

Exploring the Influence of Colors on Primary School Learning Environments: A Psychophysiological Perspective

Zufra Ashraf^{1,*}, Deepti Pande Rana²

Abstract

Primary schools are thought of as a child's first educational experiences and should be planned with a supportive learning environment that supports the desired learning goals. This study's primary goal is to investigate how colors, a significant visual component of design, affect a child's psychophysiological and behavioural characteristics. The impact of prolonged exposure to a monochrome classroom on primary education is examined in this study. Depending on how color is used, it can have different effects on elementary school learning environments. Depending on the color, either one (monochromatic) or a combination of colors may have a varied effect on the student. The research paper involves investigating the effects of warm and cool colors in a classroom and the impact on child development and learning. It makes a particular effort to pinpoint colors that enhance abilities and behaviour while appreciating the differences in influence between the two extremes of warm and cool hues. The study involves various emotional and psychological impact of different colors on primary school students. This study utilizes a mixed-methods approach, integrating quantitative data analysis with qualitative observations and surveys to thoroughly examine the varied impacts of color within primary school settings. Through analyzing physiological responses such as heart rate variability and electrodermal activity alongside behavioral cues like attention span and task performance, the goal is to gain a comprehensive insight into how color influences the learning process. Moreover, it explores the potential influence of cultural and individual disparities in color perception and preference, acknowledging the diverse backgrounds and sensitivities of primary school students. Ultimately, the research findings aim to inform the development of evidence-based design principles for crafting stimulating and conducive learning environments in primary schools.

Keywords: Primary education, classroom color, primary school, color preference, skill development

INTRODUCTION

Color scheme plays an important role in shaping our emotions, influencing our mood, and even impacting our behaviour. This is especially true in the context of interior design, where the choice of colors can significantly affect the overall atmosphere of a space [1]. In primary school the importance of creating a conducive environment for learning and development cannot be overstated. Understanding the impact of colors on mood and behaviour is essential for designing classrooms and common areas that foster a positive and productive learning environment.

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The balanced use of warm, cool, neutral, and accent colors contributes to a harmonious and stimulating atmosphere, fostering positive behaviour, and enhancing the overall educational

environment in primary schools. For example, colors have been shown to help create a pleasant school climate by eliciting supportive attitudes, emotions, and psychological behaviour, decreasing disruptive and off-task behaviour, and boosting academic performance development, preference, behaviour.

For example, warm color is identified to be stimulating and cool colours are pacifying as shown in Figure 1.

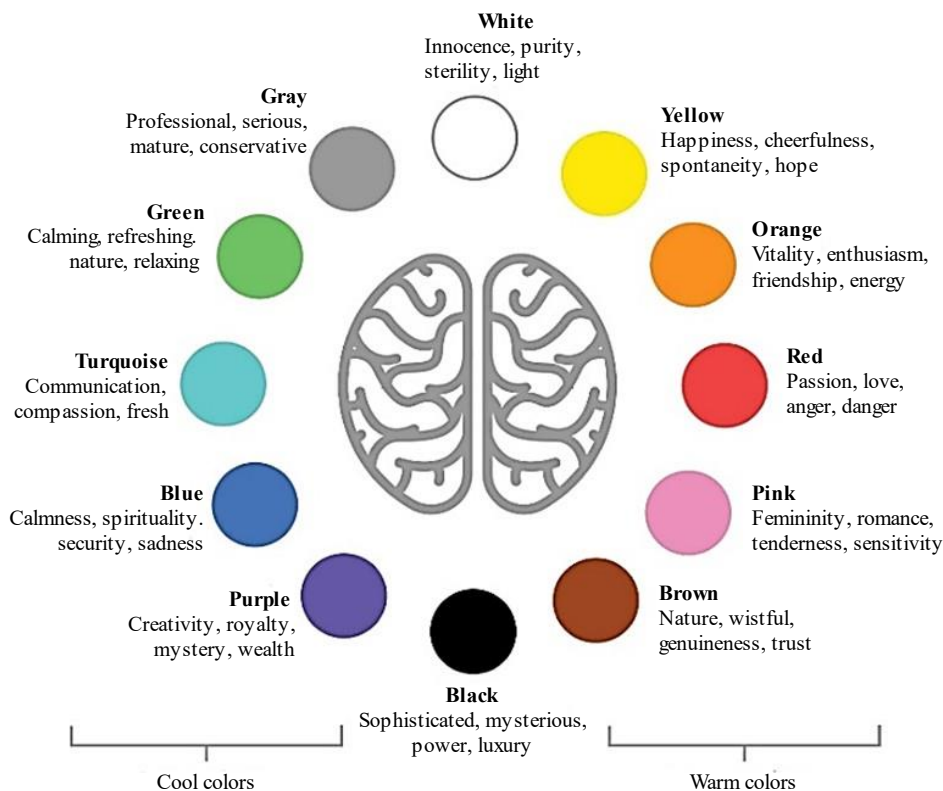


Figure 1. Illustrates color psychology of warm and cool color.

Source: <https://unplugged.rest/blog/colour-psychology>



Figure 2. Color used minimally on furniture and doors.

Source: <https://www.scirp.org/journal/paperinformation.aspx?paperid=92974>

RESEARCH METHODOLOGIES

- *Literature Review:* Conducting a thorough review of existing literature on the psychological and physiological effects of colors on children can provide a theoretical framework for the study.
- *Observational Studies:* Observing children in various color-rich environments within the school setting can provide insights into their reactions, behaviors, and mood changes.
- *Surveys and Questionnaires:* Administering surveys or questionnaires to teachers, parents, and children can gather subjective perceptions and opinions regarding the impact of colors on mood, behavior, and learning.
- *Experimental Design:* Conducting controlled experiments where variables such as wall colors, furniture colors, and classroom materials are manipulated to assess their impact on factors like attention span, academic performance, and emotional well-being as shown in figure 2.
- *Focus Groups:* Organizing focus group discussions with children to explore their preferences, associations, and emotional responses to different colors can provide qualitative insights.
- *Case Studies:* Examining specific primary schools that have implemented color interventions and documenting any observed changes in student behavior, academic performance, and overall school atmosphere.

