were recruited for study participation. Participants were verbally informed about the study and consent forms were completed and signed by all participants. Through this recruitment method, a control group of 31 physical therapy students and a treatment group of 26 occupational therapy students were selected for a total of 57 participants. The gender breakdown for the sample included 23 women and three men from the occupational therapy group and twelve women and 19 men from the physical therapy group.

Instruments

The use of video technology is helpful in both training and feedback for occupational therapy (Pierce, 2005). A useful tool in providing both training and feedback is interactive computer software, which can provide real-time feedback (Rosenberg, 2006). Feedback has been deemed an important part of training as found in a study conducted by Elfenbein (2006) on facial expressions. In relation to Research Question 1, for this study the Micro-Expressions Training Tool (METT) developed by Ekman (2004) was used, which is a computer training program on emotion recognition and uses seven universally recognized

9

facial expressions. Multiple studies support the idea that there are universally recognized facial expressions (Boucher & Carlson, 1980; Ekman et al., 1987; Haidt & Keltner, 1999; Izard, 1977; Matsumoto & Ekman, 1989).

The micro-expressions the METT trains individuals to notice are sadness, surprise, fear, anger, disgust, contempt, and happiness. These eight core emotions can be expressed in $1/25^{th}$ of a second by a typical individual and are viewed as emerging emotions that people display on an unconscious level and generally want to conceal (Matsumoto & Ekman, 1989). The METT training has three parts: a pretest, a training section,review, and a posttest. Both the pretest and posttest of the METT use the same format (Russell, Chu, & Phillips, 2006). The training begins with the pretest measuring an individual's level of skill in detecting the micro-expressions listed above. Next, the software trains individuals how to detect these expressions using a process consisting of slow motion videos with explanations of the positioning of specific facial muscles used when an emotion is expressed. Next there is a practice session consisting of watching the micro-expressions at $1/25^{th}$ of a second. Trainees may stop and return to this section of the training at any time for more practice and review. Finally, trainees may proceed to a posttest to determine if their skill in recognizing non-verbal emotional states in the form of micro-expressions has improved.

Computer based training has been shown to have concurrent validity with manual facial action coding (Cohn, Zlochower, Lien, & Kanade, 1999). In addition, the psychometric properties of the METT have been established with findings indicating strong support for internal and temporal reliability of scores of the emotion recognition produced by participants (Matsumoto & Ekman, 2010).

In relation to Research Question 2, the Imhof-Janusik Listening Concept Inventory (IJLCI) was used, which is a questionnaire designed to assess how an individual conceptualizes listening. It divides certain listening-related words into four categories: Organizing Information, Relationship Building, Learning and Integrating Information, and Critical Listening. A participant chooses how similar they believe a particular word is to the term *listening*, employing a Likert scale format ranging from *identical* to *not at all similar*. The results from this assessment are then used to define a person's underlying beliefs about the process of listening. This tool can be used to further identify training development needs (Imhof & Janusik, 2006).

Procedure

All testing was done as a group in a classroom setting at the end of the regularly scheduled class period. The control group (physical therapy students) and the treatment group (occupational therapy students) viewed the METT in the pretest assessment. This took approximately 15 minutes to administer. Participants viewed 12 examples of micro expressions of discrete emotions such as happy, angry, sad, disgust, fear, surprise, and

contempt. The expressions lasted only 15 milliseconds. At the end of the assessment students received a correct score out of 12, which was interpreted as a percentage.

Next, students in both the control and treatment groups were given the IJLCI which took approximately 15 minutes to administer. Results from the IJLCI were used to determine beliefs about concepts of listening. One week later and in a group setting, the treatment group participated in the training portion of the METT. The training consisted of the use of a CD ROM with a narrator explaining the slow-motion video clip of micro-expressions. The narrator carefully explained the differences in facial expressions of each emotion so that students could learn to discriminate between the micro-expressions. This training took approximately 2 hours. After the treatment group had completed the training, they were immediately given the posttest section of the METT. This took 15 minutes to administer. The control group was given the METT that same week after a class period. Approximately 30 days later, both groups were given the posttest again to test retention of the training received by the treatment group.

Results

The computer program Statistical Package for Social Sciences 13.0 for Windows was used to analyze the scores of the instruments used in this study. Scores for the METT and the IJLCI were analyzed with an independent sample t-test. Means and standard deviations of treatment and control groups were summarized to demonstrate each group's performance at pretest and posttest. The level of significance was set a priori at p=0.01 (Portney & Watkins, 2000).

On the METT pretest, the treatment group mean of 6.96 (SD = 2.00) and the control group mean of 6.35 (SD = 1.49) were not significantly different. On METT posttest 1, the treatment group mean of 9.42 (SD = 1.77) was significantly different from the mean of 6.96 (SD = 1.87) of the control group. Posttest 2 results indicate the significance was retained across time for the trained group with a mean of 9.03 (SD = 1.50) and a mean of 7.70 (SD = 2.29) for the control group. Table 1 represents the pre-and post-training scores on the METT.

Table 1:

Pretest and posttest training scores on the METT.

