

Visual Nudging of User Behavior

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INTRODUCTION

At DTU Ballerup Campus, the classrooms are available 24 hours a day for the students. Some students forget to turn off the lights when they leave the room, and often the light is on all night because of this. This is the waste of energy we will try to reduce.

The natural solution to this problem is to install PIR sensors to control the ceiling lights, but this has not yet been done in all rooms at Ballerup Campus, and will not be done in all rooms, because this is an expensive solution.

Campaigns with posters and flyers have been one of the main used methods to try to change this behavior of the users, but with no convincing results so far.

Sadly, we as consumers are becoming more and more immune to these types of information's, maybe because of the massive information-exposure in our daily life.

We need a method with a better eye catcher effect.

THEORY

"Nudging" is a relatively new method, used for changing user behaviors, using indirect suggestions and positive reinforcement. It is used with great success in many different contexts and it is a method created to help the user to make the desired/right choice. Nudging changes the structure for the cognitive memory which helps with future decision making. It is based on rationality and not on inappropriate desire.

METHODS

To achieve this nudge effect on the users, we have developed a sign, made of acrylic plastic. It has the shape of a light bulb, and is approx. 20 cm high. The sign is placed right above the light switch at the exit door inside the classroom. It lights up for about 2 seconds when someone approaches the door. The bulb-sign has imprinted the text "Turn of the light, please". The shape (light-bulb), light and placement of the bulb-sign is designed to achieve the nudge effect.

To measure the effect of the bulb-sign, we developed an electronic logging system. It was sensing if the ceiling light was on and if there where motion in the room (people in the room). First we did 3 weeks logging of 3 classrooms to have a reference. Then we placed a bulb-sign in each of the 3 classrooms and kept logging the behavior with the bulb-sign installed.

CONCLUSION

The logging system showed a 51% waste of energy in the reference period. This means that half of the time the light was on, there were no movement in the classrooms.

With the bulb-signs installed the logging system showed that the waste was reduced by half, now the waste was 25%.

The bulb-signs thereby showed a clear impact on the users.

We presented the solution to Lisbet Michaelsen and Anders Gerhard, at CAS BMS, DTU Lyngby. They ordered 60 bulb-sign from us, produced at DTU, and used them in the "Brug Fingeren"-campaign last fall at both Lyngby Campus and Ballerup Campus.