COLOR PSYCHOLOGY

The psychology of colors explores the way colors can impact human emotions, moods, and behaviours [2]. The effects of color on emotions are subjective and can vary among individuals, cultures, and contexts. Color choice in primary school design can have a profound impact on the emotional well-being and behaviour of students.

In primary school classrooms, shades of blue and green can be used as shown in Figure 3 to create an environment that promotes focus and concentration. This is especially important during learning activities, exams, or quiet study time.

In areas designed for creative activities, play, or group interaction, incorporating *warm colors* which can be seen in Figure 4 can stimulate creativity and encourage social engagement.

Light pastel colors like soft pinks, blues, and greens can create a gentle and inviting atmosphere. The colors are suitable for common areas, reading corners, or spaces where a sense of comfort and safety is desired.



Figure 3. light and dark values of blue green on dark floor.

Source: https://www.researchgate.net/figure/Light-and-dark-values-of-blue-green-with-a-dark-floor_fig6_333705260

Neutral colors provide a versatile and timeless backdrop for educational spaces. They can be used to create a clean and sophisticated environment that enhances the overall aesthetic of classrooms, hallways, and administrative areas.



Figure 4. Brightly hued partitions defining three different activity areas.

Source: https://www.researchgate.net/figure/Brightly-hued-partitions-define-three-different-activity-areas-in-this-classroom_fig2_333705260

AFFECTING EMOTIONS

Colors are the most important tool for primary school students as they influence behaviour, mood, and emotions as they have the inability to read and write so they are attracted more towards brighter and vibrant colors. They are dependent more on visuals.



Figure 5. Red and yellow colored classroom design.

Source: <https://www.google.com/url?sa=i&url=http%3A%2F%2Ftackytheteacher.com%2Fbright-and-colorful-classroom->

For Example, preschool classrooms are designed with bold and bright colors like red and yellow which provides concentration as shown in Figure 5.



Figure 6. Depicting yellow, green, blue green colored walls.

Source: <https://www.scirp.org/journal/paperinformation.aspx?paperid=92974>

COLORS IN STUDENT LEARNING ENVIRONMENT

- The color schemes which are carefully chosen gives positive effect on student learning environment of younger students.
- There is a proper use of color which can change depressing atmosphere to the one which is pleasing.
- The proper use of color in schools can convert an atmosphere that is depressing and monotonous into one that is pleasing, exciting, and stimulating as shown in Figure 6.
- Colors should be chosen keeping in view moods and behaviours of students.
- A dreary and monotonous atmosphere in a school can be transformed into one that is stimulating, intriguing, and pleasing with the right use of color.

IMPACT OF COLOR PSYCHOLOGY ON KID'S MOOD

- Pupils can readily associate colors with various emotions and perceptions.
- Age has an impact on how a person perceives and feels about a specific color.
- Children are more attracted to vivid hues, such as pink, blue, green, yellow, and red.
- The colors also convey joy to children's spirits.

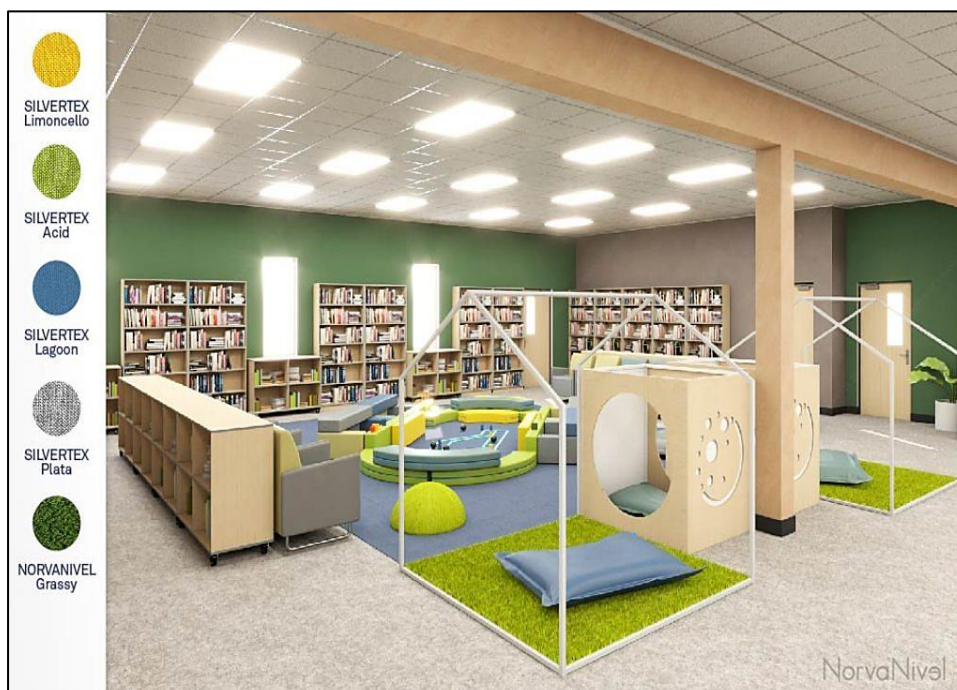


Figure 7. Classroom color with warm bright yellow color.

Source: <https://norvanivel.com/the-power-of-color-in-a-learning-environment/>

IMPORTANCE OF COLOR IN CLASSROOMS

Using color coding for different areas of the classroom or educational materials can aid in organization and navigation. For example, color-coded bins for different supplies or subjects can help students easily locate what they need [3]. Colorful visuals and displays can also serve as effective teaching aids, enhancing comprehension and retention of information.