	METT pretest	METT posttest 1	METT posttest 2
Control (N= 31)			
Mean	6.35	6.96	7.70
SD	1.49	1.87	2.29
Treatment (N=26)			
Mean	6.96	9.42	9.03
SD	2.00	1.77	1.50

An independent sample t-test was conducted on the METT scores to evaluate whether scores for posttests 1 and 2 were significantly different from the pretests for both the control group and treatment group. An independent t-test was also used to determine if posttest 2 scores were significantly different from posttest 1 scores. The 26 participants in the treatment group ($M = 9.42$, $SD = 1.77$) and the 31 participants in the control group ($M = 6.96$, $SD = 1.87$) demonstrated a significant difference in performance at posttest 1 (t(df = 55) = 5.06, $p < .01$); as expected, the training in detection of microexpressions improved performance on the METT. On posttest 2, trained participants retained a statistically significant improvement in scores when compared to the control group, (t(df = 55) = 2.53, p < .01).

To answer research question 2, scores on detection of non-verbal emotional states were correlated with the conceptualization of listening as relationship building with r (55) = -.19, p < .01 for all students at posttest 1 and r (55) = -.09, p <. 01 at posttest 2. A reliability analysis was performed on the results of the IJLCI to address the conceptualization of listening of occupational and physical therapy students. The same four factors for conceptualizations of listening found in the original study (Imhof & Janusik, 2006) emerged in the data. The reliability for each factor revealed internal consistency with a Cronbach's alpha coefficient reported of Organizing Information (.86), Relationship Building (.88), Critical Listening (.81), and Learning and Integrating Information (.88). Table 2 represents the mean scores for both groups on conceptualization of listening.

Table 2:

Mean scores for conceptualizations of listening.

Conceptualizations of Listening	Group	Mean	SD
Organizing information	PT	2.67	.72
	OT	2.86	.59
Relationship building	PT	2.63	.73
	OT	2.90	.71
Critical listening	PT	2.34	.72
	OT	2.30	.55
Learning & integrating information	PT	2.55	.63
	OT	2.85	.61

NOTE. PT = physical therapy student and OT = occupational therapy student

Table 2 illustrates how physical therapy and occupational therapy students were very similar in terms of their conceptualizations of listening. Occupational therapy students had

slightly higher means on three out of the four conceptualizations of listening categories. The range for occupational therapy students was a low of 2.30 on Critical Listening to a high of 2.90 on Relationship Building. The range for physical therapy students was a low of 2.34 on Critical Listening to a high of 2.67 on Organizing Information. It is interesting to note that the lowest scores for both groups were in the area of Critical Listening. Figure 1 provides a visual representation of the scores of both groups on the IJLCI.
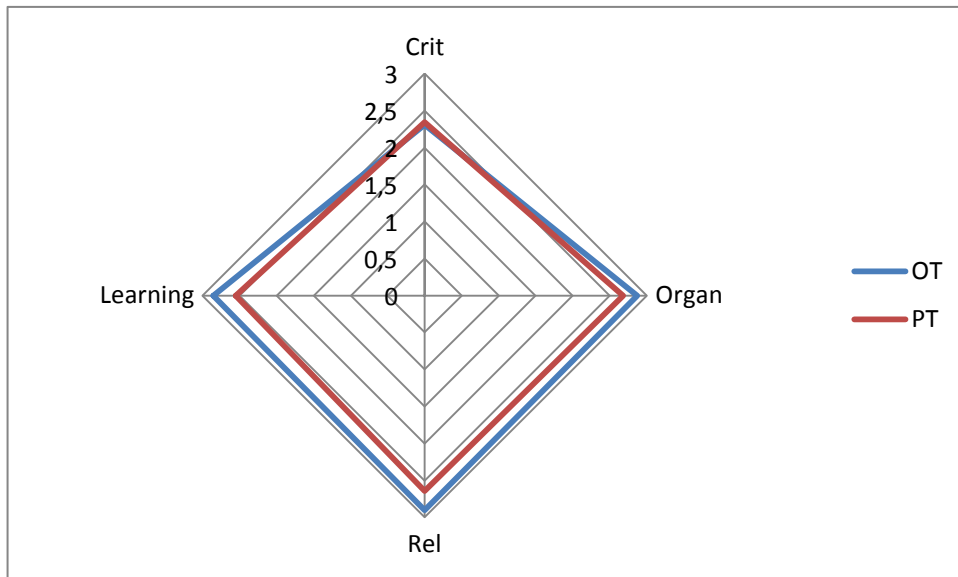

Figure 1: Representation of the mean scores on the four dimensions of listening concepts.

Interpretation and Discussion

This study had two objectives: a) to determine if training using the METT was effective in building skills in the recognition of nonverbal emotional states and b) to examine the participants' conceptualizations of listening. Two research questions were posed for this study. The first research question investigated if there was a difference in the scores of students who were trained using the METT compared to those without training. The data suggest that training can improve the ability to detect microexpresssions in others that would otherwise go unnoticed. The results also indicate that the training was retained over a period of time, in this case 30 days after training.

Results such as these may be attributed to the effectiveness of the METT as a training tool in recognizing nonverbal facial expressions. Even though participants in this study were students, this supports Russell et al., (2006) who found that patients who had schizophrenia were able to improve their emotional recognition skills after training with the METT. Elfenbein (2006) found a similar result in a study conducted on facial expressions where it was determined feedback was very important during any type of communication training. Cognitive psychology has long recognized the value of immediate feedback in skill acquisition (Anderson, 1983). Shneiderman (1997) suggests that in human-computer

13

interaction feedback that is given after each human action is critical to performance enhancement. The differences on the treatment group's pretest and posttest METT scores may be attributed to the interaction between student and computer and the immediate feedback given to students, although, a caveat to this supposition is that the interactive format of the METT has not been tested against a non-interactive format.

