

Classroom Wall Color Selection at Public Elementary Schools in Salatiga

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Abstract—Indonesian elementary students spent 7-8 hours learning in schools. Mostly, they spent their time inside the classroom do their activities. Learning process needs ideal conditions. This condition provides an atmosphere that makes learners feel comfortable and happy to follow the teaching and learning process. Conditions where students can learn comfortably and happily. Learning, in inevitably related to the environment. The intended environment is the class and social conditions (interaction) when the learning process happens. Classes have structures that can be manipulated to give students learning facilities in the classroom, namely the color of the wall. The Wall color can be simulated according to the condition of the students. Color affects visual and psychology for students. This article uses a quantitative method by questionnaire and involved 441 elementary students and categorizes into two categories; lower classes (grade 1-3) and higher class (grade 4-6). The purpose of this article is to provide an overview of color that suits to the wall and can be applied to public schools in Salatiga.

Keywords—wall color; classroom; environment; elementary school

I. INTRODUCTION

Students in elementary schools in Indonesia spend around 8 hours in school studying and most of them are spent in the classroom. Most interactions occur in the classroom (the process of learning and interaction with friends and teachers). Classroom is a place for children to find and gain knowledge and expertise that will help them later to become good individuals and ready to live their lives. In this case, the physical environment in the classroom acts as a silent curriculum, which has the understanding that class design can simplify and enhance the learning process such as an open curriculum [1]. The visual environment can affect student's ability to feel visual stimuli and affect mentally. There are several factors about the environment that can be considered. They are 1) Ambience factor; temperature, noise, smell, music and lighting, 2) Design Factor; architecture, color, material, interior, texture, and room layout, 3) Social factor; ages, gender, customer, and personnel [2].

In addition, children have different needs in the classroom than adults. Children needs an environment that helps them feel convenient to study in the classroom. There are things that must be considered in designing the class, including lighting,

room acoustics, air quality, access, temperature, and class settings. Conventional class structures do not support children to interact with one another but only focus on completing their personal tasks [3]. One of the easiest and often the center of attention is the physical form of the class itself, namely the color of the classroom walls. In designing the classroom, there must be several considerations including considerations regarding: The first is Nature like light, sound, temperature, air quality, relationship with nature. The second, individualization that consists of ownership, flexibility, and connection and the third one is stimulation such as complexity and color [4]. Color in educational context can be divided into personal preferences and functional learning processes.

Color is an impression obtained by the eye from light reflected by objects affected by the light. Color is also an element that can give an impression on the eye towards a form that is psychologically capable of influencing feelings. Colors can affect human emotions and describe moods [5]. Color has a role in helping channel perceptions of an object. Color differences can increase differences in motivation which, can later affect performance on cognitive tasks [6]. Color with positive associations can lead to increased motivation and color with negative associations can increase motivation aversion [7]. Color also affects the emotions and physiology that causes mood swings that also affect their performance [8]. Furthermore, color also influences human life physically, psychologically, and socially [9].

Colors based on their nature can be divided into two types, namely warm colors and cold colors. The warm color group is the red /orange family that has the nature and influence of warm, fresh, fun, stimulating, and passionate. Cold color groups including those from the blue/green family that have quiet, calm, darker and older properties, the colors are getting sinking and depressed [10]. The nature of color also influences on individual behavior. Hot colors stimulate children, simple primitive people, and are extroverted. Cold colors are calm, introverted, mature, and mature [11]. Color in the classroom has important effect for learning process, not only as a decoration. Moreover, color affects relationship between students and their learning environment.

II. METHODS

This research is quantitative method. Data obtained using questionnaires distributed in four public elementary schools in Salatiga. The subject of this study consisted of students from grade 1 to class 6 students. The discussion will be divided into two parts, namely lower classes and higher classes. The number of students involved in this study amounted to 441 which, was divided into 235 lower class students and 206 higher class students. Students are asked to sort the color choices of their favorite class. There are seven choices of class wall colors that selected in the questionnaire.



Fig. 1. Red wall classroom design



Fig. 2. Purple wall classroom design



Fig. 3. Yellow wall classroom design



Fig. 4. Green wall classroom design



Fig. 5. Orange wall classroom design



Fig. 6. Light blue wall classroom design



Fig. 7. Beige Wall Classroom Design

III. RESULTS AND DISCUSSION

The class color selection questionnaire distributed to 441 students in 4 public schools related to their preferences regarding the color of the classroom walls gives the following results:

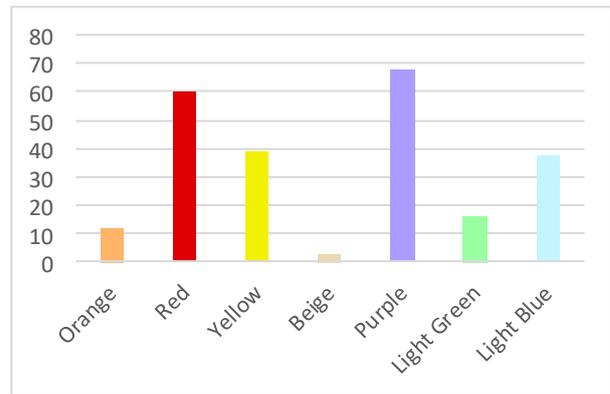


Fig. 8. Rank 1 lower class color preference

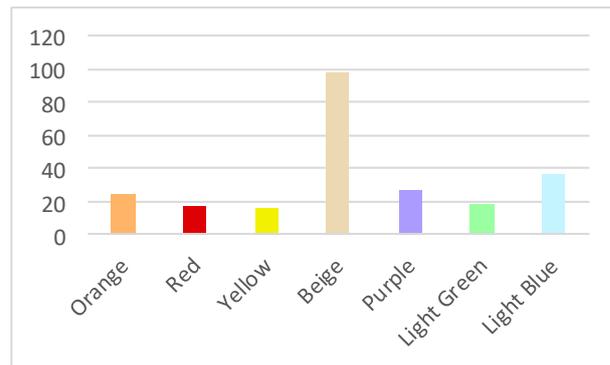


Fig. 9. Rank 7 lower class color preference

Questionnaires result from lower class (grade 1-3) shows that purple is the most favorite wall color even though purple is type of cold color. Purple wall color chosen by 68 students or 29% from total 235 lower class students. In the other hand, beige wall color become the least favorite among the other wall color design. Beige is type of warm color chosen by 98 students or 42% of total lower-class students.