A colorful and visually appealing environment can inspire creativity and imagination in young learners. Incorporating bright colors into art supplies, classroom decor, and creative learning activities can encourage self-expression and experimentation as shown in Figure 8 and Figure 9.



Figure 8. showing wall uses learning theme paintings such as science center.

Source: <https://m.indiamart.com/sarwalldecors-hyderabad/school-wall-painting.html>



Figure 9. bright coloured furniture.

Source: <https://www.hertzfurniture.com/buying-guide/classroom-design/classroom-colors.html>

DEVELOPMENT PSYCHOLOGY

Developmental psychology, in the context of color psychology, refers to the study of how individuals, across different stages of development, perceive, respond to, and interact with colors.

The cognitive, emotional, and social aspects of color perception and how these aspects evolve as individuals progress from infancy through childhood, adolescence, and into adulthood [4].

It helps professionals tailor environments, products, and experiences to meet the cognitive and emotional needs of individuals at different stages of development.

An overview of Developmental Psychology in Relation to Color Psychology

- *Sensory Perception:* New borns begin to develop their sensory perceptions, including color vision. They may initially respond to high-contrast colors before distinguishing more subtle color differences.
- *Visual Stimulation:* High-contrast colors, such as black and white, are often used to provide visual stimulation for infants.
- *Basic Color Recognition:* Children start to recognize and name basic colors like red, blue, and yellow. Their understanding of colors becomes more sophisticated over time.
- *Emotional Association:* Early emotional associations with colors may emerge. For example, children might associate warm colors with positive emotions and cool colors with calmness as depicted in Figure 10.
- *Color Discrimination:* The ability to discriminate between different colors improves. Children become more aware of variations in hues and shades.
- *Symbolic Understanding:* Colors may acquire symbolic meanings, and children may associate certain colors with specific concepts, emotions, or cultural symbols as shown in Figure 11.



Figure 10. The use of muted yellows, blues and greens boosts concentration.

Source: <https://www.google.com/url?sa=i&url=https%3A%2F%2Fnorvanivel.com%2Fthe-power-of-color-in-a-learning->



Figure 11. The use of soft greens and neutrals creates a comforting space for independent study.

Source: <https://www.google.com/url?sa=i&url=https%3A%2F%2Fnorvanivel.com%2Fthe-power-of-color-in-a-learning->

COLOR AND ITS SIGNIFICANCE IN PSYCHOLOGY

Color is a useful cue for object perception and cognition because the human visual system creates a perceptual experience as seen in Figure 12 of color from wavelengths of light reflected or emitted from the surfaces and objects around us.

Our ability to perceive color helps us differentiate between items with similar shapes, as well as segment them visually from their backgrounds and identify visual sceneries as shown in Figure 13.

Color provides important details about the characteristics of items and environments.

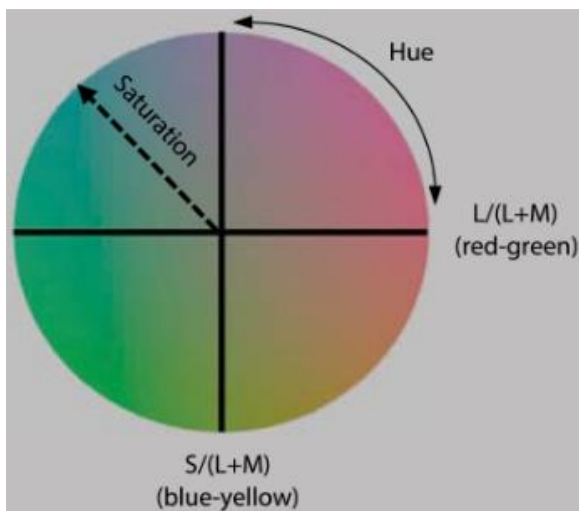


Figure 12. diagram showing color vision of red-green and blue, yellow.

Source: https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.researchgate.net%2Fpublication%2F221329059_Human_Preference_for_individual_



Figure 13. Depicting human perception of color

Source: https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.researchgate.net%2Fpublication%2F221329059_Human_Preference_for_individual_colors

Design Principles

Numerous works of art have been produced by artists using the elements of Line, Shape, Space, Texture, Form, Color, and Value. Composition refers to the way in which painters employ the Elements of Art [5]. A method was developed by artists and art scholars to produce compositions that pique your interest and thrill your eyes. We refer to them as the Principles of Design.

The Principles of Design are:

- Pattern
- Movement/Rhythm
- Proportion/Scale
- Balance
- Unity
- Emphasis

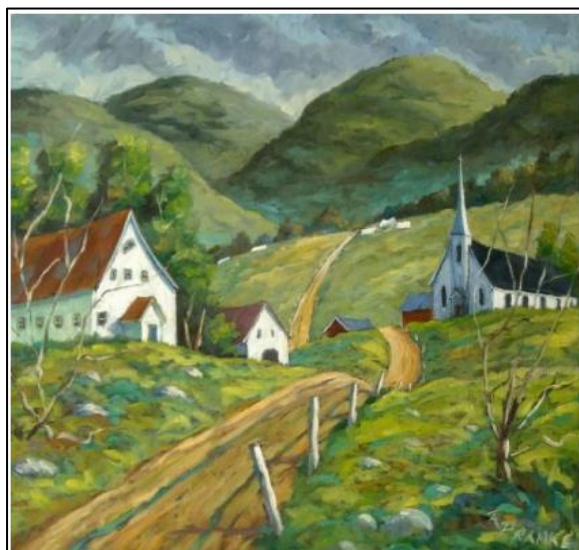
Pattern

Patterns are among the fundamental elements of art. Artists utilize repetition of a line, shape, or color to create patterns.



Movement

The path the viewer's eye travels through a piece of art, frequently to key points, is called movement. This kind of movement inside the artwork might be focused on the shape, color, lines, and edges.