The second research question addressed whether or not participants who scored higher on the METT would conceptualize listening on IJLCI as more similar to the category of relationship building. In this study there was no meaningful correlation between participants who scored high on the METT and those who conceptualized listening as relationship building on the IJLCI. This was unexpected, as it was anticipated that there would be a strong correlation between participants who scored high on the METT and those who conceptualized listening as relationship building on the IJLCI. This result could be attributed to the fact that indentifying non-verbal emotional states is a discreet skill that students do not associate with relationship building. Another interpretation is that conceptualizations of listening develop early in life and do not change over time unless an intervention or event occurs that influences beliefs. Perhaps both groups of students hold beliefs about listening that correspond to the therapeutic processes of their professions, where listening to find and organize information is the first thing a healthcare professional does when they meet a patient or client.

Results from the IJLCI also showed occupational therapy students have a slightly broader view of listening than did physical therapy students. The results of this study suggest occupational and physical students may view listening differently, possibly due to differences in how healthcare relationships are conceptualized by individuals selecting these different professions. Additionally, occupational and physical students education programs have different prerequisite courses with occupational therapy education programs demanding more psychology than physical therapy programs. Future research is indicated to explore why listening conceptualizations differ between disciplines.

Implications for Further Research

Both APTA and AOTA specifically target communication skills and use of unconditional positive regard as goals of their education programs (AOTA 2002; APTA, 2010). Consequently it is imperative that the educational process, including continuing education, include effective communication training that provides concrete ways for these healthcare professionals to become effective in recognizing nonverbal cues. The METT could be incorporated into occupational and physical therapy academic curricula as well as in any setting where they practice as a way to train them in recognizing nonverbal emotions in their clients. Provision of this training would satisfy the ACOTE and APTA goals as well as

14

enhance the therapist-client therapeutic relationship. Recommendations for further research include randomization of the treatment and control group, both in selection and assignment. Also, using a finalized version of the IJLCI, once it has been thoroughly tested for validity on a larger scale, could have a greater impact on the results. The METT, while it can be administered in a group format, is designed for individual training; allowing participants to complete it at their own learning speed could alter the results.

Another area for future research may include comparing conceptualizations of listening of experienced occupational and physical therapy practitioners with those of students to help determine if job demands influence beliefs about listening. Seasoned practitioners may develop a conceptualization of listening that is more flexible due to the different types of relationships and work demands encountered in the workplace. It may also be beneficial to add a qualitative question at the end of the IJLCI that asks participants to define listening in their healthcare context. Information provided by this type of research can help clarify how listening and communicating styles differ after gaining clinical experience. Application of this knowledge can be helpful in designing effective training programs for both students and practicing clinicians.

Limitations

Because this study was specific to a single academic setting and targeted only occupational and physical therapy students, findings can only be generalized to this setting and population. Another limitation of this study is that participants were not randomly selected, nor were they randomly assigned to their respective group. Therefore, this poses concerns regarding validity as it relates to lack of randomization.

In addition, the participants were limited to 57 students. While this study is focused on communication skills for occupational and physical therapy students, choosing participants from other healthcare programs such as nursing and medicine might provide results which could be generalized more broadly to the healthcare field.

Implications for Teaching

It is argued that if educators are interested in how students' beliefs change, or how an educational experience might influence students, it is imperative to uncover students' prior knowledge, beliefs, and attitudes, expose how they influence action, and teach accordingly (Cerbin, 2000). In addition, the language used by students provides insight into their understanding of their role and actions needed within that role. Therefore, it is critical for educators to develop awareness and appreciation for the power of language and what is meant by *listening* in students' minds. Root ideas and images often drive the use of students' language and action, as these images shape, define and give meaning to everyday realities.

For educators interested in teaching listening, it is vital to understand their students' beliefs about listening if listening behavior is to be modified. The IJLCI is an effective instrument for identifying students' beliefs about listening in a healthcare context. Beliefs about listening, however, may be context dependent. Therefore it is important to elucidate this idea to students and help them think critically about their reasons for listening.

It is clear from these findings that students can learn to identify non-verbal emotional states and that the METT is a valid and reliable tool to use to teach students this skill. This skill is critical in situations when client's verbal communication may be ambiguous (Endres & Laidlaw, 2009). The ability to perceive non-verbal emotional states is essential if healthcare practitioners are to interpret the lived experiences of clients. These types of skills are at the heart of client-centered care.

References

American Occupational Therapy Association. (2002). Occupational therapy practice framework: Domain & process. *The American Journal of Occupational Therapy, 56,* 609-639.

American Physical Therapy Association. (2010). *Physical Therapist Clinical Education Principles.* Retrieved May 10, 2008, from http://www.apta.org/AM/Template.cfm?Section= Clinical_Education_Standards1&TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID=70292 .

Anderson, J. (1983). *The Architecture of Cognition.* Cambridge, MA: Harvard University Press.

Bailey, D. M., & Cohn, E.S. (2001). Understanding others: A course to learn interactive clinical reasoning. *Occupational Therapy in Health Care*, *15*, 31-44.

Bennett, I., Switzer, J., Aguirre, A., Evans, K., & Barg, F. (2006). 'Breaking it down': Patient-clinician communication and prenatal care among African American women of low and higher literacy. *Annals of Family Medicine*, *4*, 334-340.

Bensing, J., Schreurs, K., & De Rijk, A. (1996). The role of the general practitioner's affective behavior in medical encounters. *Psychology and Health*, *11,* 825-838.