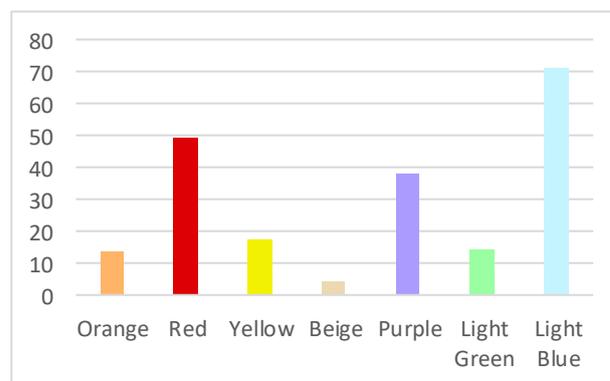


Fig. 10. Rank 1 Higher Class Color Preference

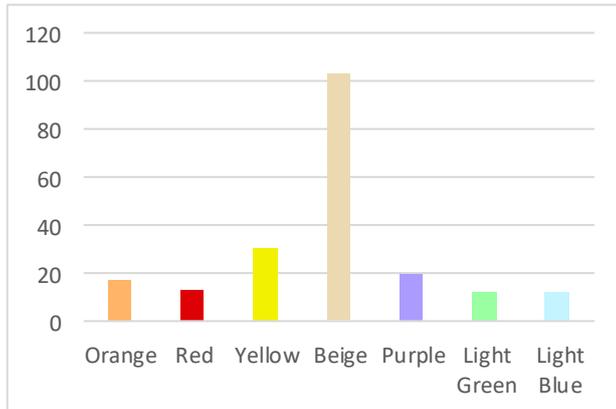


Fig. 11. Rank 7 higher class color preference

Questionnaires result from higher class (grade 4-6) shows that light blue is the most favorite wall. Light blue which is type of cold color chosen by 71 students or 35% from total 206 higher class students. Same result with lower class students, beige wall color become the least favorite among the other wall color design. Beige is type of warm color chosen by 103 students or 50% of total lower-class students.

The application of color to the classroom wall must should pay attention to the characteristics of the child. The colors will be channeled through the eyes and can affect feelings, mental clarity, and energy levels. Based on his age, small children prefer bright colors [12] and also warm colors are recommended for small children [13]. In addition, the colors suggested for the school to give the impression of warm and bright are soft yellow (K.9 / 4), coral color (M.8 / 4), peach color (J.8 / 4) [14]. Warm and bright impression also reinforced by [15] which, states that the colors suitable for the classrooms are bright yellow-orange, cream, pale green, green, and blue-green. More active children will prefer cool colors and children who passively prefer warm colors [16].

From the results of these studies, we can find out that for small classes (classes 1 to 3) the favorite color for their class walls is the color of the purple wall. The purple color, chosen by as many as 68 students or 29% of the total lower-class students 235 students. It shows, that low-class students also like cold colors, namely purple. Meanwhile, the first color choice for class walls for higher class is light blue. Light blue color was chosen by 71 students or 35% of the total large class students namely 206 students. This suitable with the opinion of some experts who state that higher class students will prefer cold colors to warm colors. On the other hand, related to the color that is the last or 7th is beige. There are similarities in the results of research in lower and higher classes. The beige color is the color that is the least chosen by students with 98 students or 42% of the total students as many as 235 students while for the higher class there are 103 students or 50% students from a total of 206 students.

As quoted in Gale [17], children especially young children, are interested and like warm and bright colors. As we age, color preferences change from pastel colors (elementary school) to bright cold colors like green, blue, and blue-green (middle school)

to darker colors (middle school) such as burgundy, gray-gray, navy blue, dark green, and purple.

Color in the context of education, the choice can be seen in terms of personal preferences (preferences) or functional learning perspectives. In terms of preference, children prefer bright colors [18]. Also, besides, Eillen [19] the environmental needs between children and adults are different, children need a creative environment that later makes them comfortable in that environment. Children's needs in space are gaining a sense of freedom, safety, excitement, comfort and warmth.

IV. CONCLUSION

The choice of wall classroom colors in order to help children feel safe and comfortable does require a lot of consideration. Within the educational technology area itself also provides an opportunity to develop this. The consideration to develop a proper and suitable classroom for support children in learning process also supported by the understanding of 1994 and 2008 educational technology. The understanding of 2008 educational technology, namely the study and ethical practice of facilitating learning and improving performance through creating, using, and managing appropriate technological processes and resources [20] and then with the understanding of 1994 educational technology, namely theory and practice of designing, developing, utilizing, managing, and evaluating processes and sources for learning [21].

When compared with the results of the research, there will be differences in the colors chosen by low-grade students. It turns out that purple is the favorite color of low-class students even though purple is a cool color. Meanwhile, beige colors that are warm colors are not a favorite choice of all students, both low and high class. There is still a need for further research related to the color of the classroom walls. Is the color to be used or chosen is the color that the child likes or the child fits in theory.

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