Rhythm

When a piece of art is made to appear to move using repeated shapes, colors, patterns, or textures. Visual rhythm guides your attention around the arrangement of an artwork in the same way that a song's beat guides you through it.



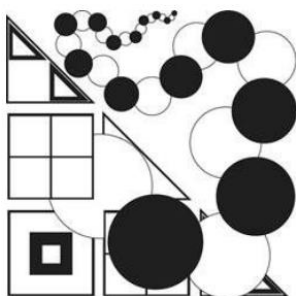
The artist can "weigh down" a section of the composition so that the viewer's attention stays in that region, or they can balance it such that the viewer's eye can easily roam about the subject matter [6].

Types of Balance

1. *Symmetrical Balance* means both sides of an imaginary line are the same.



2. **Asymmetrical Balance** means each side of an imaginary line is different yet equal.



3. *Radial Balance*: Radial balance, also known as circular balance, is a design principle that involves arranging elements around a central point in a symmetrical or harmonious manner.



PROPORTION/SCALE

The feeling that is created when all parts of a work of art (sizes, amounts, or number) relate well with each other – when all the parts of a picture are the proper size, or Scale, then the image just seems to “For example, when drawing the human figure proportion can ref.



Unity

Unity refers to the coherence and harmony achieved in design. It involves arranging visual elements to ensure that they are relate to each other and contribute to overall purpose.



This work is has unity.



This work is not unified.

Emphasis

Emphasis refers to the focal point or center of interest within a design. It is the element or elements that stand out and draw the viewer's attention, guiding them through the composition and conveying the intended message or purpose.



Some design principles for using color in primary school classrooms

- Texture adds depth and visual interest to the environment, providing children with unique tactile experiences. This can be achieved by using a variety of textures in the classroom, such as using different materials for surfaces, furnishings, and art supplies [7].
- Using a consistent color palette and coordinating textures across different elements of the classroom can help create a harmonious and unified space harmony can be achieved.
- To create emphasis, teachers can use contrasting colors, textures, and materials to draw attention to specific elements within the classroom as shown in Figure 14. For example, a brightly coloured accent wall or a unique textured rug.
- To create balance, arrange furniture and materials to create a sense of equilibrium, incorporate a variety of textures, shapes, and colors to create a harmonious and unified environment as shown in Figure 15.
- To create **pattern**, use repetition of shapes, colors, or textures to create a sense of rhythm. The focal point using a patterned rug, wallpaper, or mural to draw attention to a specific area of the classroom as shown in Figure 16.

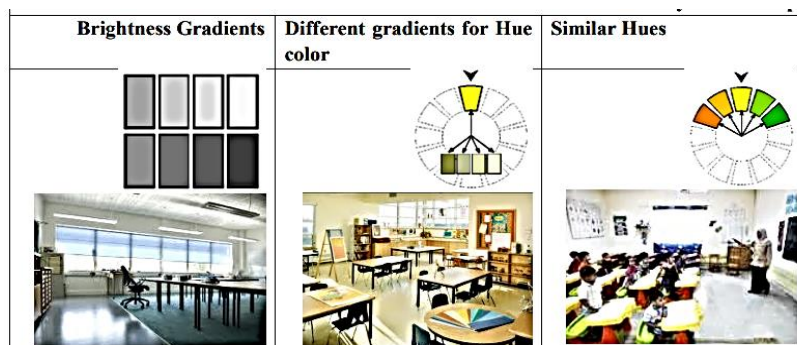


Figure 14. Design Considerations based on Similarity Relationship showing monochromatic and analogous color schemes.

Source: <https://www.google.com/url?sa=i&url=https%3A%2F%2Fnorvanivel.com%2Fthe-power-of-color-in-a-learning->

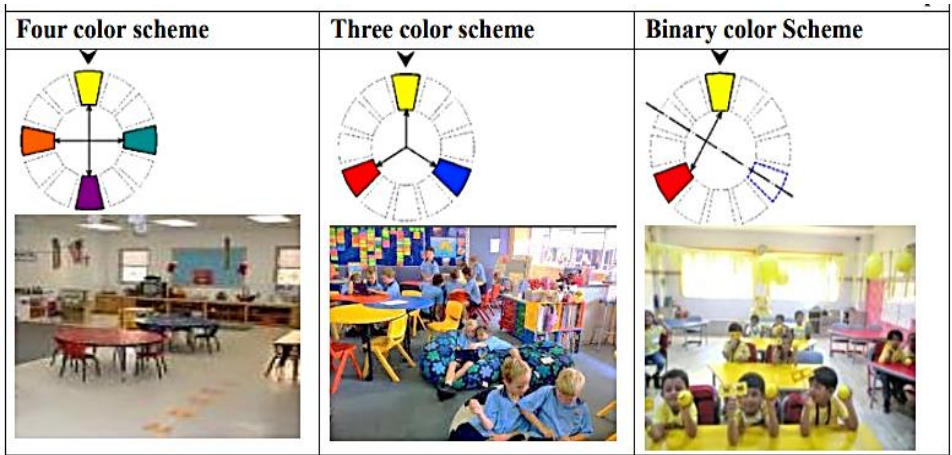


Figure 15. Design Considerations based on balance relationships showing primary, secondary and tertiary colors.