Blumer, H. (1969). *Symbolic interactionism perspective and method.* New Jersey: Prentice-Hall.

Boucher, J. D. & Carlson, G. E. (1980). Recognition of facial expression in three cultures. *Journal of Cross-Culture Psychology, 11*, 263-280.

Campbell, D. T. & Stanley, J. C. (1963). *Experimental and quasi-experimental designs for research*. Chicago: Rand McNally.

Cerbin, W. (2000). Investigating student learning in a problem-based course. In P. Hutchings (Ed.), *Opening Lines: Approaches to the Scholarship of Teaching and Learning* (pp. 11-22). Menlo Park, CA: Carnegie Publications

Cohn, J. F., Zlochower, A. J., Lien, J., & Kanade, T. (1999). Automated face analysis byfeature point tracking has high concurrent validity with manual FACS coding. *Psychophysiology, 36,* 35-43.

Darragh, A. R., Sample, P. L., & Krieger, S. R. (2001). "Tears in my eyes 'cause somebody finally understood": Client perceptions of practitioners following brain injury. *The American Journal of Occupational Therapy, 55*, 191-199.

Ekman, P. (2004). Emotions revealed: Recognizing facial expression. *British Medical Journal Careers,* 75-76*.*

Ekman, P., Friesen, W. V., O'Sullivan, M., Chan, A., Diacoyanni-Tarlatzis, I., Heider, K., Krause, R., LeCompte, W. A., Pitcairn, T., Ricci-Bitti, P. E., Scherer, K., Tomita, M., & Tzavaras, A. (1987). Universals and cultural differences in judgements of facial expressions of emotion. *Journal of Personality and Social Psychology*, 53, 712-717.

Elfenbein, H. A. (2006). Learning in emotion judgments: Training and the cross-cultural understanding of facial expressions. *Journal of Nonverbal Behavior, 30*, 21-36.

Endres, J. & Laidlaw, A. (2009). Micro-expression recognition training in medical students: A pilot study. *BMC Medical Education,* doi: 10.1186/11472-69-20-9-47.

Fassaert, T., van Dulmen, S., Schellevis, F., & Bensing, J. (2007). Active listening in medical consultations: Development of the Active Listening Observation Scale (ALOS-global). *Patient Education and Counseling*, *68,* 258-264.

Fisher, G. S, Emerson, L., Firpo, C., Ptak, J., Wonn, J., & Bartolacci, G. (2007). Chronic pain and occupation: An exploration of the lived experience. *The American Journal of Occupational Therapy*, *61*, 290-302.

Gard, G. (2004). Are emotions important for good interaction in treatment situation? *Physiotherapy Theory and Practice, 20*, 107-119.

Goleman, D. (2006). *Social intelligence*. New York, NY: Random House.

Haidt, J., & Keltner, D. (1999). Culture and facial expression: Open-ended methods find more expressions and a gradient of recognition. *Cognition & Emotion*, *13,* 225-266.

Izard, C. E. (1977). *Human emotions*. New York: Plenum Press.

Iezzoni, L. I. (2006). Make no assumptions: Communication between persons with disabilities and clinicians. *Assistive Technology*, *18*, 212-219.

Imhof, M., & Janusik, L. A. (2006). Development and validation of the Imhof-Janusik listening concepts inventory to measure listening conceptualization differences between cultures. *Journal of International Communication Research, 35,* 79-98.

Kaplan, S. H., Greenfield, S., & Ware, J. E. (1989). Assessing the effects of physician-patient interactions on the outcomes of chronic disease. *Medical Care*, *27*, 110-127.

Matsumoto, D., & Ekman, P. (1989). American-Japanese cultural differences in intensity ratings of facial expressions of emotion. *Motivation and Emotion*, *13,* 143-157.

McKenna, J. (2007). Emotional intelligence training in adjustment to physical disability and illness. *International Journal of Therapy and Rehabilitation, 14*, 551-556.

McKinnon, A. L. (2000). Client values and satisfaction with occupational therapy. *Scandinavian Journal of Occupational Therapy*, *7*, 99-106.

Nishizawa, Y., Saito, M., Ogura, N., Kudo, S., Saito, K., & Hanaya, M. (2006). The non-verbal communication skills of nursing students: Analysis of interpersonal behavior using videotaped recordings in a 5-minute interaction with a simulated patient. *Japan Journal of Nursing Science, 3*, 15-22.

Pierce, D. (2005). The usefulness of video methods for occupational therapy and occupational science research. *The American Journal of Occupational Therapy, 59*, 919-925.

Portney, L. G., & Watkins, M. P. (2000). *Foundations of clinical research: Applications to practice* (2nd ed.). Upper Saddle River, NJ: Prentice Hall Health.

Rautalinko, E., Lisper, H., & Ekehammar, B. (2007). Reflective listening in counseling: Effects of training time and evaluator social skills. *American Journal of Psychotherapy, 61*, 191-209.

Rogers, C. (1951). *Client-centered therapy*. Boston, MA: Houghton-Mifflin.

Rosenberg, J. I. (2006). Real-time training: Transfer of knowledge through computer-mediated, real-time feedback. *Professional Psychology: Research and Practice, 37*, 539–550.

Russell, T. A., Chu, E., & Phillips, M. L. (2006). A pilot study to investigate the effectiveness of emotion recognition remediation in schizophrenia using the micro-expression training tool. *British Journal of Clinical Psychology, 45*, 579-583.

