The effects of the noise on young schoolchildren

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Abstract

The article illustrates the effects of noise on the performance of young children in primary schools.

Key words

Noise, primary schoolchildren, internal and external noise, acoustics

The classroom noise is what every teacher finds irritating in his teaching years although what makes the class is noise. Many teachers are challenged by the misbehaving learners especially in the primary and secondary schools. In the comparison with adults, children and teenagers tend to make more noise during the lessons. Indeed it is good if learners make noise as they are deeply immersed to the lesson. To illustrate, discussions and debates cannot be taken place without noise, which is called useful noise. In teaching languages noise makes sense since it is the sign of the teacher's endeavors to encourage learners interact more. The more language learners are exposed to communication, the more efficient the classroom becomes, and the more quickly they absorb the language. Therefore it is evident that language instructors and learners both can benefit from the very concept "noise".

Researchers in the Department of Psychological Sciences, University of London, London, United Kingdom had a survey on whether noise can boost the creativity and the results of the survey revealed that there were no conditions where noise promoted children's creativity. In fact, they checked the creativity of young people both in silence and in noisy atmosphere. However, some side effects of noise were observed, in particular the children who had the low selective attention, performed most poorly in the presence of noise. [1] This means teachers should be careful to arrange the special noisy stages of lessons because a certain group of children's performance may remain risky. Therefore noisy activities seem quite more critical.

Another point what has been recently investigated by Picard and Bradley came to the conclusion that exposure to noise during the class has detrimental effects on different abilities of young children. They investigated the effects of noise on the literacy, performance, mathematics and memory when high cognitive processes were involved, such as, reading, problem-solving tasks and particularly memory was the most affected. [2]

In general, the noise is attributed to internal and external sources. The internal source is the noise created by students and external noise is normally caused by other sources including traffic and transportation, industrial sources, people outside the classroom. Another well-reputed noise is the rainfall noise which comes from the roof of classrooms. The survey conducted by Shield and Dockrell to find out major noise sources revealed that the main source of noise was cars outside 86% of the schools in London, 54% of schools also suffer from the noise of aircrafts. In addition, lorries (35%) and buses (24%). [3] This explains the common situation in schools which are situated in urban areas.

Regarding the internal noise, there are other contributive sources to noise effects. They are teaching equipment, such as computers, projectors, elevators, air-conditioners and so on. However, the dominant source of internal noise is the noise of children themselves; in many cases the walls of classrooms at schools are vulnerable to transmit the noise, which results in others classes and learners being affected by the noisy activities of the other class. [3] Indeed main role of teacher and student interaction is to deliver

and receive the necessary information and then this function is impaired because of the noise.

The younger the children are, the more they are affected by environmental noise as a matter of the fact that their auditory abilities do not reach the normal level till their teenager years. This maintains the idea that young children are more susceptible by the acoustic features of the classroom. What is more, 40% of children at primary schools have some sort of hearing impairment to listen to their peers and teachers because of diseases, infections. [4] Therefore, these children are easily distracted by noise and they are challenged in their studies.

There is a significant comparison between quiet and noisy classroom settings. The children's performance decreased when they were distracted by noise while in quiet classroom they perform better at intelligibility tests. [5]

From the experience I had, I came to the mind that the main negative effect of noise is impairment of speech understanding. Noise not only distorts the flow of information from teacher to child, but also makes it difficult for him to communicate with classmates. Reverberation times that are too long have the same negative effect on speech comprehension as noise. The speech signal is "blurred", because of which its quiet components are perceived more difficult or not at all. Due to the long reverberation time, the noise level automatically rises as the sound field is hardly attenuated by total reflections. Noise and reverberation worsen speech understanding in children more than in adults, because the ability to understand speech well in difficult conditions is fully developed only in older adolescence. The younger the child, the worse he understands speech in difficult acoustic situations and this is especially true for elementary school students. Another group of children who have special difficulties in understanding speech in noise and reverberation are children for whom the language of instruction is not native. For example, in Germany today, about 8% of children of foreigners study in primary school. Obviously, this is the same case in Uzbekistan. Most of the Uzbek-speaking families want their children to study in the classes in which the education is delivered in Russian. Overall, it can be expected that the effects of noise double in such classrooms where children face language problems and distractors to concentrate at the same time.

Educators also suffer from poor classroom acoustics. Of the more than 1,000 respondents, 75% cited noise as one of the main negative sources. Teaching in noisy rooms with reverberation can lead to increased vocal stress, resulting in increased fatigue and voice impairment. Those who teach in acoustically unfavorable classrooms are more likely to get sick.

Hay measured the noise levels during various lessons in 7 schools and concluded that more experienced teachers are better at handling classroom noise. In their lessons noise levels are quite lower. [6]

It is evident that noise has a strong impact on the performance of children who study at primary schools. They are not only mentally affected but they are also emotionally disrupted by noise. Chronic noise and exposure lead children to fall behind the curriculum and get annoyed. Researches show that the levels of typical noise in the classrooms are quite high due to external factors but mostly classroom activities. Although there are certain standards for classroom acoustics, it is still unknown which level is the most applicable.

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