

# **The Interactive Effects of Color Realism, Clustering, and Age on Pictorial Recall Memory among Students in Malaysia**

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**THE INTERACTIVE EFFECTS OF COLOR REALISM, CLUSTERING, AND  
AGE ON PICTORIAL RECALL MEMORY AMONG STUDENTS IN  
MALAYSIA**

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**(ABSTRACT)**

This study investigates the effects of clustering or format of presentation (categorized and uncategorized lists), level of color realism of graphics (color pictures, black and white pictures and line drawings), and age (10 year old, 16 year old and adults) on the pictorial recall memory among students in Malaysia. Three hundred sixty students of three age groups were randomly assigned to one of the six stimulus treatments (categorized color, uncategorized color, categorized black and white, uncategorized black and white, categorized line drawing, and uncategorized line drawing). There was a significant interaction effect between age and cluster,  $F(2, 342) = 9.07, p < 0.0001$ . Simple main effects test shows that among 10-year olds, significant difference exists between the mean recall of pictures in categorized lists and uncategorized lists. More pictures in the categorized lists were recalled than in the uncategorized ones. However, the mean recall of pictures between the categorized and uncategorized lists among 16-year olds and adults did not differ significantly. Interaction between age and color realism was also significant,  $F(4, 342) = 2.93, p < 0.021$ . Simple main effects test indicates that among 10-year olds and adults, the mean number of items recalled differed significantly

under each level of color realism. Pairwise comparison shows that among 10-year olds and adults, color pictures were recalled significantly better than both black and white pictures and line drawings. The mean number of items recalled between black and white pictures and line drawings however, was not significantly different. It was concluded that color pictures or illustrations are recalled better than black and white pictures and line drawings, and that categorized lists of pictures are recalled better than the uncategorized lists.

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