Shneiderman, B. (1997). *Designing the user interface: Strategies for effective Human-computer interaction*. Reading, MA: Addison-Wesley Press.

Stewart, M., Brown, J. B., Donner, A., McWhinney, I. R., Oates, J. Weston, W. W., & Jordan, J. (2000). The impact of patient-centered care on outcomes. *The Journal of Family Practice*, *49*, 796-804.

Stewart, M., Brown, J. B., Hammerton, J., Donner, A., Gavin, A., Holliday, R. L., Whelan, T., Leslie, K., Cohen, I., Weston, W., & Freeman, T. (2007). Improving communication between doctors and breast cancer patients. *Annals of Family Medicine*, *5*, 387-394.

Taylor, R. R. (2008).The Intentional Relationship: Occupational Therapy and Use of Self. Philadelphia: F. A. Davis.

U.S. Department of Health & Human Services. Progress toward healthy people 2010 targets. Retrieved March 29, 2008, from http://healthypeople.gov/data/midcourse/html/focus areas/FA11ProgressHP.htm.

Ustun, B. (2006). Communication skills training as part of a problem-based learning curriculum. *Educational Innovation, 45*, 421-424.

Wiersma, W. (1995). *Research methods in education: An introduction* (Sixth edition). Boston: Allyn and Bacon.

Teaching Listening In the Classroom: How Mickey Mouse and Winnie-the-Pooh Help "Big Kids" Hone Critical Listening Skills

Author: Barbara A. Penington, University of Wisconsin-Whitewater
Communication Department University of Wisconsin-Whitewater, Whitewater, WI 53190
peningtb@uww.edu
262-472-1034

Type/Aspect of listening in focus: Critical Listening, Fallacies of Reasoning, Propaganda, Political Communication

Courses: Listening, Public Speaking, and any other classes that emphasize critical listening skills.

Age Level: High school, College (possibly high achieving middle school students)

Goal: To introduce fallacies of reasoning and propaganda devices so that students gain practice in becoming more effective critical listeners especially when listening to political messages.

Aspect of Listening: Critical Listening

Description: Critical listening is considered an upper level listening skill because it goes beyond simply understanding a message to, as Wolvin and Coakley (1996) suggest, listening to evaluate the merits of that message. As such, the critical listener becomes mentally immersed in the message and draws upon critical thinking skills to analyze, synthesize, apply and/or evaluate the language and related behavior of the communication source.

Today more than ever before, individuals are called upon to utilize effective critical listening when they are exposed to political messages that may come to them through television, radio, the internet or even cell phones. Critical listening should be an essential component of the educational process as the development of skills in this area, serve to ensure that teenagers and young adults will become informed and responsible citizens.

Unfortunately, advertisers and political strategists are aware that many people will not listen as critically to their messages as they should. Fallacies of reasoning, such as "hasty generalizations" or "ad hominem" arguments are sometimes strategically used in political campaigns to sway voters from one candidate or cause to another. Propaganda devices such as "name-calling" or using a "bandwagon" plea (everyone is doing it) often interfere with a critical appraisal of political information because they are easy to miss if one is not listening critically.

The following group activity gives students practice in critical listening by having them detect fallacies of reasoning and propaganda devices in political messages. Instead of starting with actual political speeches, however, this activity uses fictional Disney characters who are candidates for the office of "President" of Disney World.   Small groups of students choose a Disney character and write a political speech where they must strategically use at least four fallacies of reasoning or propaganda devices, to support their character while working to minimize support for their opponents. One member of each student group is selected to

present their Disney candidate's speech while students in other groups record the fallacies or propaganda devices they hear.

Preparation and Procedure:

Time: The activity takes approximately 75 minutes. It can be done in two shorter class periods if need be (explanation of the group project and writing the speech on Day 1; presentation of the speeches and class discussion on the Day 2).

Steps in the Process:

1. Review critical listening, especially its definition and importance. Be sure to discuss the times when students might be most likely to use critical listening skills. For this activity, emphasize that as students decide on political candidates or causes to support, they must listen critically to campaign speeches, testimonials from supportive others, and campaign advertisements. Political strategists "bank" on people not listening carefully and critically to a message, so they occasionally, either intentionally or unintentionally, incorporate fallacies of reasoning or propaganda devices into their messages to garner greater support for their candidate or cause.

2. Introduce fallacies of reasoning and propaganda devices. I generally do this using a handout or power point presentation where I give a definition and its accompanying example. I primarily use Wolvin and Coakley's (1996) definitions found on pages 331-342. I typically use the following devices (but you can delete items or expand the list as you see fit):

    a. Hasty Generalization: Drawing unwarranted or general conclusions from an insufficient number of cases (p. 33l)
    b. Ignoring the Issue (Ad Hominem argument): Attacking the personal character of the opponent rather than focusing on the content of the issue itself (p. 334)
    c. Name Calling: Attaching an unfavorable or undesirable label to a person, object or event to encourage disapproval or rejection (p. 341).
    d. Glittering Generality: attaching a vague but virtuous-sounding label to a person object or event to cause automatic approval (p. 341).
    e. Transfer: associating positive qualities of a respected/revered person or group with a person or event (p. 342).
    f. Plain Folks Appeal: Trying to identify with the audience by adopting the language, dress or behavior of the listeners (p. 342)
    g. Card Stacking: manipulating (withholding, ignoring, over/under emphasizing) evidence of the opposing viewpoint and giving only the evidence that supports your viewpoint (p. 342).
    h. Bandwagon: Using phrases or statements to suggest "everyone is doing it (p.342)."
    i. Testimonials: Using the opinion of some well-known person to support one's view. Often the person who is speaking is famous, but not necessarily knowledgeable on the issue (Brownell, 2006, p. 256).

