

Niko Gentile

**Better lighting for healthier children**

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Our species has evolved under daylight for many thousands of years. But since the Industrial Revolution we have begun to live longer indoor. Today we spend about ninety percent of our life inside buildings. How does this new habit impact on our psychological and physiological well-being? And how are more sensitive groups, such as school kids, affected by this change?

Niko Gentile is associate senior lecturer at the Department of Architecture and Building Environment at Lund University, where he mainly collaborates with the Energy and Building Design and the Environmental Psychology groups. In the last eight years he has been working on topics related to the integration of daylight and electric lighting, aiming at healthier and more efficient lighting systems.

His research includes the analysis of psychological and physiological effects of lighting on school children, a subject that has been scrutinized by the Environmental Psychology group of Lund University for more than thirty years. His presentation provided an historical overview on the evolution of lighting in schools, from the first lighting standards up to the most recent findings on circadian rhythms and impact on school performance.

Niko presented an historical perspective, the effect size and some scientific evidence. An interesting journey from vision to psychology and its effect for children’s health. He mentioned the Daylight regulation for school in UK, the open-air schools, the windowless classroom in US, and the led technology and experiments done in their studies. He explained how the cortisone and melatonin change in different environments and stimuli. Niko tell us about how much does light impact on mood. The result is based on physical environment, social environment, individual factors and activity. A study on light distribution shows that electric lighting have a big impact on learning performance. Daylighting improves mood.

There are new opportunities with LED enters lighting market that can adjust the temperature dynamics and control the impact in our lives.

 **Emilia Fisal 😊**