## WARM-UP SESSIONS FOR SINGING WITH PHASES OF OPPOSITE SEQUENCES

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Objectives: In our investigation we composed two different warming-up session phases. One uses the 'voice source-filter' theory of the vocal tract, using only the oral cavity during the tasks. Other uses the 'voice source – vocal tract impedance' concept, using the nasal cavity first in the exercises. We call the first sequence 'oral', the second one 'nasal'. The applied melodies, vowels and consonants were chosen according to the main objective of the research.

Methods: In the investigation including twenty (ten female and ten male) participants, with voice-training experiences took part. They came to the sessions without any warmingup, with a so called fresh voice. The sessions lasted 25 to 30 minutes. The first session began with 'oral' exercises, and these were followed with 'nasal' tasks. At the second session, organized minimum one week later, the tasks were repeated in the opposite order. At both sessions we made three recordings. First we recorded at the beginning, then between the different types of exercises and finally at the end. The participants sang [a, i, u] vowels, sustaining them for more than one second for the recordings, at a comfortable pitch and volume. The pitches were chosen for every voice-category, in the middle of each participant's voice range. We analyzed the records with SIGVIEW 2.4, and analyzed the results with SPSS 20 programs.

Results: Both exercise orders are efficient. The 'nasal' and then the 'oral' order has more significant effects than the reversed order. The females in general react more sensitively for the tasks then males. The 'oral' warm-up session seems to be more effective for females, t while the 'nasal' warm-up for males.

Conclusion: It seems that, for warming-up the singing voice, 10-15 minutes is too short. Also, the 'oral' and the 'nasal' tasks have specific effects, and can enhance each other's influences. So both conceptions for the function of the vocal tract are effective, and rather complement than exclude each another. The group of the participants is small, therefore the significance of the conclusions is limited. In the future we plan to enhance the number of the participants and try out the effects of both types of the task-scales separately, within a longer, independent session.

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