3. When students have a basic understanding of the fallacies and devices, I divide them into 4-5 groups of about 5-6 members each. I glue pictures of about eight different

21

Disney characters to long paint stir sticks to resemble political signs or placards. The stir sticks are available at hardware stores or where ever paint is sold. I have also purchased Disney coloring books and color the faces of the characters I will use, cut them out, and then glue them to the sticks. Here are some possibilities of Disney characters you might use:

   a. Mickey Mouse
   b. Minnie Mouse
   c. Goofy
   d. Donald Duck
   e. George of the Jungle
   f. Winnie the Pooh
   g. Tigger
   h. Eyore
   i. Aladdin
   j. Jiminy Cricket
   k. Snow White…and the list is endless!

I let each group choose their candidate from the possible choices. I then list on the board all of the candidates that are "running for office." I usually assign one candidate to run against one other candidate rather than having each candidate run against four or five others. That can get quite complicated.

The groups get from 20-30 minutes to write a campaign speech for their Disney candidate. To help them out, I also develop short information sheets on each candidate (you can use Google or even Wikipedia to get a brief history and description of each character). Groups get information on their candidate as well as their opponent to help them craft their political speeches. The goal is for each group to develop a political speech where they incorporate at least four fallacies of reasoning/ propaganda devices.

4. When the speech has been written, each group selects one member to deliver the speech to the entire class from a podium at the front of the classroom.

5. During the delivery, students who are not in that particular group must record the fallacies of reasoning/propaganda devices that they hear.

6. Following each group's presentation, we discuss the fallacies of reasoning/propaganda devices that students have heard.

7. This continues until all groups are done.

Example: Excerpt from an actual speech written by a group in a college class:

Candidate: Mickey Mouse

Opponent: Winnie the Pooh

Mickey speaking:

Thank you, everyone, for coming out today. And thank you, Minnie, for that gracious introduction. Although Minnie introduced me as Mitchell Mouse, I'm sure you can see by the way I'm dressed that I'm a down-to earth-kind of guy-- so if you call me "Mickey" or even "Mick" that is way cool with me.

From that first day long ago when I met the intelligent and kind-hearted Walt Disney, he was certain that I would be a great asset to the world of politics. It was on that day that we began a journey that I hope will end in me serving as your President. Although I very much like my opponent, Winnie the Pooh (and I am sure some of you do as well, I have to wonder if you really want someone to lead you who is constantly daydreaming about honey and wandering around Hundred Acre Wood? Do you really want an incapable buffoon in office who can't even figure out how to get his hand out of a honey jar or escape a swarm of bees?

I, on the other hand, have graduated second in my class at Holey Swiss High School. I have years of experience being the Executive Officer in my marriage to Minnie, and I am currently working night and day to build a state-of-the-art amusement park so it can employ all of my good friends who live in the Disney World area. The talented and exciting Oprah supports me as does her good friend, television personality, Dr. Phil.

So to sum up my message today, voting for me is voting for a real winner. Voting for Mickey Mouse, will put you in the company of hundreds of others who have already wished upon a star and know that all their dreams will come true--when I become elected to this prestigious office.

Additional Tips and Debriefing:

This fun and non-threatening activity encourages students to use their critical listening skills as they become more familiar with fallacies of reasoning and propaganda devices they hear in politically-oriented messages. The instructor can extend this activity by having students view a real political advertisement or campaign speech and apply the critical listening skills they have been practicing. Showing students infomercials and having them apply critical listening skills is another creative way to extend the exercise.

Assessment:

Informal assessment occurs as students share the fallacies of reasoning and propaganda devices they have heard during their peers' campaign speeches, and the instructor assesses the accuracy of their observations. Assessment could also occur if the instructor chooses a current political message for students to analyze for fallacies of reasoning/propaganda devices. Finally, a quiz could be given or a section of an exam devoted to asking questions geared to assess understanding of critical listening, fallacy of reasoning and propaganda devices.

References:

Brownell, J. (2006). *Listening: Attitudes, principles, and skills*. Boston: Pearson Education.
Wolvin, A., & Coakley, C.G. (1996). *Listening.* Madison, WI: Brown & Benchmark.

Title: Listening Skill Assessment Sets from *Rule #1: Stop Talking: A Guide to Listening*

Author: Linda Eve Diamond

Author Affiliation: Author of *Rule #1: Stop Talking: A Guide to Listening*, former Listening Post Editor and ILA Executive Board Member

Correspondence should be addressed to:

Linda Eve Diamond
3389 Sheridan Street, #228
Hollywood, FL 33021

Email: **LindaEve@mac.com**

Grade level: 7-16; Undergraduate; Graduate; Adult Education

Courses: The assessments are appropriate for any level and ideal for introductory listening and communication courses.

General keywords: Listening skills, self-assessments, questionnaires, perspectives

Goals: The goal is for students to learn more about themselves and view their listening skills and abilities from different perspectives for a more rounded understanding.

Type/Aspect of Listening in Focus: These assessments provide a general, broad strokes look at listening skills (mainly interpersonal, with a few questions directed toward inner listening).

Description: This set of assessments is designed to encourage students to evaluate their listening skills from three perspectives: (1) *Self-Assessment,* (2) *Questions of Perception* Assessment (assessment by others through a questionnaire that aligns with the self-assessment), (3) a comparison of the two assessments with special attention to any difference between them.

