

# How Does Lighting Affect Learning?

By Allison Boelcke

## Focus

1. According to a 1999 [University of Georgia](#) study on academic achievement in [children](#), lighting was shown to be a major factor in the brain's ability to focus. Students that attended [class](#) in brightly lit rooms received higher grades than students in dim rooms. The study reports that poor lighting does not cause damage to eyes, but can reduce how effectively the brain collects information. If the pattern of learning in poor lighting continues over time, the brain can become slower at absorbing new information.

## Visual Clarity

2. Dim lighting can negatively affect learning by making it more difficult to clearly see words when reading new information. The University of Georgia study reported that poor lighting affects a student's ability to read accurately on a paper or chalkboard. This can cause wrong information to enter the brain or affect new information being stored.

## Psychological

3. Lighting is also a factor in psychological health when a person is in one room for the majority of the day. According to the University of Georgia study, bright light has been used as a depression treatment; conversely, spending a significant amount of time in a dimly lit room can negatively alter mood. A person suffering from depression has difficulty concentrating or completing tasks. If a person's learning environment is dimly lit and ends up affecting his psychological well-being, the ability to learn will be negatively affected.

## Off Task Behavior

4. A 1995 study that Dr. Ellen Mannel Grangaard presented at the Association for Childhood Education International Study Conference and Exhibition found that fluorescent light contributed to off task behavior, such as daydreaming, playing with objects instead of listening, and talking to others during a lesson. Students whose learning environment had a softer, more natural lighting had an easier time staying on task and not becoming distracted. The University of Georgia study supports Dr. Grangaard's findings. It found that fluorescent lights can make hyperactivity behavior more severe and prevent learning at the fullest extent.

## Best Lighting

5. Both studies were in agreement that the best lighting type for maximum productivity and learning is as natural and soft as possible, while still being bright enough to see clearly. Lighting that is too dim can cause difficulties in learning, like affecting brain focus and visual clarity when reading. It also can lower psychological well-being over time. Conversely, lighting that is overly bright and fluorescent was shown to contribute to off task behavior and making hyperactive behavior worse.

# How Does Color Affect Learning?

By Rose Kivi

## Color Encourages Learning

1. [Children learn](#) and retain information longer when color is used in educational material and in the classroom. Eighty percent of the brain receives information visually. Color stimulates the visual sense and encourages the retention of information.

## Different Colors Cause Different Moods

2. The colors red, orange and yellow stimulate and increase brain activity. The colors green, blue and violet induce relaxation. Teachers can design classroom decor to match either an active or relaxed style of learning. Classroom assignments and presentations can use color to enhance learning. [Children](#) that are overly stimulated could benefit from the relaxing colors. Children with attention disorders can benefit from brain stimulating colors.

## Children Remember Colors Better Than Verbal Cues

3. A study conducted in 1999 by Vuontella, showed that children remembered color cues better than verbal cues. Combining lesson material with colors can help children to memorize information. For instance, flash cards with facts can be presented with colored back grounds. Each fact can have a different colored background. The students will associate the color with the fact, helping them to recall the information.

## Color and Creativity

4. Color inspires creativity and encourages students in coming up with new ideas. The use of color not only assists students in artistic projects, color stimulates creativity thinking towards story writing and helps students to evaluate and solve questions.

## Colored Writing Utensils

5. The simple adjustment to classroom instruction of allowing students to use various colored pens and pencils to complete their schoolwork, has proved to motivate students to do their schoolwork. It also hold the student's attention span for longer periods of time, and helps to retain classroom information.

## Color at Home

6. Parents can create a creative environment in the home to inspire creativity and learning. Starting at infancy, a colorful bedroom is beneficial to the learning of a baby. [Babies](#) that have colorful bedrooms, increase intelligence at a faster rate than babies who do not have colorful bedrooms. The use of colorful toys and decor for infants and children alike, creates a fun environment as well as a learning environment. Color can affect mood. Warm colors can induce a comfortable feeling and bright colors can induce the feeling of excitement.

## Adults and Color

7. The benefits of color on learning does not only pertain to infants and children. Color affects adults in the same ways that it affects children. Color should be used in college classrooms to assist in learning. Places of entertainment such as restaurants, often use color to entice a fun experience. The fast food chain McDonald's knew what they were doing when they designed their restaurant red and yellow. Two colors that excite and stimulate the brain.