

TITLE: PRINCIPLES OF MOTOR LEARNING APPLIED TO DIRECT BIOFEEDBACK ON VOICE USE WITH A PORTABLE VOICE ACCUMULATOR IN SUBJECTS WITH PARKINSON'S DISEASE.

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ABSTRACT

There has been an increased interest in how principles of motor learning can be applied to speech motor learning, i.e. how structure of practice and feedback facilitates the learning and retention of speech motor skills. Portable voice accumulators are devices that allow continuous long-term registration of voice use in field environments. Some voice accumulators also allow direct biofeedback on voice use. Research on how different feedback regimes enhance learning is typically done in strictly defined practice settings and during restricted periods of time to ensure a standardized and reliable method. However, the direct biofeedback on voice use that portable voice accumulators allow is administered during long periods of time in real-life situations.

One of the main symptoms in patients with Parkinson's disease is reduced voice intensity and generalization of treatment effects to spontaneous speech continues to be challenging. Providing biofeedback on voice intensity in real-life situations may therefore be a promising possibility.

The presentation focuses on how principles of motor learning can be applied when adjusting biofeedback parameters regarding voice intensity with the portable voice accumulator VoxLog to facilitate an optimal learning outcome. Different feedback settings have been manipulated experimentally during a series of semi-constructed conversations with individuals with PD to find a configuration that produces an optimal feedback frequency. The aim is to develop a systematic approach to calibrating biofeedback settings based on previous research on motor learning.