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A longitudinal study on vocal behavior of teachers in classrooms and relationships with classroom acoustics / Astolfi, Arianna; Calosso, Giulia; Puglisi, giuseppina emma; Castellana, Antonella; Carullo, Alessio; Pellerey, Franco. - ELETTRONICO. - (2016). ((Intervento presentato al convegno 5th meeting of the nordic voice ergonomic group tenutosi a Helsinki (Finland) nel 10th September 2016.

Availability:

This version is available at: 11583/2647834 since: 2016-09-11T12:49:27Z

Publisher:

Published

DOI:

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A Longitudinal Study on Vocal Behaviour of Teachers in Classrooms and Relationships with Classroom Acoustics

Arianna Astolfi^a, Giulia Calosso^a, Giuseppina Emma Puglisi^a, Antonella Castellana^b, Alessio Carullo^b, Franco Pellerey^c

^aPolitecnico di Torino, Department of Energy, Corso Duca degli Abruzzi, 24, 10129, Torino, Italy,

arianna.astolfi@polito.it

^bPolitecnico di Torino, Department of Electronics and Telecommunications, Corso Duca degli Abruzzi, 24, 10129, Torino, Italy

^cPolitecnico di Torino, Department of Mathematical Sciences, Corso Duca degli Abruzzi, 24, 129, Torino, Italy

ABSTRACT

The objective of the longitudinal study presented in this work is twofold: to determine changes in the voice use of teachers along a school year and to study the relationships between voice and classroom acoustics parameters, which account for the background noise level during the teaching hours too. Thirty-one teachers from two secondary schools in Torino (Italy) were involved at the beginning of a school year and twenty-two of them participated in the monitoring campaign also at the end of the same school year too. Teachers adjust their voice significantly with noise and reverberation, both at the beginning and at the end of a school year. Moreover, teachers who worked in worst classroom acoustic conditions showed higher voice sound pressure levels at the end of the school year. Finally, a good predictive model to estimate the sound pressure level in front of the speaker's mouth from the background noise level and the reverberation time was found.