E-GUIDE: THE IMPACT OF COLOUR ON EDUCATION
Colour Psychologist Angela Wright takes a look at how colours can affect students as they learn.

A familiar concept

In education, the impact of colour is more widely recognised as relevant to specific objectives than, for example, a retail environment. With recent activity and new attitudes producing new kinds of schools, such as academies and free schools, there is evidence that attention is moving to focus on more creative ways to raise standards. There is a way to go yet, but perhaps colour will come into its own through the minds of young students.

The research shows

Educationalists attach considerable importance to the role of colour in the learning environment. In 2008, Dr Willard R Daggett, President of the International Center for Leadership in Education, and his team published a paper entitled “Color in an Optimum Learning Environment” in which they made a number of statements confirming this:

1. Research has demonstrated that specific colours and patterns directly influence the health, morale, emotions, behavior, and performance of learners.
2. Eye strain, contrast, glare, minimal distraction, degree of stimulation and degree of concentration are impacted directly by colour. Colour can alter the perception of time, increase school pride, reduce disruptive behavior and aggression, reduce vandalism, reduce absenteeism, and provide a supportive background for the activities being performed.
3. Classrooms should incorporate a variety of colours (based on age, gender, subject and activity) to reduce monotony and visually refresh perception. However, overuse of colour – using more than six colors in a learning environment – strains the mind’s cognitive abilities.

This last point is particularly significant in that it states that colour is more complicated than, “this is a good colour for learning maths, but that is a good colour for learning history”.

We know that when learning art, for example, if you give a child black or grey crayons they instinctively draw inanimate objects such as houses or cars. If you give them coloured crayons they are more likely to draw people or animals. However, generally it is more a case of how the colours are used than the actual colour itself.

Dr Dagget’s team identified that the colour preferences of the majority of children change as they mature, and this chimes with other colour researchers such as Rudolf Steiner, Faber Birren and others.

Angela Wright, Colour Affects

Key Facts

- The impact of colour in education is more widely recognised as relevant to specific objectives, such as holding student attention.
- Rudolf Steiner said: “Colour is the soul of nature...and when we experience colour we participate in this soul.” His schools are famous for their use of colour.
- Dr Helen Irlen has refined and developed her methods of identifying those with problems seeing colours and determining how best to help them.
- When learning art, if you give a child black or grey crayons they will instinctively draw inanimate objects such as houses or cars. If you give them coloured crayons, they are more likely to draw people or animals.

It is impossible to avoid the effects of colour on moods and behaviour; we are all constantly using colour psychology.

Angela Wright
Colour Psychologist
Practising what you preach

The philosopher Rudolf Steiner was fascinated with the spiritual and psychological effects of colour, and was a great admirer of Johann Wolfgang Goethe, the German writer, poet and polymath, who is often cited as the father of colour psychology.

Steiner said: “Colour is the soul of nature … and when we experience colour we participate in this soul.”

In 1919, Steiner founded his first Waldorf School, in Stuttgart, Germany. The Waldorf System of Education is based on Steiner’s philosophy of Anthroposophy, a holistic approach to life whereby spiritual development is as important as the purely intellectual.

Today, there are over 1,000 Waldorf Schools across the world and the décor in all of them follows the principles of the Waldorf Colour Theory. This is built from the natural world – starting with the rainbow. Therefore, the dominant colours in the classrooms for Years One, Two and Three will be red, orange and yellow.

After that, their colour perceptions will be more fully established and the classrooms will be predominantly greens, then various blues, then purples.

Furthermore, the walls are painted with “faux effects”, i.e. various paint finishes designed to bring life to the room; they also have murals depicting the natural world.

It should be pointed out that, while Rudolf Steiner and the Waldorf schools attract passionate adherents and implacable opponents in more or less equal measure, all sides appear to agree about the importance of colour in the classroom, and the murals reflecting nature are found to be inspiring.

It is disappointing that, while the educationalists and other academics are enthusiastically researching the effects of colour on students and learning, the harassed professionals on the front line often feel that they have many more pressing demands on their time and energy.

The Waldorf Schools practise what they preach, but the sad fact is that the majority of conventional schools, when they are due for maintenance, are simply repainted in utilitarian white or magnolia to keep them looking clean. To return to Dr Daggett, he suggests that bland, neutral colours evoke boredom and passivity, killing enthusiasm or interest and making the job of the teacher more challenging.

Perhaps that is too strong a statement, but it would be fair to say that sticking to neutral tones in the learning environment is a lost opportunity.

Irlen’s view

The other pioneer in the great education debate is Dr Helen Irlen, an American psychologist who has been working with children for many years, and has probably contributed more to our understanding of how colour can improve the learning experience than anyone else.
We know that blue text is more legible to dyslexic people, but Dr Irlen takes this study to new heights. She realised that there were many more dysfunctions of visual stimulation than just the classic dyslexia and, having gained a US Federal grant for the purpose, she established a Learning Disability program for adults at a local California university to conduct research with university students who were struggling with their course work.

She discovered that these students saw a printed page very differently and thought that everyone saw the page the way that they did. She identified Scotopic Sensitivity Syndrome, also known as Irlen Syndrome. Sufferers report, among other problems, words becoming blurry, running off the page, flipping around, moving and floating. Her breakthrough came when she found that one student was helped by reading with a red overlay.

In the following years, she concentrated on refining and developing her methods for identifying those with these problems to determine which colours were needed as overlays and coloured lenses.

She founded the Irlen Institute in the early 1980s, and today there are Irlen Clinics all over the world treating a variety of disorders, including Dyslexia and Autism. Her best known book is “Reading by the Colors”. Several states in the US are making Irlen testing mandatory for all schoolchildren, with the colour overlays and lenses easily available to all students who are found to need them.

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**Colour effects mood and behaviour**

It is impossible to avoid the effects of colour on moods and behaviour; we are all constantly using colour psychology. Colours are the component parts of white light, and we are adapting to the energy of light through every waking moment, whether we are aware of it or not. It affects us emotionally and physically, as well as purely aesthetically.

Surely, it is better to get it right by design, than wrong by default?

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For more information, visit: [www.colour-affects.co.uk](http://www.colour-affects.co.uk)