

“Vehicle Information” section which seems to be intuitive, then this is an inconsistent use of *. The site uses many different link names to refer to the same link. This is an inconsistent use of link names that becomes a source of confusion.

[H1-8 Good Error Messages] [Severity 3]

On the “Kids Art Contest” page, the instruction indicates that, “for a larger view of each of the drawings, simply scroll down until the picture you want to see is near the top of your computer screen, then hold your mouse pointer over the picture for a few seconds and, like magic, it will grow! Then, when you move your mouse pointer away from the larger picture, it will return to it's smaller size.” The instruction does not seem to work, and the page does not provide any error messages on not being able to see larger views of the drawings.

[H1-9 Prevent Errors] [Severity 3]

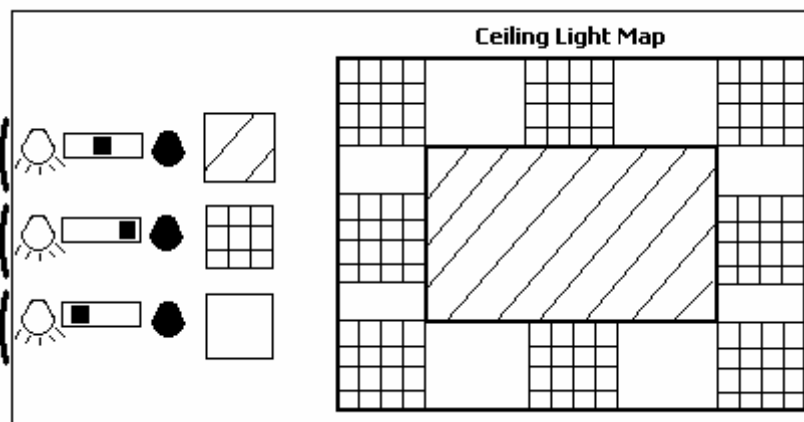
The feature for viewing larger version of the picture is written in Java-Script. Java-Script based features tend to run into problems with browser compatibility. This kind of error can be prevented by just providing a simple “a href” tag based link next to the current picture to a larger version of the picture.

[H1-10 Help and Documentation] [Severity 3]

The site violates the rule of simplifying the system by providing minimal instructions since it heavily interleaves the help instruction with the content. It also does not provide clear and readable help instructions since the use of large fonts on help instructions can overwhelm the user into thinking there are a lot of instructions to read. The site does not provide any page devoted to help first time users.

Question 2: Cognitive Consideration in Tandem with a Redesign

The design:



Description of the design:

The new design is a small LCD display that contains a map of the ceiling light on the right, and a set of light intensity status bar on the left. Notice that near the left edge of the LCD display, there are three dial switches for adjusting the light intensity. When the dial switch is adjusted to the dim polar end of the light intensity, the light is turned off. The use of patterns in the mini map and the pattern legend is to accommodate color blind users.

The LCD light control display at the front and the end of the room is synchronized. So if the PHD candidate adjusts the light intensity at the front of the room, the back room LCD light intensity display will be automatically adjusted as well.

The LCD light control display also makes it possible for any user to read the display in the dark, since it has an illuminating background.

This design takes affordances into account as it uses dial switch to suggest dialing; the pattern legend suggest correspondence of the light switches to the mini map on the LCD; the mini map of the ceiling on LCD to suggest its correspondence to the actual light locations in the ceiling of the room; the horizontal intensity bars with a bright and dim light icons to suggest the level of the intensity of lights; the matching display and layout of LCD light switches at the front and the back of the room to suggest they are used for adjusting the same set of lights.

The design takes mental models into account as it assumes that people can think abstractly and able to associate the mini map on the LCD to the actual light locations in the ceiling of the room.

The design takes transfer effects into account as it uses the dial switch to adjust light intensity since most of the people have used dial switch to adjust the intensity level of a system (e.g. adjusting intensity of temperature on a thermostat, adjusting volume on a radio). The design also uses the transfer effects for the horizontal progress bar to indicate the current status of light intensity since most people have seen a progress bar on their computer for indicating where they are in a document. The design uses the transfer effects of light icons as well since most people have seen this type of light icon on the airplane. I assume the PHD recipients have all seen those light icons on the airplane.

The design takes mappings into account as it uses two levels of mapping in the design: the mapping between the mini map on the LCD display to the actual light locations on the room ceiling, and the mapping between the pattern legend to the mini map on the LCD display.

Question 3: Formal Experiment Design and Interpretation

Hypotheses