

Colours Effect Analysis on The Attention Level with A Single-Channel EEG

ABSTRACT

Colours play an important role in many applications such as in education, communication, tourism, marketing, and architecture. From the previous research, especially related to education, colour could affect people's focus or attention level. However, with further investigation, the colour could also be used for controlling or activating electronic devices. Therefore, the purpose of this study is to find out if turquoise, green, red, and a combination of red, orange, and yellow (picture of autumn) could trigger the attention level to be equal to or above the attention threshold. The required threshold that had been decided was 40. The attention level of five (5) respondents was recorded when they were looking at the colours for 8 seconds using a single-channel EEG of the Neurosky Mindwave headset. From the study, it is found that all colours could trigger the attention level of all respondents to be above the attention threshold of 40. However, the combination of red, orange, and yellow (autumn picture) showed the best result in triggering or maintaining the attention value within 40 to 100. The colour could be a potential input in controlling electronic devices that have an attention threshold of 40.