Preparation and Procedures:

The process will require students to give the second assessment, the *Questions of Perception* assessment, to someone who would have had some personal experience of that student as a listener. Prior to administering assessments, instructors must decide whether students should seek feedback from one another (which would only be beneficial if students have worked closely together before) or from someone outside of class who is more familiar with the student's every-day listening behaviors.

Ideally, instructors allow students to choose the person to ask and may suggest categories (such as friends, family, coworkers, supervisors, or partners). Instructors may also choose to suggest that students ask two or three people who have different kinds of relationships with them in order to provide a more rounded perspective (and possibly some insight into whether they are more attentive toward people in different kinds of relationships or environments.

Tips and Debriefing:

The assessments may be especially useful as a starting point and then later in the course as a benchmark. Both are also followed by just a few broad, open questions, which may be helpful in setting personal goals for listening skills improvement.

Step 1: *Self-Assessment*s: Because a student who wants to earn an impressive score can easily say the "right" thing, I recommend that instructors stress that achievement is not based on the final score, but on participating in and learning from the process. While simplistic, some of the questions may spark interesting discussions, especially about the difficulties of stopping to focus and the common belief that we can multitask anything—even careful listening. The wording of the questions lends itself to having students think about not only their listening skills, but their beliefs and behaviors that may or may not foster careful listening. The last three questions raise issues of inner listening, which might also open an interesting discussion or serve as a simple reminder for students of the need to also be aware of inner listening.

Step 2: *Questions of Perception*—Assessments by Others: Questions 1-11 on the *Self-Assessment* and the *Questions of Perception* Assessment are parallel to one another. For instance, the *Self-Assessment* question #11 is "I'm good at looking like I'm listening when I'm not. Most people don't notice." The *Questions of Perception* assessment asks the other participant the parallel question about the student: "Does the 'listener' ever seem to be pretending to listen?" Question #12 of the *Self Assessment* should be viewed alongside both questions 12 and 13 of the *Questions of Perception* assessment. As the last three questions of the *Self-Assessment* involve inner listening, the *Questions of Perception* assessment offers no corresponding questions.

Answers to the Questions of Perception should be provided in writing, but also be given verbally to the student, who should be instructed to listen without defending and to repeat or paraphrase important points for clarification. The experience will be rounded out when students share their findings, process, and their feelings about the process with the class.

Step 3: Integration of Self and Other Perspectives:

Questions for in-class discussion may include:

1. Did you recognize any beliefs or behaviors that you have about the listening process that may get in the way of careful listening?

2. Did you discover anything surprising from the *Questions of Perception* exercise?

Other in-class discussion topics may include:

➢ The challenges of listening in difficult situations
➢ The combination of both deep interpersonal and inner listening that must occur when listening to and integrating feedback

Students should come away from this exercise with added perspective and an understanding of how their listening abilities are experienced by others.

Assignment:

Listening Skill Assessment Sets from *Rule #1: Stop Talking: A Guide to Listening*: *Self-Assessment* & *Questions of Perception* Assessment

How would *you* assess your listening, and what would you say are your listening strengths and challenges? How would *others* assess your listening? Because both questions seek to deepen awareness and listening skills, these assessments are designed as a two-part set.

Listening Assessments #1: SELF-ASSESSMENT

Instructions: The *Self-Assessment* offers an opportunity to take a brief look at where you place your attention when interacting with others. (Answers may be quite different for various situations (school, social, home, work); answer for one or make separate columns for those you would like to assess.) Answer *Yes* or *No* beside each of the following questions.

Yes/No

1. I like to multi-task and think about other things when people are talking.

2. If people aren't going to take my advice, they shouldn't waste my time telling me their problems.

3. I'm usually bored when the conversation doesn't center around my interests.

4. When someone is slow to get a point across, I interrupt to get things moving.

5. When people speak to me, they most often have to compete with a number of distractions.

6. I tend to be involved in a lot of misunderstandings.

7. A person's appearance, grammar, or style of speaking affect how much attention I give them.

8. I have trouble keeping a confidence.

9. I usually feel that making my case is more important that someone else's feelings.

10. When I don't understand something, I will often fake it and smile instead of asking questions.

11. I'm good at looking like I'm listening when I'm not. Most people don't notice.

12. I tend to talk when I should be listening.

13. I trust my intuition and it serves me well.

14. I can usually tell when people aren't being honest with me.

15. I am good at soothing conflict situations and finding win-win solutions.

***Self-Assessment* Scores:** A *perfect score* would be *No* to questions 1-12 and *Yes* to 13-15. If you answered *Yes* for any number from 1-12, look at these as areas you might want to strengthen. As you place your attention on those areas and make small shifts, notice any subtle changes in your relationships. If you answered *No* to most of them and *Yes* to questions 13-15, you have some solid listening foundations. If your answers show areas that you wish to improve, not to worry. You have already begun the process by assessing where you are now and will continue to strengthen these skills as you continue to place your attention on listening.

Additional *Self-Assessment* Questions:

Ask yourself:

1. What are my listening strengths?
2. What are my listening challenges?
3. How will improving my listening skills improve my personal and/or business relationships?
4. Do I listen to my own intuition? When I have, has it guided me well?

