CALIFORNIA STATE SCIENCE FAIR
2014 PROJECT SUMMARY

Name(s)
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Project Number
34543

Project Title
Retention and Ratings of Black/White vs. Color Video Presentations

Abstract

Objectives/Goals
I have always wondered whether people learn and perceive information differently in color versus black/white. The purpose of this study was to determine if there was a difference. I hypothesized that the color presentation would be rated better and would deliver better factual recollection because color draws more attention and stirs interest.

Methods/Materials
I created educational presentations about two different organisms. One was an animal and the other was a tree. Each of the presentations were produced in both color and black/white videos using the same audio narrative. A survey of fourteen questions was created with the first 10 specifically on the topic itself and the last four on how well the information was delivered. After creating these four presentations I surveyed the students on their factual recollection and also their subjective impression of the presenter and the presentation. 102 students were tested (204 surveys).

Results
The recall test scores for the color animal video were 27% higher than the black/white video retention scores. For the tree video, the retention differences between the black/white and color video were not significant (6%). For the animal video, the color version rated a 21% higher quality score than the black/white version. The scores of the color tree presentation rated at 4% higher quality than the black/white version.

Conclusions/Discussion
This study supported my hypothesis that color presentations lead to a better overall impression of the presenter and the presentation. This implies that a more attractive presentation, even though providing the same information, confers a positive bias towards the presenter and the presentation and is more highly regarded by the audience. Color may also enhance factual recollection compared to black/white presentations. The results of this project ought to be taken into consideration for advertising and education. Future studies could assess whether age or gender impact the results.

Summary Statement
My experiment studied the impact of color on recall and comprehension of educational material.

Help Received
Thanks to my father who read the two narratives I wrote for the recordings, so the students would not be biased by my voice. Thanks to the students who participated in my tests. Thanks to my science teacher for her guidance.