

ALISE School Library SIG

Call for Proposals – 2015 Conference

Panel Title: School Library Practice and Education: Developing a Passion and Commitment to Civil Rights, Social Justice, and Learning For Life

Paper Title: Meeting the Needs of Learners Through the Use of Color in School Libraries: An Exploratory Study of What School Librarians Know About Color Vision Deficiencies

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Color vision deficiencies affect approximately eight percent of the male population (Birch & Chisholm, 2008; Cole, 2007; Jenny & Kelso, 2007; Neitz & Neitz, 2000), yet the condition is often overlooked in the educational setting despite the pervasiveness of color in the school (Suero et al., 2004). The purpose of this study was to explore how elementary school librarians provide instruction and prepare the library environment to meet the needs of students with color vision deficiencies.

If eight percent of the boys in a class had a physical condition that did not allow those children to access the information in the same way as other students, would the librarian know about it? Would the librarian want to help and know how to make adaptations to the library environment and instruction to provide for the needs of the students? Statistically speaking, it is likely that each class in the school would have at least one student with color vision deficiencies. The vast majority of these students do see colors, but they view them in ways that are different from those with normal color vision (Birch & Chisholm, 2008). The school librarian works with all of the students in the school, including those with color vision deficiencies.

Color vision deficiency is sometimes referred to as a “hidden disability” (Tofts, 2007) because this physical condition is not visually apparent and not always identified in affected children. It does not satisfy the definition of a disability according to the guidelines set forth in the Americans with Disabilities Act of 1990 (US Department of Justice, 2012; Patrick, 2000). Regardless, the impact of color vision deficiency on a child in a world full of color could be significant (Tofts, 2007).

Suero hypothesized that much of early childhood education is "based on the use of color as an attribute of objects" (Suero et al., 2004, p. 90). For example, children learn the colors of the visible light spectrum can be seen in a rainbow and when light is dispersed by a prism, but

children with color vision deficiencies may not see all of the colors. They are then left to memorize the colors in the visible light spectrum with little frame of reference. For the children with color vision deficiencies, the mnemonic device ROYGBV becomes the way to memorize something unseen. Similarly, the child must memorize the color wheel when others have the added visual cues to see that red and blue combine to make purple or yellow and blue become green. In science class, what happens when the two colored liquids combine? In geography, where do the colored sections of the map change? What colors do the leaves turn in autumn? In the school library, what color is the dot on the spine of the book, and what book level does that indicate?

Given the extensiveness of color vision deficiencies in males (Cole, 2007; Cumberland et al., 2004; Wilkinson, 1992) and the pervasive use of color within early education classrooms (Suero et al., 2004), little research was found that related the two (Wilkinson, 1992). Additionally, no research was found related to the use of color in school libraries. This study is an important first step in combining early education, school libraries, and color vision deficiencies by exploring what elementary school librarians know and believe about color vision deficiencies and how they use color in their library space and instruction.

This mixed methods study consisted of two components. The first component was a questionnaire administered to elementary school librarians throughout Virginia to gather data related to their knowledge of and attitudes toward students with color vision deficiencies. The second component of the study was a case study of eight elementary school librarians in one school division within Virginia. The case study participants were given the same questionnaire as the state group to assess their knowledge of and attitudes toward students with color vision deficiencies. Then they participated in observations, interviews, and a color vision deficiencies

awareness training designed to inform school librarians about issues related to color vision deficiencies. The training included background information about Universal Design for Learning as a means to develop instruction and design the library space to be accessible to all students, including those with color vision deficiencies. The training was followed by a series of journal prompts through a blog and additional observations to gather information about changes in behaviors. After the training, a post-test was administered to the case study participants to gather data about changes in knowledge, attitudes, and behaviors.

Findings indicated that elementary school librarians did not feel knowledgeable about color vision deficiencies but were interested in knowing more and expressed a desire to make changes based on participating in the questionnaire alone. The case study participants' increase in knowledge from pretest to post-test was statistically significant. There were noticeable changes in beliefs and desires to change behaviors as evidenced through the qualitative data. The changes in the case study lend support to the need for color vision deficiency awareness training for elementary school educators.

Among school librarians, an increased awareness about the needs of students with color vision deficiencies followed by suggestions for making changes would allow the librarians to meet the needs of this group of library users. As mentioned by the case study participants, school librarians are not always informed about the needs of the students, and it would be difficult to know the needs of every student. It makes sense for librarians to set up the learning environment to be accessible to any students with color vision deficiencies, whether known or unknown. Universal Design for Learning principles guide the librarian in designing the program and the lessons with diverse needs in mind so accommodations are anticipated before the students come through the door (Zhong, 2012). In a profession that encourages welcoming all

learners, it is imperative to provide instruction that is accessible to all, creating a program that "recognizes the unique needs of every learner" (Kortering, McClannon, & Braziel, 2008, p. 352).

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