Source: <https://www.google.com/url?sa=i&url=https%3A%2F%2Fnorvanivel.com%2Fthe-power-of-color-in-a-learning->

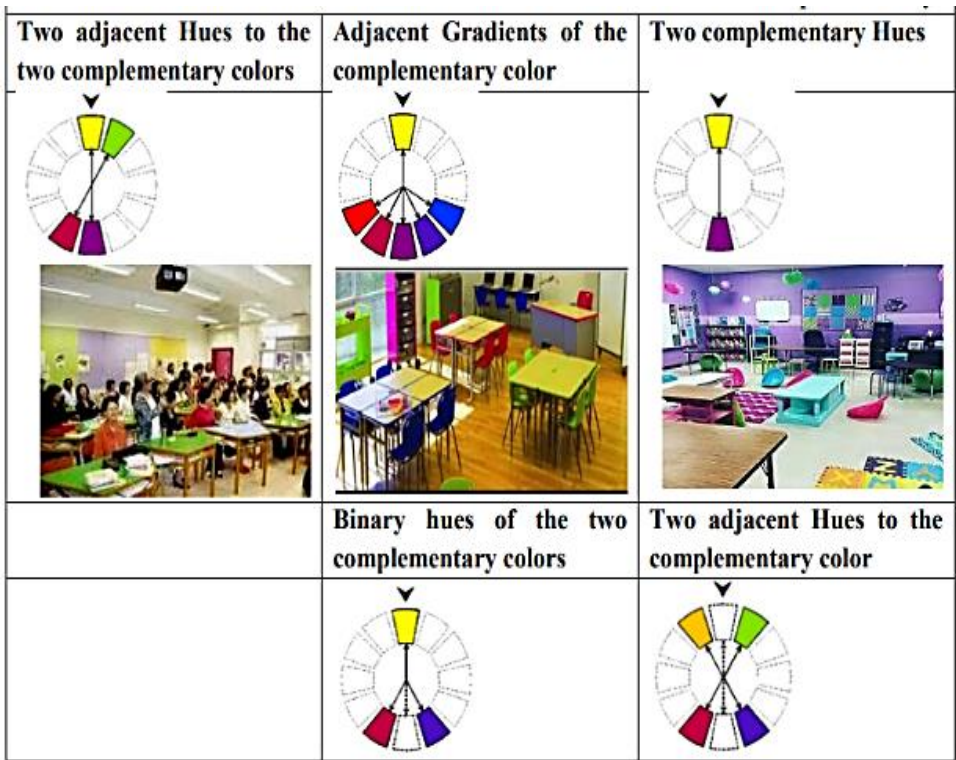


Figure 16. Design Considerations based on complimentary showing complimentary and double complimentary color schemes.

Source: <https://www.google.com/url?sa=i&url=https%3A%2F%2Fnorvanivel.com%2Fthe-power-of-color-in-a-learning->

Safety and Regulations in Primary School

When selecting colors for primary school environments, it is important to consider the developmental stages of children, their responses to different colors, and the impact of colors on learning, morale, and behavior. For Instance, Young children tend to be attracted more towards bright, warm colors, while middle and high school students may appreciate more sophisticated color palettes [8].

So, it is recommended to use warm colors for more energy, focus and concentration.

Shape	Meaning	Color	Examples
 Circle with diagonal bar	Prohibition	RED (contrast: white)	No smoking 
 Circle	Mandatory Action	BLUE (contrast: white)	Wear Eye protection 
 Equilateral Triangle	Warning	YELLOW (contrast: black)	Danger Flammable material 
 Square / Rectangle	Information about safe condition	GREEN (contrast: white)	Escape Route – Left 
 Square / Rectangle	Fire Safety	RED (contrast: white)	Fire Extinguisher 

		Prohibition
		
		Warning
		
		Mandatory Action

The Recommended Colors for Primary School Classrooms Are

- Light blues, greens, as seen in Figure 17 and purples are mostly recommended for their calming and soothing effects.
- Soft yellows, oranges, and warm neutrals can create a welcoming and inviting environment.
- Light shades of beige, off-white, or light grey can serve as neutral backgrounds that complement other colors while providing a sense of balance and visual harmony.
- Incorporating colourful educational materials, such as posters, charts, and bulletin boards, can enhance visual interest and engagement in the classroom.



Figure 17. Wall colors focusing on the calming greens and blues.

Source: <https://smithsystem.com/grade-level/pre-school/>

COLOR COMMUNICATION IN CHILDREN EDUCATIONAL ENVIRONMENT

- Children's actions, their architectural environs, and their colors are all connected by the same color. They can represent several things in various contexts.
- When it comes to planning for Color Communication In Children's Play Environments, color is typically the deciding factor (preschool children). Color can be a significant component in evaluating child development.
- Between the ages of three and seven, children often undergo the key transition from color dominance to form dominance [9].
- For example, much of the literature suggests that most children prefer bright and warm colours

like blue as seen in Figure 18.

- According to certain research, anchor colors that are moderate and calming, including light creams and warm, soft tones of white, are ideal for preschools and elementary schools. It is advised to use bolder, stronger colors for accents and focus points.



Figure 18. Wall color with blue giving calming effect.

Source: <http://lifeinfirstgrade1.blogspot.com/2012/06/classroom-makeover-before-pictures.html>

Physiological and Psychological Requirements

- There are numerous significant connections between a child's emotional and cognitive growth and the complexity of their environment.
- Children between the ages of 4 and 7 require a setting that makes them feel safe, engages their minds, and fosters their sense of imagination and accountability.
- Additionally, such an environment should not lead to exhaustion, problems focusing, or visual disruptions.
- More than any other aspect, colors may have a strong emotional impact on kids.
- It has even been demonstrated that they affect bodily reactions like muscle strength.
- For instance, research has revealed that pink and red have a detrimental effect on muscle strength, whereas blue can help boost it. It has also been demonstrated that color affects alpha brain wave activity.

COLOR PREFERENCES FOR ESPECIALLY Abled Children

This study looked at the primary and secondary color preferences of kids with special needs in relation to their gender, school level, and kind of impairment, as well as their color preference for an object. A survey research design using a quantitative methodology was used in the investigation.

The findings showed that pupils' primary and secondary color preferences varied depending on their school level. The students' preferred colors changed in proportion to the modification of the geometric shape. Students selected blue for the car visual and red as the primary and secondary colors, respectively, based on the sorts of disabilities they had. It was discovered that although male and female students had different main and secondary color choices, they all liked blue for the car visual.