Listening Assessment #2: *QUESTIONS OF PERCEPTION*

Instructions: This is a chance to find out how others would rate your listening skills. Give this to people in your life (and ask for honest opinions). Many of the questions mirror the ones in the *Self-Assessment,* so this is a chance to see if the perceptions of others match your own. No one person's perception equals reality, but learn how your listening skills are perceived—and be open to thinking about whether someone has a good point.

Yes/No

Does this "listener"...

1. often multi-task or seem distracted when you are talking?
2. become annoyed when you don't take his/her advice?
3. seem bored when the conversation doesn't center around his/her interests?
4. frequently interrupt?
5. allow interruptions or distractions (such as taking calls) when you wish he/she wouldn't?
6. seem to be involved in a lot of misunderstandings (with you and/or others)?
7. seem to allow a speaker's appearance, grammar or style of speaking to affect how much attention he/she will give that person?

27

8. show that he/she can be trusted to keep a confidence?

9. bulldoze over others' feelings to make a point?

10. show genuine interest and ask questions when discussing issues

    that are complex or especially important to you?

11. ever seem to be pretending to listen?

12. seem impatient and quick to draw conclusions?

13. tend to talk when he/she should be listening?

Additional *Questions of Perception*:

These questions would also be helpful to discuss with those who take your *Questions of Perception* assessment.

1. Ask your friends/family/coworkers/classmates:
   o Do you consider me a good listener? Why/Why not?
   o Can you tell me about a time when you felt I wasn't listening? What did you need from me that you didn't get (emotional support, empathy, an action, a reaction, advice, etc.)?

Reviewing *Questions of Perception*: A perfect score of the numbered questions would be *Yes* to questions 8 and 10 and *No* to all others. Review all answers carefully and ask follow-up questions. Compare answers with your own self-assessment and consider areas that do not match. You might learn things about how others perceive you that are encouraging, and you might learn of areas you need to strengthen, or even that people notice more than you think they do. Make notes on the feedback you receive and check back with the same people as you progress on your listening journey.

References:

Diamond, Linda Eve (2007). *Rule # 1: Stop Talking! A Guide to Listening*. Cupertino, CA: Listeners Press.

Title: One in Five Teens Have A Hearing Loss, So What

Author: Alan Ehrlich

Author Affiliation: The Center for Listening Disorders Research, President, Founding Director, Vice President, International Listening Association

Correspondence should be addressed to:

Alan Ehrlich
The Center for Listening Disorders Research

818.554.6480 or 609.619.0039

Email: **arehrlich@gmail.com**

Two conflicting studies on teenage hearing loss have been released over the past few weeks. The first one, by Brigham & Women's Hospital in Boston proffers the troubling finding that one in five of our teens show signs of hearing loss. The second, by the University of Minnesota points out that the conclusions of the Brigham & Women's study might be up to 10% incorrect due to possible errors in their measurement techniques.

So What?

We generally associate hearing loss with an aging population and, for better or worse, most people lack a real understanding of the many issues that affect these people. Hearing loss is, in most cases, a slow, transitional process. Slow enough for us to develop compensating behaviors that allow us to deny the problem: we move closer to the speaker; we increase the volume of the TV, radio or mp3 player. We do these things to persuade ourselves that the 'loss' is not real, it really doesn't matter, or we can make the problem go away.

But there is more to hearing loss than a reduction in volume. We lose the ability to effectively listen; to understand. This is true with even a minor or mild hearing loss.

Listening, not hearing is our primary gateway to learning. Students spend upwards of 70% of their school day engaged in some type of listening activity. While hearing and listening are interconnected, they are very different. Hearing is about sounds while listening is about contextual understanding. Listening requires a conscious choice, to not only sense the sounds (hearing) but to attend to them, interpret and evaluate them, and then respond to them. Difficulty understanding speech complicates the education process and exacerbates learning disorders.

Most of the teens in these studies suffer from Noise Induced Hearing Loss – a form of sensorineural hearing loss that affects the ability to hear the higher frequencies. In the spoken English language, many consonants sounds are high in frequency and low in volume. Specific examples are the /s/, /f/ and /th/ sounds. A person with a mild hearing loss of 25dB (the demarcation of what's considered normal hearing and a mild hearing loss) can have difficulty in discriminating these sounds. Words begin to sound alike because the differentiating consonants begin to blend together. Additionally, many of the vocal intonations

that we use to make a point or to form a question rely on these higher frequency, low volume sounds.

For students, especially younger ones, this can be academically devastating. Dr. Fred Bess of the Department of Hearing and Speech Sciences at Vanderbilt University Medical Center reported over a decade ago that 37% of children with a hearing loss failed at least one grade, compared with the district norm of about 3%. Dysfunctional listening triggered learning problems in these children that included: lack of understanding, trouble with vocabulary, word usage skills and storytelling abilities. Children with even a mild hearing loss are 4.3 times more likely to experience trouble in communication, than children with normal hearing.

Students that have a hearing loss or auditory/language processing problem may not present any problems until they are in a situation where they have to listen carefully and gain a clear understanding of complex (for their age level) material. Listening with this intensity takes attention, concentration and conceptualization, each requiring significant cognitive effort. These students tire easily and get frustrated quickly. Try sitting through a meeting with ear plugs pushed into your ears and see how you feel after an hour or so. These children will quite often act out, especially in the afternoon classes. Their behavior is often mistaken for ADD/ADHD with the result being a pharmacological remedy inappropriate to the underlying problem.

Regardless of which study you want to believe, the fact is that a high percentage of youngsters have a hearing loss that will affect the level of their academic achievement and complicate their social interactions throughout their entire lives.