

Critical Review: The Effectiveness of Voice Training in Preventing Vocal Pathology in Actors

Julie Cohn

M.Cl.Sc. (SLP) Candidate

University of Western Ontario: School of Communication Sciences and Disorders

This critical review explores the impact of training on the quality of actors' voices. Despite the wealth of information on the benefits of therapy for occupational voice users, little research has focused on the actor. Studies thus far have been inconclusive, or suggestive, in nature,

if there was a difference between the qualities of actors' voices with versus without training. One group of 23 subjects received no voice training; the other group of 23 received training in vocal hygiene for nine months and voice training for 18 months. The voice training consisted of 90 hours of technical workshops and vocal coaching lead by teachers and an SLP, and lectures on breathing, articulation, voicing, and vocal hygiene. Each group of students was assessed before and after the training period. The researchers found that voice quality changed due to time and training, with training creating a more significant effect. Self-assessment did not seem to be affected by training. This study verifies the need for a well-organized voice training program for actors; however, the researchers do acknowledge the limited usefulness of the vocal hygiene lectures employed in this study (even afterward, actors were reluctant to make the recommended lifestyle changes). The researchers suggest that future studies should

examine the following: 1) pre- versus post-vocal violence (the “vocal violence effect”), 2) pre- versus post-training (the “training effect”), and 3) the interaction of 1) and 2) (the “interaction effect”). The procedure followed the following format: vocal measurements, vocal violence, vocal measurements repeated, training in HLRT, vocal measurements, vocal violence, vocal measurements repeated. The subjects’ Modal, Minimum, and Maximum F0 were measured using: flexible laryngovideoscopy and Electroglottography (EGG). For the vocal violence portion of the study, the subjects were instructed to produce four violent vocal behaviours (grunting, groaning, sobbing, and shouting). The researchers found no significant vocal violence effect (comparing the before- and after- vocal violence portions of the study at each session), suggesting no damage will come from short-term vocal violence at a comfortable pitch. The researchers also found a significant interaction effect (vocal violence had a smaller effect on the acoustic signal after training), suggesting training can protect the voice from damage.

The recordings used in this study were analyzed on 18 different parameters. The results were then examined using a repeated measures analysis of variance (ANOVA), and then the SAS system’s MIXED procedure with an unstructured covariance matrix. The former analysis was appro

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for changes in spectral parameters; regardless of SPL, the training had a significant, independent, positive effect on F0, frequencies of 3-4 kHz, and general voice quality (formant changes were not simply brought about by increasing loudness, therefore it was the training that improved voice quality). This analysis was critical in ruling out potentially confounding variables and ensuring good construct validity. ANOVA was an appropriate measure because it allowed researchers to study the interaction between training type and voice improvements based on several different parameters (F0, SPL, and voice quality).

There were several disadvantages of this study. The authors admit that the small number of subjects made conclusions tenuous. The pre-test results were not analyzed between groups with regard to how the subjects were performing (thus it is possible that there was a difference between the two groups before the training, even though they were randomized). No information regarding randomization methods was given. Due to the nature of this study, blinding the subjects would be extremely difficult (subjects had to be instructed regarding the vocal goals being studied in order to use the feedback they were receiving).

This paper has several advantages: the researchers were thorough in ensuring inter- and intra-rater reliability and increasing the study's validity by using two blind trainers, presenting the vocal clips in randomized pairs, and having each trainer rate the results twice. Subjects were also matched on experience level before the experiment;