Some children may be sensitive to certain colors, while others may find certain colors soothing. For example, child's disabilities may prefer muted or calming colors, such as blues and greens and bright,

highly contrasting colors might be overwhelming which can be seen in Figure 19.

For especially abled children, high-contrast color combinations can be helpful for distinguishing objects and environments. Pairing light and dark colors can aid in visibility.

Utilize a variety of sensory inputs beyond the color, such as texture, sound, and scent, to create engaging and inclusive environments for children with disabilities.

Cultural meanings should be taken into consideration which are associated with colors because different colors may interpret colors differently.

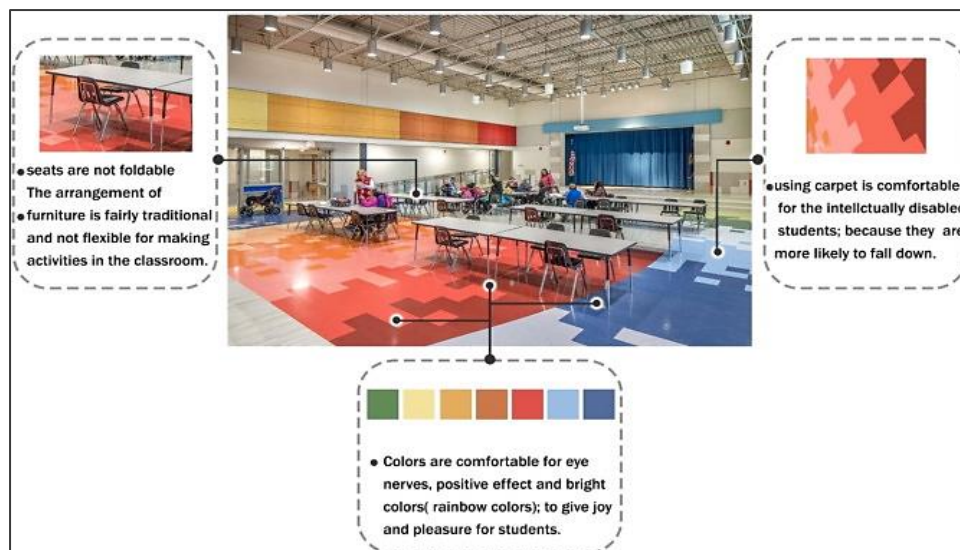


Figure 19. Defines color scheme of a classroom applied on walls, floors, and furniture.

Source: <https://www.google.com/url?sa=i&url=https%3A%2F%2Fsmithsystem.com%2Fresource-library%2Farticle-library%2Fcolor->

CULTURAL AND SOCIO-ECONOMIC FACTORS

- The socioeconomic and cultural significance of colors in elementary schools is impacted by the diversity of the student body as well as the cultural significance of colors in other cultures.
- In many civilizations, colors have significant symbolic meanings derived from historical, religious, spiritual, or social occurrences.
- For instance, while red is associated with love and passion in many places in North and South America, Europe, and Africa, it is associated with death and mourning in African civilizations. White, on the other hand, is associated with innocence in certain cultures and death in others.
- A study has examined children's preferences for single colors and color schemes in primary school environments, as well as the impact of age, gender, and functions on these choices.
- The implicit association between the color red and social status has been studied across different cultures, showing some cultural universality in color cognition.
- So, the cultural and socio-economic factors of colors in primary schools are intertwined with the diverse cultural backgrounds of students and the symbolic meanings of colors in different societies.

CLASSROOM DESIGN

- *Warm vs. Cool Colors:* Warm colors like red, orange, and yellow can boost energy and mood, making them suitable for creative subjects and areas where students need to be engaged and cool colors like blue and green can promote concentration and relaxation, making them more suitable for areas where students need to focus or read.
- *Age Group Preferences:* Younger learners tend to gravitate towards warm colors, while high

school learners may benefit more from cool colors.

- *Balancing Colors:* It's important to balance colors and consider the size of the space. Fewer colors are recommended for learning environments, while larger spaces can handle a balance of 4-6 colors.
- *Impact on Behavior:* Certain colors can influence students' bodies, minds, and behavior. For example, vibrant colors like red and orange can boost energy and mood, while softer shades of blue and green can enhance concentration and encourage engagement.

Practical Implications

- *Classroom Areas:* Brightly colored chairs can be used in areas where students need to pay attention and learn new information, while softer, cooler colors can be used in areas.
- *Bulletin Boards:* Using color on bulletin boards can facilitate learning, and it's important to ensure that the colors used complement each other and avoid using too many colors to prevent visual overwhelm.
- *Libraries:* Pale or light green color are considered best options for areas like library.
- *Walls:* Different shades of blue are good choices to consider on classroom walls as they give calming and relaxing atmosphere for young learners [10].
- *Classrooms:* Red color can be used in certain areas like classrooms for more vibrant look as seen in Figure 20.
- *Creative art studios:* yellow color is vibrant and can be used in activity areas for energetic appeal as depicted in Figure 21.



Figure 20. depicting warm coloured creative art studio.

Source: <https://www.hertzfurniture.com/buying-guide/classroom-design/classroom-colors.html>



Figure 21. Bright colored furniture.

Source: <https://www.hertzfurniture.com/buying-guide/classroom-design/classroom-colors.html>

COLOR SCHEMES FOR CLASSROOM DESIGNS

- *Blue and Green:* Blue and green are popular color choices for primary school classrooms as they promote relaxation and concentration, making them ideal for areas where students need to focus or read.
- *Yellow:* Bright colors like yellow can stimulate younger children and promote movement, making them suitable for hallways and gymnasiums.
- *Neutral Colors with Accents:* Neutral colors like white, beige, and gray can be used as a base color, while accents of brighter colors can be added to create interest and stimulate learning as shown in Figure 22
- *Warm Colors:* Warm colors like red, orange, and yellow can boost energy and mood, making them suitable for creative subjects and areas where students need to be engaged.
- *Earthy Tones:* Earthy tones like terra cotta and muted greens can create a warm and inviting atmosphere, making them suitable for classrooms that want to create a cozy and welcoming environment.

