

The near-hand effect on the visual processing of objects in a sample of right-handed, normal vision adults

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Abstract

Past studies have evinced that the perception of near-hand objects is qualitatively different from that of far-hand objects. However, as the influence of test anxiety during tasks of visual processing has never been considered, this study aims to assess whether the presence of hand alters/biases the visual processing of objects while controlling for the effect of test anxiety. A sample of 30 participants aged 22-55 years old was recruited through convenience sampling and performed a cognitive task based on the Posner paradigm of Inhibition of Return (Posner et al., 1985) during which they held their hand on their lap in the control condition and next to the screen in the experimental one. Their test anxiety was assessed retroactively through the Test Anxiety Profile (Oetting & Deffenbacher, 1980, as cited in Gass and Curiel, 2011). A correlation was performed between test anxiety and Reactions Times (RTs) scores, and an analysis of variance was computed with the presence of the hand and the validity of trials as independent variables and RTs as the dependent variable. Next, an analysis of covariance included test anxiety as the covariate. The presence of the hand altered/biased the visual processing of stimuli, and participants shifted their attention between items faster in the experimental condition. Participants' test anxiety did not mediate the near-hand effect. This study provides insights into the development of multitouch devices and their applications in the educational setting.

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