

“THERE IS NO CLASS FOR NOISE”: TOO MANY DECIBELS IN ITALIAN SCHOOLS, NOISE CAN WORSEN REPORT CARDS

ON INTERNATIONAL STUDENTS’ DAY (NOVEMBER 17TH) EXPERTS SOUND ALARMS ABOUT THE CONNECTION BETWEEN TOO MUCH NOISE AND A REDUCED CAPACITY TO LEARN. IN ITALIAN CLASSROOMS NOISE OFTEN EXCEEDS 70 DECIBELS.

SOMETIMES REDUCED PERFORMANCE AT SCHOOL CAN HIDE A REDUCED HEARING ABILITY WHICH, IF UNDETECTED, CAN LEAD TO POOR OUTPUTS.

SIMPLE CHANGES, SUCH AS THE USE OF ELECTRONIC BLACKBOARDS AND FELT PADS UNDER CHAIRS, CAN REDUCE NOISE IN SCHOOLS. MILAN’S HIGH SCHOOL ISTITUTO CAVALIERI IS EXPERIMENTED WITH SOUNDPROOFING CLASSROOMS THANKS TO A PROJECT PROMOTED BY AMPLIFON AND ECOPHON SAINT-GOBAIN.

Milano, 17 November 2016 - Forgetful students with poor language skills and comprehension. It could be that the fault does not lie with the students alone, but with the level of noise at school. The continuous buzz, the squeaking chalk on the blackboard, the chairs and benches that are dragged along the floor: in Italian classrooms noise often exceeds 70 decibels¹ and recent studies show that too much noise can have a negative impact on students’ performance and can affect memory, as well as the ability to understand texts and lessons². In addition to the noise inside - produced by the students and amplified in buildings with inadequate acoustics - there is also outdoor noise: around 12% of the Italian schools are, in fact, close to an airport, 9% are near motorways and 8% are only one kilometer away from an area with high levels of noise pollution³.

On International Students’ Day (November 17th) experts are sounding alarms about the connection between too much noise and a reduced capacity to learn, showing also that the label “a careless and not very diligent student” may hide an undetected reduced hearing ability. Today, in fact, it is commonly believed that 1 out of every 5 adolescents (17% of the young men and women between the ages of 12 and 19) live with a noise related hearing disorder which, if undetected, can often lead to a poor scholastic performance. This can result in poor work outputs and fewer professional opportunities⁴.

“The hearing disorders that materialize during childhood and adolescence - Professor Claudia Aimoni, Department of Biomedical Sciences and specialized surgery at the University of Ferrara commented - can cause a decrease in the ability to pay attention and concentrate, to read and understand texts, which can negatively impact performance at school. Quite often it happens that behind a child deemed problematic there are undetected hearing difficulties. Today children’s hearing is put in danger by environmental factors, like particularly noisy cities and schools, but also by lifestyles and risky habits; I’m referring to, for example, listening to music on headphones or earbuds and the widespread use of electronic games at volumes that can reach or exceed 85-90 decibels. The consequences are worrying: it is estimated that today 12% of the young people between the age of 6 and 18 and 17% between the age of 12 and 19 have hearing disorders caused by noise. For this reason it’s important to lower the level of noise in Italian schools - Prof. Aimoni concluded - performance and noise, in fact, have always been arch enemies”.

Noise-performance relationship. Continuous exposure to noise can trigger the production of cortisol: too much of this hormone compromises the function of the prefrontal cortex which has a negative

¹ Progetto De.C.I.So - Deaf Children: Improvement of classroom Sound quality; 2014.

² Does noise affect learning? A short review on noise effects on cognitive performance in children; Front Psychol. 2013; 4: 578.

³ Ecosistema Scuola 2016, XVII Report of Legambiente on the quality of school buildings, structures and services.

⁴ WHO, Childhood Hearing Loss; 2016



impact on the ability to reason and plan, as well as control impulses. The prefrontal cortex also plays a role in short-term memory. Furthermore, the stress caused by exposure to continuous background noise can lower the level of dopamine which can negatively impact memory and the ability to learn.

Precautions. A few simple precautions may be enough to lower noise in schools, including the use of **electronic blackboards** and **felt pads under chairs and benches**. The most effective strategy, however, to protect the hearing of students and to put them in the best position to learn is undoubtedly to **soundproof classrooms**. Over the past few years a few experiments have been conducted in Italy. For example, an innovative soundproof classroom was built at **Istituto Cavalieri in Milan** thanks to the support of **Amplifon and Ecophon Saint-Gobain**: the use of special sound absorbing panels and a “decibel eating” wall made it possible to half the reverberation time, the main variable used when assessing an environment’s acoustic profile.

“THERE IS NO CLASS FOR NOISE”: 7 WAYS TO REDUCE NOISE IN SCHOOLS

COMPILED BY AMPLIFON WITH THE ASSISTANCE OF PROF. CLAUDIA AIMONI

- 1) **AVOID BUILDING SCHOOLS IN AREAS WITH HIGH LEVELS OF NOISE POLLUTION, NEAR AIRPORTS OR MOTORWAYS**
- 2) **INCENTIVIZE THE USE OF ELECTRONIC BLACKBOARDS**
- 3) **PUT FELT PADS UNDERNEATH CHAIRS AND BENCHES**
- 4) **USE AMPLIFICATION SYSTEMS OR SOUND ABSORBING PANELS**
- 5) **PROHIBIT THE USE OF HEADPHONES AND EAR BUDS IN CLASSROOMS**
- 6) **EDUCATE STUDENTS ON SOUND ECOLOGY**
- 7) **MAINTAIN A MODERATE TONE OF VOICE, WITHOUT RAISING IT TO BE HEARD OVER THE CLASSROOM BUZZ**

About Amplifon

Amplifon, listed on the STAR segment of the Italian Stock Exchange, is the global leader in hearing solutions and services for retail expertise, customization and consumer care. Through a network of approximately 3,900 points of sale, 3,600 service centers and 1,850 affiliates, Amplifon is active in 22 countries across EMEA (Italy, France, the Netherlands, Germany, the UK, Ireland, Spain, Portugal, Switzerland, Belgium, Luxembourg, Hungary, Egypt, Turkey, Poland and Israel), Americas (U.S.A., Canada and Brazil) and APAC (Australia, New Zealand and India). With approximately 5,500 hearing care professionals, the Company is committed to delivering the highest quality of service and care, in order to achieve the best hearing experience for customers worldwide. More information about the Group available at: www.amplifon.com/corporate.

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