**Figure 22.** Classroom Color Palette

Source: <https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.pinterest.com%2Fpin%2F5-modern-classroom-color-palettes-teaching-in-my-right-mind-->

Recommendations

- Neutral colors like beige, light gray, or soft whites can create a calming and versatile backdrop for a classroom. They provide a clean environment that won't distract students from their work.
- Consider adding pops of color as accents to stimulate creativity and engagement. Bright and vibrant colors like blue, green, or yellow can be used on furniture or wall decorations to add visual interest without overwhelming the space.
- For example, blue is often associated with calmness and concentration, making it suitable for areas where students need to focus, such as reading corners or study spaces. Green can evoke a sense of tranquility and is often associated with nature, which can help create a refreshing and invigorating atmosphere.
- The color preferences and sensitivities of students can vary depending on their age like for younger children, bright and cheerful colors might be more appealing, while older students might prefer more mature tones.
- Aim for a balanced color scheme that includes a mix of light and dark shades. Contrast can help highlight important areas or elements in the classroom and create visual interest.
- **Functionality:** Consider the functionality of the furniture when choosing colors. For example, if

you're selecting chairs or desks, go for colors that are easy to clean and maintain, especially in a classroom setting where spills and messes are inevitable.

- If the classroom receives plenty of natural light, take advantage of it by choosing colors that complement and enhance the brightness of the space. Lighter colors can help reflect light and make the room feel more open and airier as shown in Figure 23.



Figure 23. Use of red and orange colors on shelves and chair to attract students.

Source: https://www.researchgate.net/publication/239822900_The_Effects_of_Color_on_Memory

CASE STUDIES ON PRIMARY SCHOOLS

Lotus World Public School

Location-Sector A pocket 3, Sushant golf city, shaheed path Sultanpur road, Lucknow.

This primary school analyses the color scheme implementation at Lotus World Public School, Lucknow. It delves into the impact of colors on the learning environment and student behaviour. The study aims to provide insights into the effective use of color in educational settings.

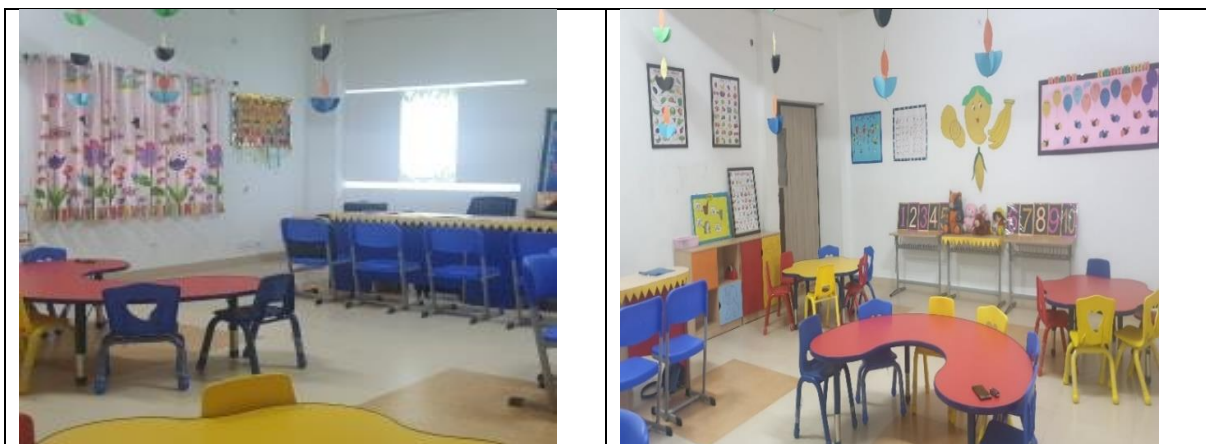


Figure 24. Classroom colors showing use of diverse color palette.

Source: https://www.justdial.com/Lucknow/Lotus-World-Public-School-Sushant-Golf-City/0522PX522-X522-18120412226-P8K6_BZDET

Lotus World Public School, Lucknow, implemented a diverse color palette in its classrooms and common areas. The selection of colors was based on psychological research which can be shown in Figure 24 on the effects of color on mood and behaviour. The school aimed to create a stimulating and conducive environment for learning.

Color Psychology

It is essential to comprehend color psychology to design the perfect learning environment. While cool hues like blue and green encourage serenity and focus, warm hues like red and yellow can stimulate energy and creativity. To create a peaceful environment, the proper balance is necessary.

Classroom Color Scheme

Lotus World Public School has carefully chosen its color palette for classrooms to encourage participation and focus. Gentle blue and green hues adorn the walls to provide a tranquil atmosphere, and thoughtfully placed bursts of vibrant color encourage creativity.

Impact On Learning

The case study makes clear how color affects behavior and learning. In classrooms with calming hues as shown in Figure 25 students focus better and perform better academically. The school's cheerful and lively atmosphere has been further enhanced by the color scheme.

Lesson Learned

The case study has shed important light on how color might be used in teaching environments. It highlights how crucial it is to choose colors carefully to give pupils a well-balanced and engaging atmosphere. The event has also brought attention to how important it is to maintain the color scheme's impact over time.



Figure 25. Showing the balanced use of color schemes in different activity areas of classroom.

Source: https://www.justdial.com/Lucknow/Lotus-World-Public-School-Sushant-Golf-City/0522PX522-X522-181204122226-P8K6_BZDET

Sanfort Play School

Location: 14/50, Indira Nagar Lucknow, Lucknow - 226016 (Near RLB School)

Importance of Color in Early Education

Early schooling is greatly impacted by color, which also affects mood, focus, and creativity as seen in Figure 26. The learning environment and student involvement in educational environments can be greatly impacted by the color schemes used.

