

PRESS INFORMATION

Better lighting leads to improved school results



Good lighting and a high quality of light promote learning. What's important here is the right lighting tools, whether for classrooms, dining areas or school libraries. Double benefits: with modern lighting solutions, in addition to improved visual comfort, significant improvements in the areas of energy efficiency and costs can be achieved.

Often quite a shock for architects and lighting planners: the lighting in our schools. In most cases it seems that it's not the rooms and furniture themselves but the lighting that's deficient. And it must be appreciated that lessons are based to a large part upon visual perception. But if the lighting levels in classrooms are not balanced, meaning that visual comfort is limited, the lesson and in end effect the process of learning itself is impaired.

If it is considered that two thirds of all educational buildings in former East Germany have lighting systems and equipment older than 20 years, the situation becomes even more clear. School construction does not only have deficits in the safeguarding of primary building structures, but even more so with building technology, the quality of lighting systems and their appropriate energy management.

Good light promotes achievement potential

Simple and straightforward: lighting is good when it doesn't impair seeing but makes it easier. Brightness, quantity of light and its quality decisively determine both bodily and metabolic functions. Even more so with children and adolescents. Small quantities of light for example lead to a greater release of melatonin and therefore reduced levels of cortisol. –This brings on tiredness. Higher quantities of light have the opposite effect and ultimately cause the stimulation of cortisol. People feel more awake, they are able to concentrate better, the sense of well-being is increased and the ability to achieve improves.

PRESS INFORMATION

Better lighting leads to improved school results

A further factor that is becoming ever more important is that the lighting of a classroom is no longer defined exclusively by the conventional up-front method of teaching. New forms of lessons based upon dialogue and interaction, along with interdisciplinary learning within internationally networked learning groups demand flexible room usage that can be adapted easily to current needs. Digital information sources are integrated into lessons as a matter of course, and the results are displayed in multimedia form: satchels make way for laptops.

Lighting solutions are therefore required that independent of the arrangement of workstations in the room, permit learning with laptops and computer screens. Absence of glare, good contrast and a balanced distribution of direct and indirect light aid in establishing a lighting atmosphere that promotes the processes of learning. Other important factors are the interplay of light and shadow as well as good colour rendition and pleasant light colours. Such criteria as a whole define the light atmosphere and ambience of a room. The use of a dynamic lighting management system adapted to quantities of daylight and time of day is also of significant importance in this respect.

Siteco lighting tools for education

The keys for good light for learning are the right distribution of light and light intensity. As well as ensuring high-contrast and glare-free light, sufficiently high light intensity levels and uniform distribution into the classroom are highly important, without however limiting the flexibility of room usage and arrangements of furniture.

As well as a host of tried and tested lighting tools such as luminaires with louvre technology, T16 lamps and energy-saving ballasts, Siteco has also developed the innovative ELDAICON® light control technology. Here the light is directed via highly precise microprismatic structures without glare and with a high level of uniformity onto the working plane. Its specific light characteristic enables workplaces to be positioned freely within the room, exactly as future-oriented rooms for education demand.

Quality of light and energy efficiency lead to sustainable solutions

The wide spectrum of Siteco lighting tools not only ensures outstanding light quality for learning purposes, it also contributes significantly to an improved energy balance. Compared to conventional diffuser luminaires equipped with T26 lamps and conventional ballasts, energy costs can be reduced by 55 percent solely with implementation of electronic ballasts in connection with modern T16 lamp technology.

A further 35 percent in energy savings compared to old systems with T26 lamps and enclosures

PRESS INFORMATION

Better lighting leads to improved school results

can be achieved by using luminaires with efficient light control such as louvre technology or microprismatic technology.

And if these factors are supplemented with a lighting management system, for example daylight-dependent dimming able to maintain constant lighting levels in all weather conditions, energy costs can be reduced by up to 80% compared to old systems.

As such, lighting tools from Siteco, incorporating a wide spectrum of quality and efficiency improving components, achieve a balance that is good for the environment, good for your budget, positive for the learning and living climate existing in schools and therefore also sustainable for the future.