

Experiences with human centric lighting in the classroom

Lindeborgsskolan Malmö

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Big school,
southern Malmö

About 700 pupils

Built in 1975



August 2015

New lights installed

Skylight?



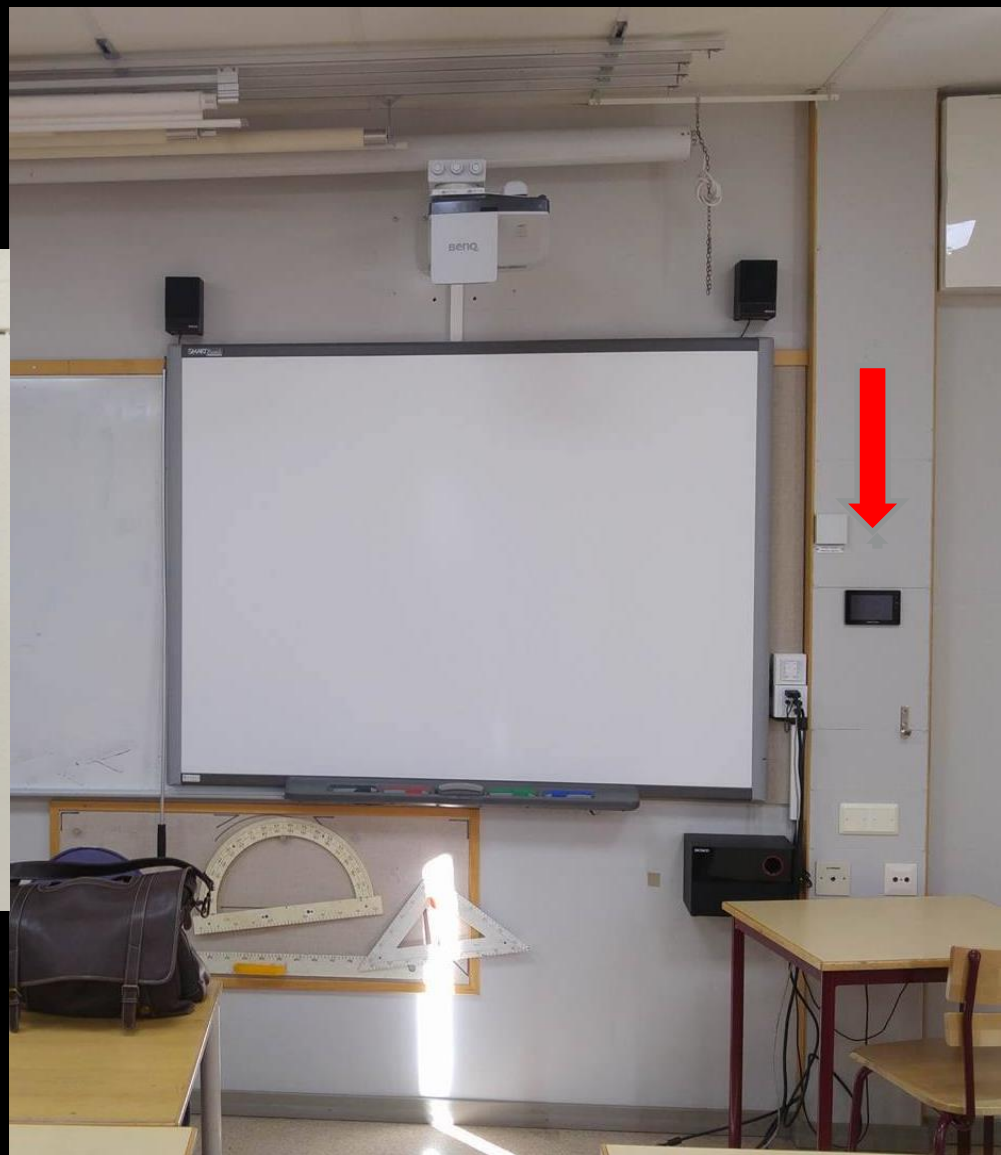
Before

Classroom with
fluorescent lighting



Automatic light variation

- Light intensity
- Colour temperature
- Different settings
- Possibilities to adapt the light



Windows to the
east

Curtains closed



The classroom is used for

lessons in Swedish,
English, Maths,
social studies
(Spanish), class
gatherings

3-4 lessons/day

spread out
throughout the day
(8.10-15.30)



Schedule varies

Starting time

Length of the lessons

- Rapid changes of the light
- Noticed the lights changing
- Pupils stopped working
- Comments from the pupils

What the pupils think

- it's better
- they feel more alert
- they can concentrate better
- the light doesn't flicker
- no sound
- the light is spread out more evenly
- their eyes feel better
- it looks better
- the room feels bigger, more space
- the blue light is best for maths
- would like to have this for other subjects as well

Malmö school introduces human centric lighting



Video - Malmö School Introduces Human Centric Lighting



A majority of the pupils prefers the strong blue light when they are working

A few pupils prefer the red light (relaxing)

A few pupils want a light that's blue, but not too bright



Problems

- a few pupils got a headache
- settings don't work all the time
- screen clock changes
- lights turned off in the middle of lessons
- rapid changes in the beginning
- feeling of discomfort if you enter the classroom with the blue strong light

Teachers' views

- Good that you can choose what light you want
- Pupils are able to concentrate better during lessons
- No visible difference from natural light
- The strong blue light is good to work in
- The light is spread evenly
- Easy to use the control panel
- Hard to go from HCL to a classroom with fluorescent lights

My thoughts

- Very interesting to be part of this project
- Learnt about the importance of light
- Continue working with lighting
- Want this in all classrooms