Psychological Impact of Hues: Different hues elicit different mental reactions. For instance, blue encourages focus and serenity, but yellow fosters enjoyment and creativity. To create the best possible learning environment, it is imperative to understand these consequences.

Color Schemes: To improve young children's learning, Sanfort Play School in Lucknow has introduced color schemes. The color selections and their possible effects will be discussed in detail in this section which can be shown in Figure 27.



Figure 26. Yellow colored furnitures are used.



Figure 27. Theme paintings are used on walls for learning environment.

Source: <https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.justdial.com%2FLucknow%2FSanfort-Play-School-Near-RLB-School-Indira-Nagar->

Influence on Creativity and Imagination

For young children, color schemes are essential for fostering imagination and creativity. This section

will look at how Sanfort Play School might encourage creativity in the classroom by using color selections as shown in Figure 28.

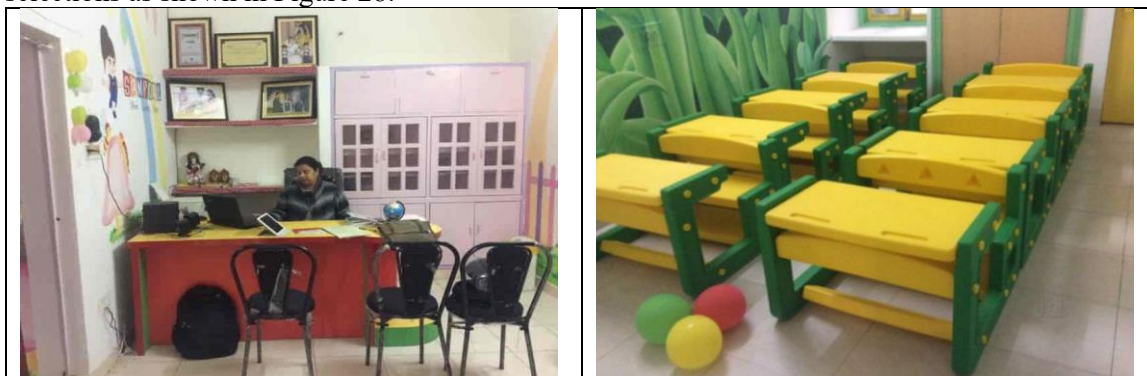


Figure 28. Showing selection of colors encourage creativity in classrooms.

Source: <https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.justdial.com%2FLucknow%2FSanfort-Play-School-Near-RLB-School-Indira-Nagar->

Educational Implications

There are important educational ramifications for Sanfort Play School's color scheme study. Improved curriculum design, classroom management, and overall learning results can result from an awareness of the effects of color.

Recommendations for Educational Institutions

Based on the findings, recommendations will be provided for educational institutions to optimize color schemes in early learning environments as depicted in Figure 29. These recommendations aim to support holistic development and academic success.

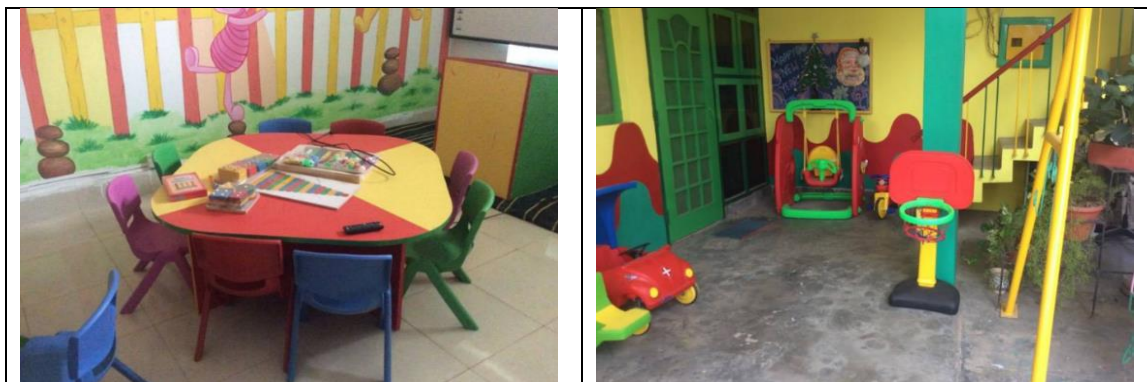


Figure 29. Warm colors are used for energetic performance.

Source: <https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.justdial.com%2FLucknow%2FSanfort-Play-School-Near-RLB-School-Indira-Nagar->

CONCLUSION

It is clear from reading through several studies and observations that the effect of color on behaviour and mood in elementary schools is a thoroughly studied subject. They are known to provide a learning atmosphere that boosts brain growth, lowers stress, and improves visual processing. They can also have an impact on students' bodies, brains, and behaviours, grade-school-aged children respond well to secondary and tertiary colors. These age groups respond differently to colors.

While colder and more muted colors are appropriate for teenagers, warm colors like red, orange, and yellow are known to be the most effective at holding students' attention and encouraging their active participation.

When selecting a color scheme for a learning environment, it's critical to take into account how each color affects the attitudes and behaviour of the pupils. While blue can induce a pleasant, calming emotional reaction, lessen stress, and stimulate student creativity, red can boost alertness, creativity, and excitement.

In order to establish an environment that is conducive to learning and positive behaviour, it is imperative that primary school learning spaces be designed with the impact of various colors on kids' behaviour and mood in mind. People's reactions to different colors can vary depending on several factors, including age, cultural background, and personal preferences. Thus, when creating their classroom spaces, elementary schools should consider the varied demands and preferences of their children.

While certain colors may have specific effects, creating a balanced color palette in primary school settings is crucial. Combining stimulating and calming colors appropriately can help maintain a harmonious and conducive atmosphere for learning without overwhelming students.

To sum up, my dissertation is ready, and I'll be using it next semester for my thesis which would be for sustainable steel structure for residential purpose which is movable and be used for decade.

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